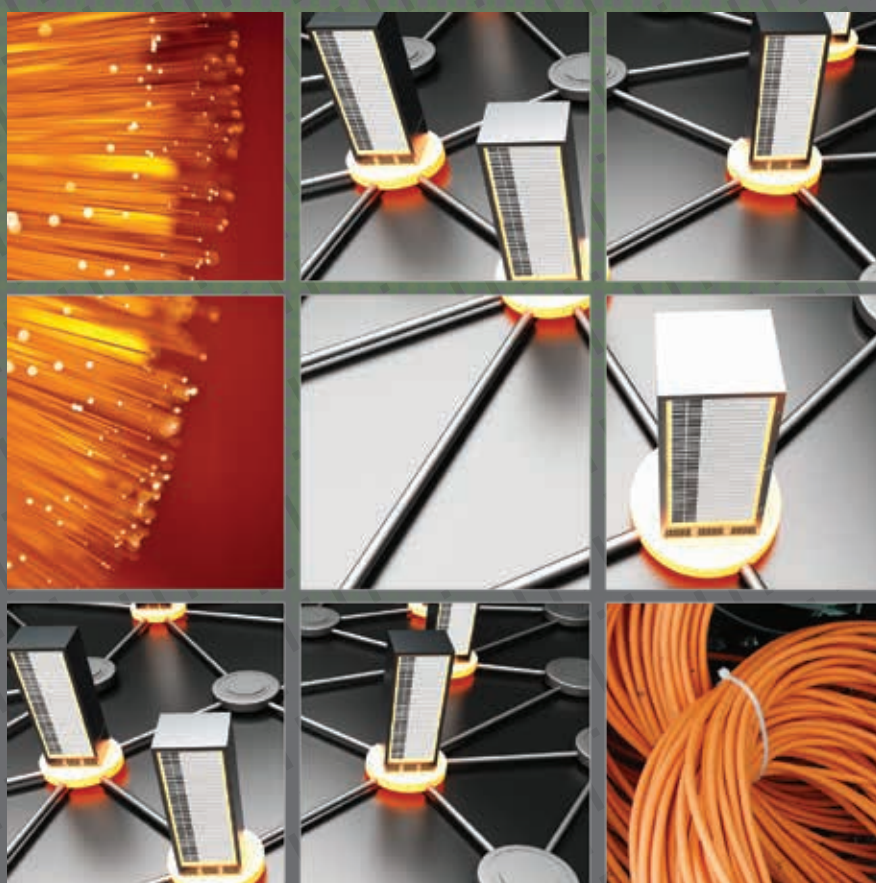


INFRASTRUCTURE

A licensing toolkit FOR DTTB AND MTV SERVICES

Report



Telecommunication Development Sector



A licensing toolkit for DTTB and MTV services

The licensing toolkit and model licence presented in this report have been prepared by the International Telecommunication Union (ITU) expert Krisztina Rozgonyi under the supervision of the Telecommunication Development Bureau (BDT) Spectrum and Broadcasting Division.



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Executive Summary

Demand for a model licence seems strong in the near term. It is foreseeable that during the period of 2015-2020, another wave of licensing will take place worldwide, either in countries completing digital switch-over (DSO) and analogue switch-off (ASO) for the first time or as a result of utilization of the digital dividend for IMT or other services and thus limiting terrestrial broadcasting to the lower bands, which will require administrations to reconsider previous licensing frameworks and implement new ones.

This gives special importance to a licensing toolkit, a pre-defined model license, which enables governments to use this template at their discretion by simply making the necessary adjustments stemming from the local social, economic, legal and political background. This may spare considerable resources and time on their behalf. As a consequence it may substantially contribute to making digital switchover happen as early as possible. The licensing toolkit and the model licence in this report also enables ITU experts providing assistance for individual administrations, governments, regulators, etc. to focus their attention on the local conditions. This can significantly increase the efficiency of their missions.

The main parts of the report offer practical support for a licensing process:

- the main elements of a licensing framework (radio spectrum and broadcast licensing) and potential public measures are introduced in chapter 3;
- a DSO licensing toolkit in chapter 4 provides a checklist and brief summary of main activities with direct and indirect relevance to licensing, and describes the main licensing models;
- the model licence set out in the Annex provides a detailed template for the licensing process.

The licensing framework set out in this report focuses on the following main fields of DSO licensing policy formation:

- licensing trends in electronic communication networks (the choice of the most suitable approach);
- spectrum management aspects (licensing the spectrum, the policy aims and choices should be set and agreed first);
- specifics of broadband licensing;
- public measures to be considered in the licensing model.

The DSO licensing toolkit:

- draws a DTTB/MTV roadmap example for regulators;
- gives a comprehensive and detailed list of activities relevant prior to the licensing process;
- highlights the elementary steps of an assignment process;
- defines the two basic licensing models for DTTB and MTV services based on the allocation of spectrum, operating and broadcast rights.

The model licence, presented in the Annex of this report, can serve as a checklist and draft text for issuing the relevant licences for DTTB and/or MTV services for administrations, national regulatory authorities and agencies. According to the main assumptions, the model licence:

- focuses on the licensing framework and assignment models for DTTB and MTV in the commercial market, as licensing of public broadcasters shows more unique than general characteristics;
- assumes that one licensee is assigned for all available DTTB and MTV capacities/frequencies;
- is elaborated for Model A, since Model B can more easily be derived from this structure, than the other way around;

- assumes that the licensee acts as:
 - multiplex operator;
 - service provider; and
 - content distributor;
- focuses on DSO and ASO and under licence conditions also addresses some later key events; (a) spectrum re-farming (moving DTTB services out of the 700 MHz band) and (b) migrating to a second generation transmission standard (like DVB-T--> T2);
- assumes that the licensee is also in 'charge' of the analogue TV (services and spectrum) as he has obligations for ASO.

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1 Introduction

Television is not dead, just the opposite, it's doing well: forecasts, predictions about trends are even more promising than ever before. However, television is becoming something that looks like a TV, feels like a TV, but is much more than that: a ubiquitous, smart, mobile equipment with a screen display, and ready to compete in the new multiscreen digital environment.

According to ITU Trends in broadcasting (2013), the main sector developments that will determine the trends in television broadcasting in the coming years include the rapidly growing bandwidth of broadband networks, giving an enhanced capacity for delivery of audio-visual content, along with broadcast content, and the continuing evolution of digital broadcast technology. Broadband IP networks (fixed and mobile) will support the enhanced delivery of audio-visual content via hybrid broadcast broadband (Hbb) TV solutions. HD quality and even UHDTV, enlarged screens, the implementation of more efficient compression and second generation transmission systems are enabling better picture quality, improved coverage, more services and better reception¹.

All these benefits of terrestrial broadcasting are only available if digital switch-over (DSO) is implemented. Since 2006², Region 1 countries have mainly completed their relevant DSO and by 2020 the remaining countries have to finish as well³. Meanwhile International Mobile Services (IMT) are expected to be allocated in the 700 and 800 MHz range effective as of 2015⁴, and it is therefore foreseeable that in many countries only the 600 MHz band will serve for terrestrial broadcasting. Therefor major frequency re-planning and re-engineering of transmitting stations will take place between 2015-2020 and beyond, resulting in the next wave of 'switch-overs', as viewers will need to use new receivers.

This also means that countries should be prepared for new licensing of terrestrial services, including a review of existing licences, and as was done before analogue switch-off (ASO), a review of which licensing regime should be implemented for an optimal outcome, how to balance between public and private interests, and which public measures should be chosen.

To structure and disseminate international best practices, ITU is providing regular assistance to countries on transition from analogue to digital terrestrial television broadcasting. For this work, the ITU Guidelines for the transition from analogue to digital broadcasting (hereinafter ITU Guidelines)⁵ have been developed. During assistance projects, in several cases, countries have requested the ITU experts to provide draft licences to give momentum in the licensing process. This is the main reason why ITU has prepared this report.

Demand for a model licence seems strong. If, during the period of 2015-2020, another wave of licensing takes place worldwide, either in countries completing DSO and ASO for the first time or as a result of utilization of the digital dividend for IMT or other services and thus limiting terrestrial broadcasting to the lower bands, administrations will need to reconsider licensing frameworks and implement new ones.

A licensing toolkit (a pre-defined set of model licences) will enable administrations to use the models at their discretion by simply making the necessary adjustments stemming from the local social, economic, legal and political background. This may spare considerable resources and time on their behalf. As a consequence it may contribute substantially to making the digital switch-over happen

¹ ITU Trends in broadcasting (2013) p. 27 to 29

² See RRC-06 Final Acts, "Final Acts of the Regional Radiocommunication Conference for planning of the digital terrestrial broadcasting service in parts of Regions 1 and 3, in the frequency bands 174-230 MHz and 470-862 MHz (RRC-06)", www.itu.int/pub/R-ACT-RRC.14-2006

³ ITU Status of the transition to digital terrestrial television broadcasting: Summary. www.itu.int/en/ITU-D/Spectrum-Broadcasting/Pages/DSO/Summary.aspx

⁴ ITU Trends in broadcasting (2013) p. 2

⁵ ITU Guidelines for the transition from analogue to digital broadcasting: www.itu.int/en/ITU-D/Spectrum-Broadcasting/Documents/Guidelines%20final.pdf

as early as possible. A set of model licences will also enable those ITU experts who are providing assistance to individual governments, regulators, etc., to focus their attention on the local conditions. This can significantly increase the efficiency of their missions. The licensing toolkit aims to assist governments, regulators and experts during their work on designing and implementing the most appropriate licensing framework.

2 Analysis of ITU direct assistance

ITU has provided intensive assistance to various administrations during the past period (2010-2014) to design DSO roadmaps. In the following, the key findings and recommendations of these reports from 24 countries are analysed from the licensing perspective.

2.1 Angola

ITU experts have provided support to the national roadmap team (NRT) in Angola. The roadmap for transition from analogue to digital television in Angola has been prepared and a licensing model agreed, foreseeing the creation of a new broadcast transmission operator as a common multiplex and network operator for the DTTB network (Model B).

As Angola has decided to adopt licensing Model B, the spectrum licence should have been assigned to a common multiplex/network operator. The ITU Angola roadmap report has also listed key decisions to be taken when drafting the licence.

2.2 Cambodia

In Cambodia, ITU assistance has covered the short-term digital switch-over (DSO) objectives and the activities managed by the NRT. The ITU experts have offered different scenarios and options for the licensing model to be adopted and elaborated the significance of the decision whether a public-private partnership is envisioned. More details on the licence conditions and procedures were not defined, as the licensing model was not agreed at the time of reporting.

2.3 Congo

The DSO roadmap designed for the Republic of Congo envisions ASO by 2015 and elaborates the various implications of licensing in some detail. No further details of the licence terms and conditions were discussed due to the preliminary stage of DSO.

2.4 Ethiopia

ITU assistance in Ethiopia focused on defining the key DSO objectives. As the Government of Ethiopia has considered the adoption of Model B licensing, the establishment of a new company for the common multiplex and network operations of public services was envisaged. The DSO roadmap evaluated in detail the various considerations for selecting the appropriate licensing model.

2.5 Fiji

The aim of the design of the DSO roadmap in Fiji was to guide Fiji towards the achievement of its DSO objectives. Considerations of the managing and licensing options were discussed in details (licensing Model A and B), however no licensing model was agreed to at the time of reporting.

2.6 Gabon

The Gabon NRT and ITU experts agreed on the DSO roadmap in 2013, and licensing options were elaborated and discussed. However, no further agreement on licensing was reached.

2.7 Indonesia

The ITU assistance provided along with the NRT in Indonesia has already focused on licensing details as the DTTB licence policy and regulation was ready for application in 2012. Model B was modified to Model B1⁶ in order to reflect the local TV market structure in Indonesia, and it was envisioned to issue the DTTB multiplex operator licences in 15 service zones. The details of licence terms and conditions were also elaborated⁷.

2.8 Lao

The DSO roadmap designed for Lao P.D.R. covers the short-term digital switch-over objectives (until about one year after analogue TV switch-off, however the licensing model was not agreed and adopted. The implications of selecting the appropriate licensing model (Model A or B) are elaborated in great detail in order to prepare for the licensing procedure.

2.9 Maldives

The DSO roadmap provided for the Republic of Maldives lists and discusses the short- and long-term DSO objectives, and the available licensing models. The Maldives NRT was in favour of Model B, which was seen as more cost effective for the Maldives given the large number of islands and the market size.

The Maldives NRT agreed to have one multiplex operator with open access licensed on a non-exclusive basis- preferably owned by a consortium- and that the digital broadcast network operator (DBNO) should not have a broadcast (content) licence. The existing 'carriage licence' regulatory framework for DBNO was also discussed and the option that the relevant authorities should have issued the required licences to facilitate the operation of DBNO was elaborated.

2.10 Mali

The DSO process envisioned in the DSO roadmap for Mali was at its early phase at the time of reporting, and considerations on the available and optimal licensing model were discussed only in general.

2.11 Micronesia

The Micronesia DSO roadmap was drafted at a very early stage of the DSO process, therefore few specifics of the optimal licensing model were discussed. It was recommended to determine first the

⁶ "Model B1: The spectrum rights are assigned to the multiplex operator responsible for content distribution and this entity can decide the allocation of the available capacity to individual broadcasters. In this model, the multiplex operator is selected from current terrestrial free-to-air (FTA) television broadcasters in a separate assignment procedure, by means of a "beauty contest" approach. The private multiplex operator is permitted to carry one and an additional two programmes from its own group, i.e. total three programmes including programmes from the same multiplex. The remaining multiplex capacity must carry existing analogue content in digital format from the commercial terrestrial FTA television broadcasters and/or new content provider subject to approval from the regulator." ITU Indonesia Roadmap (2013), p. iv

⁷ "The DTTB Licence terms and conditions: see MD No: 17/PER/M.KOMINFO/06/2012 on the establishment of implementation of broadcasting multiplexing and MD No: 121/KEP/M.KOMINFO/02/2012 Selection Team of Broadcasting Institution for Multiplexing Implementation on FTA fixed DTTB provides details of DTTB Licence conditions and terms.," ITU Indonesia Roadmap (2013), p. 33

agreed assignment method, specify the DTTB rollout obligations and establish site sharing rules that allow the DTTB operator(s) to access the mobile network operator facilities under certain conditions.

2.12 Mongolia

The ITU assistance to the NRT in Mongolia provided its recommendations based on the government objective of reaching ASO by 2014. As far as the optimal licensing model to be adopted is concerned, considerations were given on a shared multiplex approach to digital delivery in all parts of Mongolia as the most cost effective solution, and the necessary amendments to key regulations to ensure the management of the multiplex and equitable access on reasonable commercial terms. Key aspects of licensing and access were elaborated and discussed.

2.13 Myanmar

In Myanmar, the DSO roadmap was drafted based on the ambitious concept of setting up 250 DVB-T transmitters all over the country and implement DVB-T2 standards. The public service broadcaster in Myanmar (MRTV) planned to use UHF bands for the DVB-T2 transmitters. It was recommended to amend the relevant broadcasting and media laws and incorporate the necessary changes in the licensing framework, terms and conditions of the licence, enforcement and execution of licence conditions, incorporate multiplex ownership and sharing conditions, etc.

2.14 Nauru

The DSO roadmap designed for Nauru reported that television transmission licences were properly constituted in Nauru within the legal framework and only minor changes may be needed for new licences and for the withdrawal of analogue transmitter licences, however no more details on licence terms and conditions were agreed at the time of reporting.

2.15 Nepal

ITU assistance provided to Nepal set out the necessity of solutions to pre-existing legal issues – including re licensing- as a priority. The ‘first come first served’ model of frequency allocation, has resulted in misuse of frequency spectrum. Therefore, the legal provisions on “...the ownership of multiplex, sharing of the multiplex, law enforcement and execution, assignment procedures, licence terms and conditions, framework for building and infrastructure permits, and content regulation” were essential at the time of reporting.

2.16 Papua New Guinea

The target date for ASO in Papua New Guinea (2016-2017) was set out in the DSO roadmap, which focused on DSO objectives and enlisted the key characteristics of the various available licencing models. The introduction of a shared common free-to-air multiplex was discussed, in addition to the requirement to review existing legislation and amend relevant laws – i.e. the rights and obligations of the operator, of broadcasters sharing the multiplex, and provisions for flexible allocation of the multiplex licence (and associated transmitter licences) to either a broadcaster, a consortium of broadcasters, or an independent third party.

2.17 Philippines

The DSO roadmap set out an ambitious DSO schedule in the Philippines (mid-2014 for digital TV switch-on; mid-2014 to end of 2018 for the simulcast period; end-2018 for complete analogue switch-off). The National Telecommunications Commission (NTC) was to have developed licences and determined

the licensing model, including four licence types: a) digital replacement licence, b) multiplex licence, c) wireless infrastructures licence, and d) digital television service authorization licence. It was also recommended to use a mixed type licence Model A and Model B.

2.18 Rwanda

In Rwanda ITU has provided assistance to the design of the DSO roadmap and to the licensing of DTTB services. The follow-up report on licensing has provided detailed recommendations on the specific terms and conditions for the DTTB licence to be issued in the context of the digital value chain.

2.19 Samoa

ASO was set for 2017 and reflected in the DSO roadmap document. The primary objective was “...to expand the existing free to air (FTA) terrestrial services to be available to all members of the population, providing access to balanced, objective and impartial broadcasting services, reflecting the interests of the community”. Therefore the appropriate licensing framework- complying with licensing obligations, particularly the ability to achieve near national coverage and allowing the common multiplex operator to manage the frequency licences- was discussed and elaborated.

2.20 Sri Lanka

The DSO roadmap set out 5-6 years for the transition to digital broadcasting. It was recommended to issue two DTTB licences and thus promote competition and accommodate all current programme channels. The DSO roadmap includes references to the DTTB licence terms and conditions (Model B licence as proposed, etc.).

2.21 Swaziland

In Swaziland, ITU assistance has provided important contributions to the design of a future DSO roadmap. Several discussions on the available and optimal licensing models and regimes are included in the report, based on the existing legal and regulatory framework (the draft laws in Swaziland provided a sound foundation for establishing digital migration, being technologically neutral, with separate content and carriage, and they provide for infrastructure access and sharing).

2.22 Thailand

The DSO roadmap in Thailand provides comprehensive and detailed discussions on licensing models. The recommendations took account of potential separation of several functions within the value chain: service provisioning, with three types of service providers (public TV, community TV, and business TV); network provisioning, with the possibility of up to five network providers (six after analogue switch-off); and facility provisioning. The report also considered various aspects of the licensing framework available in Thailand, including: risk of deadlock situations; number of network licensees; definition of the scope of (legal) responsibilities; and, the complexity of the auction and tendering process.

2.23 Timor-Leste

ITU contributed to the design of the DSO roadmap in Timor-Leste. At the time of reporting the DSO process was at a preliminary stage and the duration of the transition was not agreed yet. However the key milestones (Q4/2016 digital TV switch-on, Q4/2016 to Q4/2024 simulcast period and 2025 complete analogue switch-off) were proposed and considerations on the licensing model were also elaborated (public service broadcaster (RTTL E.P) was recommended to be assigned with DTTB licence based on Model B).

2.24 Vanuatu

In Vanuatu, the primary aim of DSO was to expand the existing free-to-air (FTA) terrestrial services from two provinces to all six provinces. It was also agreed by the NRT that a new and independent entity to manage the DTTB multiplex was necessary, managing the technical standards, shared platform infrastructure, broadcasters and representing a single brand for consumers. Recommendations on licensing and on specific terms and conditions were provided.

Based on the results of the above DSO country reports, with special regard to the necessary steps to be taken in the short- and the medium-term, the issuance of DTTB licences is considered as one of the key milestone in all cases. This licensing toolkit, including a model licence can provide effective support to future ITU assistance programmes to design the licensing processes and to finalize the specific licensing terms and conditions.

3 The licensing framework

3.1 Licensing of radio spectrum

3.1.1 Licensing trends in electronic communication networks

The provision of digital terrestrial broadcasting constitutes an electronic communication service. Therefore all general provisions relevant to licensing of electronic communications are also applicable to broadcasting.

The ICT Regulation Toolkit defines *licensing* as “... authorization to build a network and/or to offer services of different kinds over a network”⁸, while providing for public purposes, typically for quality of service, against unfair or anti-competitive practices and for the protection of consumer rights. The rationale behind licensing is to manage scarce resources, as in the case of spectrum and the relevant network used for the provision of services. The major trends nowadays in licensing are triggered by convergence, rapid innovation and the spread of next generation broadband services, while the corresponding regulatory answers – and thus licensing- relate to neutrality, simplification, flexibility, and reduction of the administrative burden⁹ on providers. The aim of these licensing trends is to reflect to the constantly evolving and changing technological and market environment of ICT services and thus provide for the possibility of more flexible licensing regimes to enable responsiveness to change.

Adaptation will be critical during the coming period of broadcasting (2015-2020), as licensing of the digital dividend spectrum is challenged, especially by meeting the right balance between various and competing services, while reflecting public policies, for example, to serve the needs of those who live in remote and rural areas. As a result of digitalization, countries have either completed switch-over and are in the process of allocating the freed-up spectrum or are bringing an end to the analogue era, while looking towards the utilization of spectrum gains. To take advantage of the use of the digital dividend frequencies in the 800 MHz and 700 MHz bands, it is critical that licences issued or reviewed from now on promote innovation and the most advanced technologies and techniques to provide for the highest efficiency¹⁰: the licensing process itself should become ‘future-proof’¹¹.

⁸ ICT Regulation Toolkit 3.2 Licensing and Authorization Frameworks: www.ictregulationtoolkit.org/en/home

⁹ ICT Regulation Toolkit 3.8.1.2

¹⁰ ‘Efficiency’ refers to different aspects of spectrum utilization, including technical, economic, ‘allocation’, ‘production’ or ‘dynamic’ efficiency; ITU Guidelines (2014), p. 382-383

¹¹ ICT Regulation Toolkit 3.2

Traditionally regulators may opt for:

- auctions;
- beauty contests/public tender;
- administrative assignments; and
- flexible measures (first-come first-served, licence exemption, etc.).

The choice of the most suitable option depends on the policies and regulation lying behind the licensing process, but regulators have broad discretion to design and fine-tune the process to be implemented.

3.1.2 Licensing and radio spectrum management

Licensing of the spectrum is a critical element of the authorization process, whereby “... the national spectrum manager can choose from a mix of authorization mechanisms: traditional administrative, market-based and unlicensed spectrum - as some uses of spectrum are not licensed - and also determine the appropriate spectrum revenue and spectrum pricing objectives, policies, regulations, mechanisms, and fee schedules”¹².

The Broadband Strategies Toolkit¹³ defines the following types of wireless broadband technologies and standards, subject to different type of licensing:

- low-powered short-to-medium range communications;
- mass wireless communications;
- long-distance terrestrial backbone and backhaul microwave technologies;
- extra-terrestrial satellite microwave.

Generally, when licensing the spectrum, the policy aims and choices should be set and agreed first, accompanied by the relevant regulation. The policy options may vary from:

- stimulation of innovation;
- enhancement of competition and of consumer choice;
- regional and social considerations;
- increased economic surplus.

Meanwhile the relevant licensing methods should also reflect these objectives:

- provision of unlicensed spectrum opportunities; or
- the promotion of new market entries; or
- bid maximization methods (i.e. auctions).

However, with tensions rising from rapid technology development and innovation, market demands for more and more broadband, and the convergent and changing nature of users, regulators are faced with constant challenges of spectrum scarcity and are required to provide efficient spectrum management. This efficiency might be achieved with flexible and market-based management techniques, including:

- introducing licence free bands, thus allowing for innovation, and
- encouraging the use of innovative (i.e. smart) technologies, utilized across different spectrum categories even with relaxing technological restrictions in licensing, or

¹² ICT Regulation Toolkit 5.3

¹³ Broadband Strategies Toolkit 3.3 Spectrum Management: <http://broadbandtoolkit.org/3.3>

- introducing various economic incentives (i.e. ‘value’ based spectrum pricing).

These techniques are available also when licensing of broadcast frequencies, however the specifics of broadcasting – especially the media and aspects of freedom of speech and expression – should be considered.

3.2 Specifics of broadcast licensing

The terrestrial broadcasting platform is a unique combination of electronic communication and media, public and commercial services, therefore its social and economic significance is more far-reaching than of any other platforms. “...In many countries the terrestrial broadcasting platform is the primary means of delivering broadcasting services. It has an important role in fulfilling the obligation of universal coverage, which is often part of their public service remit. In many countries coverage of 95-98% or more of the population and free-to-air access to services are mandatory.”¹⁴

The major trends of the licensing regimes of other electronic communication networks are present in terrestrial broadcasting, however the – sometimes competing – specifics of audio-visual and media policy objectives are also prevalent globally. The old distinctions between ‘channels’ and the social impact of specific public service content are fading away, and recently, significant changes in content regulation and licensing are paving the way for a more libertarian approach even in content regulation¹⁵. Licensing of digital broadcasting generally needs new broadcasting legislation to be adopted¹⁶.

The ITU Guidelines indicates that licensing of DTTB and MTV services involves at least three types of rights: spectrum, broadcast, and operating rights. Broadcast licences grant the right or permission to broadcast television content on a defined broadcast DTTB/MTV platform in a designated geographical area and for a specified period¹⁷. The broadcast licences include – but differentiate – the granting of broadcast rights to public service broadcasting (PSB) and to commercial broadcasting.

According to UNESCO¹⁸, the overriding rationale for regulating broadcast content, distinct to the press or to on-line media, lies traditionally with spectrum scarcity, as the available number of terrestrial frequencies is always limited in contrast to the potential applicants who would wish to broadcast their content via terrestrial networks, even though digitalization has weakened this argument. This legitimates national legislation to place broadcasters under more scrutiny in terms of their obligations and set certain content-related rules when applying for the licences¹⁹. “...It is the licensing process through which governments introduce and enforce the other purposes of broadcasting regulation: the democratic, economic, cultural and consumer protection purposes.”²⁰

Broadcast licences may take the form of either individual ‘service’ licences (also referred to as programme level/linear broadcast stream licences) or complex multiplex licences (also referred to

¹⁴ EBU Position on Terrestrial Broadcasting in Europe, EBU R 131, 2010, p. 5: <https://tech.ebu.ch/docs/r/r131.pdf>

¹⁵ Broadband Strategies Toolkit 3.10, Content over Broadband

¹⁶ UNESCO Guidelines for Broadcasting Regulation (2008), p.73

¹⁷ ITU Guidelines (2014), p. 22

¹⁸ UNESCO Guidelines for Broadcasting Regulation (2008), p.11

¹⁹ One of the fundamental international regulations in this aspect is Article 10 of the European Convention for the Protection of Human Rights and Fundamental Freedoms, which stipulates that: “1. Everyone has the right to freedom of expression. This right shall include freedom to hold opinions and to receive and impart information and ideas without interference by public authority and regardless of frontiers. This Article shall not prevent States from requiring the licensing of broadcasting... enterprises. 2. The exercise of these freedoms, since it carries with it duties and responsibilities, may be subject to such formalities, conditions, restrictions or penalties as are prescribed by law and are necessary in a democratic society, in the interests of national security, territorial integrity or public safety, for the prevention of disorder or crime, for the protection of health or morals, for the protection of the reputation or rights of others, for preventing the disclosure of information received in confidence, or for maintaining the authority and impartiality of the judiciary”. This enables Member States of the Convention “...to regulate, by means of a licensing system, the way broadcasting is organized in their territories, particularly in its technical aspects” (OSCE Guide to the Digital Switchover (2010), p. 100).

²⁰ UNESCO Guidelines for Broadcasting Regulation (2008), p.11, and for more elaborated reasons on the legitimacy of broadcast content regulation, see p.11-12

as platform level/multiplex level licences)²¹. In the former licensing model (also referred to Model B) the role of the DTTB and/or MTV operator is restricted to operate the multiplex without control over the distributed content. In the latter case, (also referred to Model A) the multiplex operator has the discretion to design the content offer carried on the multiplex, typically accompanied by certain obligations, i.e. the obligation to carry PSB channels.

In both cases, the licences include several content-related terms and conditions, therefore the fundamental international norms and standards on freedom of expression, press freedom and related human rights are applicable and should be implemented, with a special emphasis to provide for a transparent, fair and democratic process. This means – inter alia – that:

- licensing criteria, prerequisites and the process should be set out in advance clearly and precisely in primary legislation;
- the process is impartial and open for the public to comment on and for the applicants to be heard;
- the process is not arbitrary and the decision on licence award is properly reasoned;
- restrictions on the form or nature of potential applicants are only eligible if they legitimate (e.g. banning political parties to apply) and limited;
- licence fees and other financial requirements are not discriminatory;
- terms and conditions of the licence to be issued are not unnecessarily restrictive to the freedom of expression;
- the duration of the licence enables broadcasters to recoup their investment; and
- judicial review is provided over the decision of the regulator^{22,23}.

The selection of the available channels on the digital terrestrial platform – either conducted by the regulator or by the DTTB/MTV operator – has significant social, cultural and economic impacts on the relevant media markets, therefore the underlying media and audio-visual policies should be carefully designed and implemented through the licensing process²⁴.

A key requirement towards digitalization remains to enhance diversity and plurality, encourage free and independent broadcasting²⁵.

3.3 Public measures to be considered in the licensing model

According to the agreed and implemented roadmap in a given country, there might be several public policies accompanying the DSO process with relevance to licensing. These policies typically relate to:

- economic/financial benefits granted to vulnerable citizens for the acquisition of the necessary means for terrestrial reception of digital broadcasting signals²⁶;

²¹ ITU Guidelines, 2.2.1

²² International standards: Regulation of broadcasting media, ARTICLE 19, 05 Apr 2012, <http://www.article19.org/resources.php/resource/3022/en/international-standards:-regulation-of-broadcasting-media#sthash.eWYIIDzu.dpuf>

²³ See also Recommendation Rec (2000)23 of the Committee of Ministers of the Council of Europe on the independence and functions of regulatory authorities for the broadcasting sector, laying down the basic conditions and criteria governing the granting and renewal of broadcasting licences (clearly defined rules governing the licensing process, open, transparent and impartial manner, transparency over the process, duly reasoned decision on awarding the Licence, judicial review, etc.)

²⁴ See e.g. the Recommendation Rec (2003) 9 of the Committee of Ministers to Member States on measures to promote the democratic and social contribution of digital broadcasting requiring Member States to ensure “...that the services on offer are many and varied, and encourage the establishment of regional/local services that meet the public’s expectations at these levels” (Appendix General Principles, 4.) and “...maintain regulation which limits the concentration of media ownership” (Appendix 2. Transition to the digital environment: the broadcasters, 18).

²⁵ OSCE Guide to the Digital Switchover (2010), p. 110.

²⁶ ITU Guidelines 3.5 End Consumer support.

- public awareness to accelerate the process²⁷; and
- reallocation of existing broadcasting spectrum, to allow the coexistence of broadcasting and other services, considering new uses for the digital dividend^{28,29}.

To achieve the optimal outcome when implementing the relevant policies, licences issued to the DTTB/MTV operators should also reflect the agreed policy aims and include the corresponding terms and conditions.

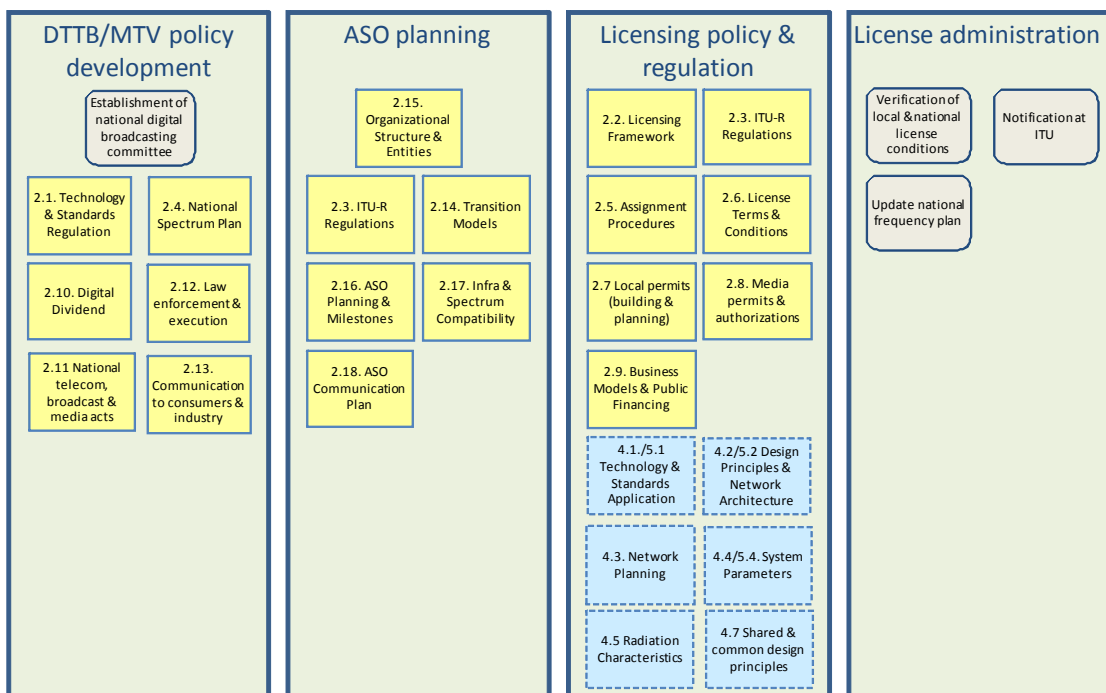
4 The DSO Licensing Toolkit

The DSO Licensing Toolkit is designed for administrations, governments and regulators to assist with their licensing process when issuing or reviewing the relevant licences for their DTTB/MTV operators. The toolkit and the model licence follow the structure and sequence of the DTTB/MTV roadmap example for the regulator³⁰. The relevance of each building block is pointed out from the licensing point of view and offers the text of a Model A licence to be used when drafting the terms and conditions of the licences.

4.1 DTTB/MTV roadmap example for regulator

A possible DTTB/MTV model roadmap and its functional block connections is described in Figure 1.

Figure 1: Functional blocks related to each of the four phases of the regulator roadmap for transition to DTTB and implementation of MTV



Source: ITU

In the following sections, the relevance of activities to the licensing procedure is highlighted and detailed.

²⁷ ITU Guidelines 2.13 Communication to end-consumers and industry and 2.18 ASO Communication plan.

²⁸ See also ITU Insights for spectrum decisions: www.itu.int/ITU-D/tech/digital_broadcasting/Reports/DigitalDividend.pdf

²⁹ ITU Guidelines 2.10 Digital dividend.

³⁰ ITU Guidelines 6.1 Roadmap for the regulator.

4.1.1 Phase 1 activities with direct relevance to licensing

4.1.1.1 National telecom, broadcast and media acts (2.11)

Table 1: Main activities related to proposing changes in national telecom, broadcast and media acts and their relevance to licensing

2.11	Proposing changes in national telecom, broadcast and media acts
1.	Make an inventory of current legislation: check compatibility of licensing regulation with DSO requirements
2.	Map inventory on DTTB/MTV introductions and compare with best practices
3.	Identify gaps and draft proposals for additional and/or changes in legislation (based on best practices): provide for legislation to enable future proof licensing
4.	Determine planning for changes in the law and determine <i>must haves</i> for launching DTTB/ASO and MTV: include changes re-licensing in <i>must haves</i>

Source: ITU Guidelines

4.1.1.2 Technology and standards regulations (2.1)

Table 2: Main activities related to the preparation of technology and standards regulations and their relevance to licensing

2.1	Preparing technology and standards regulations
1.	Carry out market research/surveys to identify industry and consumer needs for standardization
2.	Determine minimum set of receiver standards for the DTTB and MTV market, based on the market developments and the planned licensing procedures, terms and conditions
3.	Map on existing standardization policies/rules and determine additional standardization needs
4.	Assess impact on industry and end users
5.	Determine receiver requirements and include in frequency licence terms and conditions and/or media permits and authorizations: ensure that terms and conditions enabling the maximum flexibility for future technological innovation and development
6.	Determine communication messages, planning, standardization/testing bodies and methods (including logos and labelling)
7.	Update, if necessary national spectrum plan and legislation

Source: ITU Guidelines

4.1.1.3 Digital dividend (2.10)

Table 3: Main activities to identify possible allocations for the digital dividend and their relevance to licensing

2.10	Defining digital dividend
1.	Analyse current and future market developments and preferably conduct market consultation(s) in the broadcast (and telecoms) industries
2.	Assess current and future market needs for DTTB and MTV services, preferably based on formulated legislation and policies
3.	Assess available spectrum after ASO, based on ASO plans, national spectrum plan and, where applicable, ITU-R Regulations

2.10 Defining digital dividend	
4.	Map spectrum needs on available spectrum and determine priorities
5.	Draft spectrum re-farming plans and compensation schemes (for network and receiver re-tuning activities), plan reserve budgets
6.	Update national spectrum plan and align licence terms and conditions for DTTB and MTV services: reflect spectrum re-farming plans in draft licence terms and conditions if licence is to be issued and/or reviewed; ensure legal basis for future changes as a result of re-farming; avoid indemnification claims of the DTTB/MTV operator

Source: ITU Guidelines

4.1.1.4 Law enforcement and execution (2.12)

Table 4: Main activities related to reviewing national institutions and their relevance to licensing

2.12 Reviewing law enforcement and execution	
1.	Make an inventory of current regulatory bodies
2.	Map inventory on DTTB/MTV introductions and compare with best practices
3.	Identify gaps and draft proposals for additional regulatory bodies and/or changing existing bodies (based on best practice): focus on licensing procedure (scope of regulatory authority of the relevant bodies, alignment of procedural rules in case separate bodies are involved in licensing, etc.)
4.	Determine planning for either establishing new regulatory bodies or changing existing bodies and determine <i>must haves</i> for launching DTTB/ASO and MTV: include changes re licensing procedures in <i>must haves</i>

Source: ITU Guidelines

4.1.1.5 National spectrum plan (2.4)

Table 5: Main activities for updating the national spectrum plan and their relevance to licensing

2.4 Update of the national spectrum plan	
1.	Make an inventory of current spectrum use in the broadcast bands (bands III, IV and V)
2.	Register use and provide rules for self-registration: register current licence terms and conditions with relevance to ASO and utilization of digital dividend
3.	Carry out market analyses and consultations and forecast future spectrum needs
4.	Determine re-farming needs and assess impact on existing and future users (including service and financial impact), possibly reserve budget for re-farming efforts and damages: identify necessary changes to the terms and conditions of licences issued
5.	Determine publication content, dates and formats for the national spectrum plan
6.	Determine budget for spectrum management and administrative fees

Source: ITU Guidelines

4.1.1.6 Communication to consumers and industry

Table 6: Main activities related to communication to end consumers and their relevance to licensing

2.13 Communication to end consumers and industry	
1.	Make an inventory of communication scope

2.13 Communication to end consumers and industry	
2.	Determine the key communication moments and topics
3.	Determine communication tools for each target group/audience: define obligations of the DTTB/MTV operator in communicating to consumers and industry, and include in licence terms and conditions
4.	Instruct communication bodies and committees

Source: ITU Guidelines

4.1.2 Phase 2 activities with direct relevance to licensing

4.1.2.1 Organizational structures and entities (2.15)

Table 7: Main activities related to the establishment of organizational structures and entities and their relevance to licensing

2.15 Establishment of organizational structures and entities	
1.	Ensure for clear mandate on licensing procedures
2.	Form or extend special purpose organisational structures
3.	Implement budgetary and communication means (air-time, website, etc.)

Source: ITU Guidelines

4.1.2.2 ITU-R Regulations (2.3)

Table 8: Main activities related to checking of ITU-R Regulations and their relevance to licensing

2.3 Checking ITU regulations	
1.	Determine applicability and implications of ITU Radio Regulations and the GE06 plan (where this applies), on (a) the planned national DTTB and MTV services and (b) ASO (possibly indicated in the national spectrum plan) and (c) the operational DTTB/MTV, DAB and analogue TV services.
2.	Determine necessary changes to planned licensing procedures, terms and conditions for DTTB and MTV services and ASO plans: provide for <i>future proof</i> licensing
3.	Determine necessary changes to assigned frequency (and possibly content) licences for operational DTTB, MTV, DAB and analogue TV services: minimise compensation needs and provide for <i>future proof</i> licensing.
4.	Determine necessary changes/exemptions to the GE06 plan where this applies
5.	Preferably, determine necessary budget for compensation and network retuning activities

Source: ITU Guidelines

4.1.2.3 Transition models (2.14)

Table 9: Main activities related to defining transition models and their relevance to licensing

2.14 Defining transition models	
1.	Check existing legislation and policies for public and commercial television service (e.g. FTA) and coverage stipulations (e.g. nationwide coverage)
2.	Check ITU-R Regulations and any existing/formulated receiver regulations for impact on ASO

2.14 Defining transition models	
3.	Carry out market research on ASO affected viewers/listeners. Identify any hidden viewers/listeners (second television sets, regional programming, prisons, etc.), Identify impact and risk areas
4.	Analyse and assess complexity and size of network modifications and receiver transitions
5.	Consult on ASO with content aggregators (esp. public broadcaster) and consumer associations
6.	Decide transition model (simulcast period and ASO phasing): assess impact on licensing procedure

Source: ITU Guidelines

4.1.2.4 ASO planning and milestones (2.16)

Table 10: Main activities related to setting up ASO planning and miles stones and their relevance to licensing

2.16 Setting up ASO planning and milestones	
1.	Draft comprehensive ASO planning (milestones and activities) and assign tasks and responsibilities (including core project management team): focus on timely licensing procedure
2.	Establish ASO project monitoring framework and reporting structure
3.	Identify ASO project risks and draft risk mitigation plans (including fall back and/or roll back scenarios)

Source: ITU Guidelines

4.1.2.5 Infrastructure and spectrum compatibility (2.17)

Table 11: Main activities related to identifying infra and spectrum compatibility and their relevance to licensing

2.17 Identifying infrastructure and spectrum compatibility	
1.	Check legislation, ITU-R Regulations, national spectrum plan and establish service priorities and acceptable interference levels
2.	Assess available antenna space and sites and site/antenna sharing possibilities/options
3.	Calculate interference levels, service coverage and check EMC compatibility
4.	Develop site transition scenarios (including temporary installations and sites)
5.	Assess costs, time lines and service impact: assess potential impact on licensing

Source: ITU Guidelines

4.1.2.6 ASO communication plan (2.18)

Table 12: Main activities related to drafting ASO communication plan and their relevance to licensing

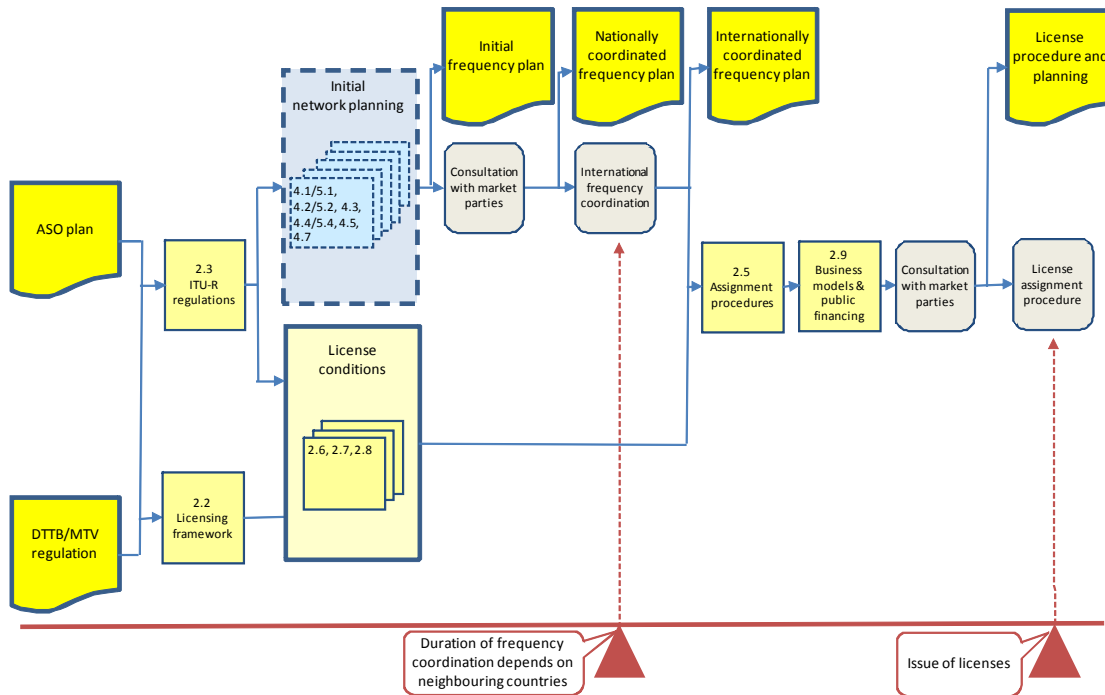
2.17 Drafting ASO communication plan	
1.	Draft communication plan (including target audiences, timing, means, etc.): define obligations of the DTTB/ MTV operator in communicating to consumers and industry, and include in licence terms and conditions
2.	Continuous alignment with ASO planning
3.	Determine and establish compensation schemes and systems, include this in communication plan

Source: ITU Guidelines

4.2 Assignment and licensing policy and regulation

Inputs to the licensing policy and regulations will result from phase 1 and phase 2 of the roadmap. The assignment procedure followed by the regulator determines the key characteristics of the licences to be issued. However the detailed terms and conditions of the licences bear also significant importance.

Figure 2: Phase 3 of the roadmap: a scenario for licensing policy and regulation



Source: ITU

The activities related to the design of the licensing framework enable the regulator to get prepared for the licensing process³¹. Individual licence conditions will be defined as a result of various activities related to formulating licence terms and conditions³², to drafting policies for local permits³³ and to the drafting of media permits and authorizations³⁴. Meanwhile – on the basis of the defined licence conditions – the formulation of the assignment procedures will be enabled leading to the issuance of the relevant licences.

³¹ 1. Make inventory of current licensing framework and check applicability for DTTB and MTV service introductions; 2. Assess and evaluate different options for licensing DTTB and MTV services; 3. Assess compatibility with ASO plans and national spectrum plan; 4. Draft planning for licence assignment, framework changes and update national spectrum plan (and possibly legislation); ITU Guidelines

³² 1. Check relevant paragraphs/entries in legislation/policies, ASO plans, national spectrum plan; 2. Analyse market conditions and assess 'level-playing-field' requirements/provisions; 3. Determine DTTB/MTV licence Terms and Conditions and align with local Building permit policies and Media permits/authorizations and their planning; 4. Update national spectrum plan (and possibly ASO plans); ITU Guidelines.

³³ 1. Check relevant paragraphs/entries in legislation/policies and Licensing Framework for DTTB and MTV service introductions; 2. Determine and align Building permit policies with intended DTTB/MTV licence Terms and Conditions; 3. Publish policies for DTTB/MTV planning and building permits (may include waivers); 4. Possibly conduct local hearings and/or expert investigations which may result in changes in permitted spectrum usage/transmitter site parameters (and delays); 5. Monitor actual transmitter site operations and check/test emitted radiation; 6. Possibly update national spectrum plan; ITU Guidelines.

³⁴ 1. Check existing media legislation, Policies and Licensing Framework; 2. Check Technology and Standards Regulation (receiver regulations) and include in media permits policies; 3. Determine Media permits/authorizations and procedures and align with DTTB/MTV licence Terms and Conditions and planning; 4. Publish policies for media permits and authorizations (may include waivers); ITU Guidelines.

Table 13: Elementary steps in an assignment procedure

Step	Description	Objective	Activities/Results	Licensing procedure and issue of licences
1	Formulate detailed assignment policy	Determine assignment instrument and procedure for DTTB and MTV spectrum licences	<ul style="list-style-type: none"> Carry out market consultation and survey Determine available frequencies and bandwidth Determine number of licences Determine licence duration Establish general licence terms and conditions Determine primary assignment instrument 	<ul style="list-style-type: none"> Prepare for x number of licensing procedures Draft general licence terms and conditions and prepare draft individual licences Publish licensing process details and timing of process
2	Set up assignment planning and schedule	Determine key milestones in DTTB and MTV licensing procedure	<ul style="list-style-type: none"> Determine completion date for application document Determine opening of licence application Determine duration of appraisal phase Determine final assignment date 	Align procedure with other necessary authorizations (e.g. media licences/permits, construction permits, etc.)
3	Draw up and publish procedure for granting the licence	'Translate' the detailed assignment policy into frequency management items	<ul style="list-style-type: none"> Define procedure, including possibilities to ask clarification and/or questions, appeal procedures, etc. Define assignment instrument (e.g. type and design of auction) Formulate admissibility requirements (i.e. minimal requirements to qualify) Formulate technical system requirements (e.g. radio interfaces and/or broadcast system) Formulate service requirements (e.g. number of channels, roll-out pace, etc.) Define detailed licence terms and conditions 	Prepare scenarios for different procedural outcomes: appeals, judicial review, interim licences, alignment of issuance of DTTB/MTV licences with the issuance of potentially necessary media/content permits/licences, etc.
4	Collect applications	Collect completed and on time submitted applications (application acceptance)	<ul style="list-style-type: none"> Check whether all received applications are complete Return incomplete applications Check whether all corrected applications have been received 	Provide for appeal and judicial review at each significant phase where a decision in merit is made about the application

Table 13: Elementary steps in an assignment procedure (continued)

Step	Description	Objective	Activities/Results	Licensing procedure and issue of licences
5	Appraise applications	In case of public tender: select the best plan (i.e. plan that most closely matches requirements/objectives) In case of auction: select qualified bidders	Evaluate all accepted applications for admissibility/qualification (threshold) Evaluate and score all qualified applications on technical requirements (threshold) Evaluate and score applications on service requirements (threshold) Carry out comparative evaluation (only for public tendering) Announce best bid (only for public tendering) Announce qualified bidders (only for auctions) Handle any objections or complaints	Re-draft individual licence terms and conditions and align with best bid details (only for public tendering)
6	Assign spectrum rights (and obligations)	Assign the available DTTB or MTV licences	Organize auction (auctioneers, location and bidding facilities – might be computer based) (only for auctions) Register and instruct bidders (including assign anonymity to bidders) (only for auctions) Collect up-front payments (if any) (only for auctions) Stop, pause, and close auction (only for auctions) Collect down payment (could be in instalments) (only for auctions) Assigning frequencies by issuing the licence (both auction and tender)	Issue individual licences Prepare for appeal and judicial review processes Prepare for possible scenarios as a result of appeal and/or review processes

Source: ITU Guidelines

4.2 Licensing of DTTB/MTV operator in the commercial market

4.2.1 The basic licensing models

This part of the study (together with the Annex) provides regulators with the necessary detailed assistance when drafting the relevant licences for the DTTB/MTV operator. The steps to be taken are based on recommendations in the ITU Guidelines (sections 2.2, 2.5, 2.6, and 2.8).

The ITU Guidelines focuses on the licensing framework and assignment models for DTTB and MTV in the commercial market because licensing of public broadcasters generates more unique characteristics than general characteristics. However, several elements of commercial DTTB/MTV draft licences could be used for licensing PSBs as well. The value chain for DTTB/MTV services in the ITU Guidelines comprises six basic functions.

Figure 3: Functions/players in the digital value chain

Content Creation	Content Aggregation	Multiplex Operations	Service Provisioning	Content Distribution	Reception
Create content and services	Aggregate content and service into customer oriented packages and service streams	Divide available spectrum in capacity units and allocate to (type of) services	Support or enhance the operations and marketing of content and services	Provide infrastructure or manage access to or delivery of the content	Provide decoding, navigation and interfacing equipment or software
	Manage advertisers, agencies and advertising space		Manage client relationship and invoice services		

Source: ITU

The two basic licensing models for DTTB and MTV services are:

1. *Model A:* The multiplex operator is assigned with spectrum, operating and broadcast rights to enable multiplex operations, service provisions and content distribution, and is entitled to allocate the capacity of the multiplex to broadcasters and to other service providers.

Figure 4: Functions/players in the digital value chain in Model A and B

Content Creation	Content Aggregatio	Multiplex Operations	Service Provisionin	Content Distribution	Reception
Create content and services	Aggregate content and service into customer oriented packages and service streams	Divide available spectrum in capacity units and allocate to (type of) services	Support or enhance the operations and marketing of content and services	Provide infrastructure or manage access to or delivery of the content	Provide decoding, navigation and interfacing equipment or software
	Manage advertisers, agencies and advertising space		Manage client relationship and invoice services		

2. *Model B*: The operator acts only as content distributor with assigned spectrum rights. Media permits and/or authorizations in this model are assigned to individual broadcasters and/or service providers in a separate assignment procedure.

As most DTTB/MTV assignment models are derived from these two basic models and vary in the degree to which the frequency licence holder can also manage the capacity of the multiplex, a model licence for 'Model A' (see Annex) can also be used as a Model B licence, altering the conditions of spectrum and broadcast rights. The different objectives of the regulator (e.g. spectrum management, enhancement of competition, environmental and media/pluralism related) will be decisive when implementing the different models or their variations.

4.2.2 The model licence

The model licence in the Annex has been prepared as a checklist and draft text for administrations, national authorities and agencies when licensing DTTB and/or MTV services. The model licence for signal distribution, network operation, multiplexing, and related service provision, assumes that the licensee acts as multiplex operator, service provider, and content distributor³⁵ to provide the full range of potential DTTB and/or MTV services. Therefor the licensee is assigned with the relevant spectrum rights, broadcast rights³⁶, and operating rights.

The other main assumptions applied in the model licence are:

- the model licence focuses on the licensing framework and assignment models for DTTB and MTV in the commercial market, as licensing of public broadcasters has more unique than general characteristics;
- the model licence assumes (for simplifying the model) that one licensee is assigned for all available DTTB and MTV capacities/frequencies³⁷;
- the model licence is elaborated for Model A (as defined by the ITU Guidelines³⁸), since Model B can more easily be derived from this structure, than the other way around;

³⁵ In certain cases, these rights can be allocated to different licensees.

³⁶ See the notes in the reference table on the definition of the scope of 'broadcast right' as interpreted in this report.

³⁷ It has to be noted, DTTB and MTV services are not necessarily combined in one license, they may be separated. In case of assigning MTV capacities, the licensor has to check whether a level playing field is maintained with 4G licensees which more and more also broadcast the same TV services.

³⁸ ITU Guidelines 2.2.1. General licensing framework for television services, p. 24;

- the model licence focuses on DSO and ASO, but under licence conditions also addresses some later key events; (a) spectrum re-farming (moving DTTB services out of the 700 MHz band) and (b) migrating to a second generation transmission standard (like DVB-T--> T2);
- the model licence assumes that the licensee is also in 'charge' of analogue broadcasting.

Despite the above assumptions, the main element of the model licence can be applied. The model licence is *a potential* licensing instrument allowing for a broad discretion of licensors to use, alter, amend its text or structure, and thus derive the relevant elements for their chosen licensing model.

4.2.3 References to the Model A licence according to the ITU Guidelines

The ITU Guidelines provides detailed recommendations on licence terms and conditions³⁹. The model licence incorporates these recommendations as shown in Table 14.

Table 14: Reference table for the model licence

ITU Guidelines Recommendations	Reference to the model licence	Notes
Granting of licence:	General: ARTICLE 2	
legal basis of the licence;	ARTICLE 1: Recitals 1.1 References	
the licensing starting and termination dates;	ARTICLE 3: The licence period	
definitions (of terms used in the licence).	ARTICLE 1: Recitals 1.2 Terminology	
Spectrum right:	General: ARTICLE 2 and 6	
avoiding interference;	ARTICLE 6: The licensee's obligations 6.1 Obligation to comply with technical requirements	
applying proper (and possibly certified) transmitter equipment;	ARTICLE 6: Licensee's obligations 5.1 Main parameters of frequency allocation 5.2 Issue of radio permits 6.1: Technical requirements	
complying with health and safety measures (for own personnel and the public);	ARTICLE 2: The licence 2.2 The contents of the operating right	
reporting transmitter activation and cooperating with inspection;	ARTICLE 8: Deployment of the network(s) and access to the licenced service 8.1 Deployment of the network(s) and ARTICLE 9: Reporting and controlling 9.3 Controlling	
providing information to the regulator.	ARTICLE 9: Reporting and controlling	

³⁹ ITU Guidelines 2.2.2. Licensing framework for DTTB and MTV, p. 25; 2.6.2 Frequency licence terms and conditions, p. 75 and 2.8. Media permits and authorizations, p. 63

ITU Guidelines Recommendations	Reference to the model licence	Notes
Broadcast Right (platform level):	General: ARTICLE 2 2.2 The contents of the Broadcast Right	In this report (and in the model licence) the term 'Broadcast Right' is defined as the right to distribute on the multiplex platform individual programmes /channels or a bouquet of programmes/channels, and the licensee is provided with this right in order to operate as Content Distributor as well. The 'Right to communicate to the public' specific linear audio-visual content is subject to media permits and/or authorizations.
the obligation to provide a defined portfolio of television services (including 'must carry/ provide' and 'price cap' rules);	ARTICLE 6: The licensee's obligations 6.4 Content related obligations and ARTICLE 7: Pricing mechanisms of the Licences Service The fees applicable to Must-Carry Broadcasters	
service level obligations (including aspects like broadcast standards, geographical/ population coverage, service/network availability, allocated bandwidth/multiplexes per service) – see at Operating Rights b) .	b) See at Operating Rights b).	
Operating Right:	General: Article 2: The Licence 2.2 The contents of the Operating Right	
the obligation to provide television services within a certain time frame (roll-out obligations);	ARTICLE 8: Deployment of the network(s) and access to the Licenced Service 8.1 Deployment of the network(s) 8.2 Access to the Licenced service	
interoperability and technical standards;	ARTICLE 6: Licensee's obligations 6.1 Obligation to comply with Technical Requirements 6.2 Obligation on compression standard to be implemented 6.3 Obligation on transmission standard to be implemented 6.12 Obligation on interoperability 6.1: Technical Requirements	
service level obligations, including aspects like broadcast standards, geographical/ population coverage, service/network availability, allocated bandwidth/multiplexes per service, etc;	ARTICLE 6: The Licensee's obligations 6.2 Obligation on compression standard to be implemented 6.3 Obligation on transmission standard to be implemented 6.6 Contracting obligations 6.8 Obligations related to the extension of associated digital services	
the obligation to provide site and antenna sharing.	ARTICLE 2: The Licence The contents of the Operating Right ARTICLE 6: The Licensee's obligations 6.13. Obligation to provide site and antenna sharing	
Exercise of spectrum rights	ARTICLE 2: The Licence 2.5 The Role of a Subcontractor	
Spectrum trading and sharing	ARTICLE 13: Transferability of the Licence	

ITU Guidelines Recommendations	Reference to the model licence	Notes
Licence fees	General: ARTICLE 4: Fees payable by the Licensee	
covering (a part of) the costs for spectrum management and monitoring;	ARTICLE 4: Fees payable by the Licensee 4.3. Frequency Fee	
recouping market value, i.e. additional fees based on the market value of the licence, for example a percentage of the revenues realized in certain years of operations.	ARTICLE 4: Fees payable by the Licensee 4.1 One-off Licence Fee 4.2 Annual Revenue Based Licence Fee	
Licence duration and renewal	ARTICLE 3: The Licence Period	
Modification, revocation and termination	ARTICLE 10: Sanctions of misconduct and causes for withdrawal of the frequency permit 10.1 Causes of revocation of the Licence ARTICLE 11: Modification of the Licence	
Complaints received from the public	ARTICLE 6: The Licensee’s obligations 6.15 Obligations on Quality of Service and on general terms of services 6.18 Publication obligation on consumer complaints	
Content and copyrights	ARTICLE 14: Miscellaneous provisions 14.4 Content and Copyrights	

Abbreviations

ASO	Analogue Switch-off
BC	Broadcasting
CAS	Conditional Access System
DSO	Digital Switch Over
DTTB	Digital Terrestrial Television Broadcasting (synonym to DTV)
DTV	Digital Terrestrial Television (synonym to DTTB)
DVB-H	Digital Video Broadcasting – Handheld (MTV standard)
DVB-T2	Digital Video Broadcasting – Terrestrial 2 nd generation (DTTB standard)
EPG	Electronic Programme Guide
GE06	Geneva 2006 Agreement (Digital broadcasting plan in VHF and UHF in parts of Region 1 and 3)
ITU	International Telecommunication Union
ITU-R	ITU – Radiocommunication Sector
Mbit/s	Megabits per second
MPEG	Moving Picture Expert Group
MTV	Mobile Television
SDTV	Standard Definition Television
UHDTV	Ultra High Definition Television
UHF	Ultra High Frequencies (300 – 3000 GHz)

References

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Annex: The Model Licence

Disclaimer

It is to note that the recommendations provided in this model licence for content distribution, network operation, multiplexing and related service provision (hereinafter: the Model Licence) lack any binding effect. Administrations, the competent national authorities and agencies are free to evaluate the findings and recommendations of this document and they are in the position to decide upon their sole discretion whether to adapt or set aside the solutions provided here.

The information and templates provided herein are not intended, and should not be taken, as legal advice on any particular set of facts or circumstances.

The outcome of the efforts taken at the national level for digital switchover Licence can depend on a variety of factors - including the specific factual and legal circumstances and often, unexpected developments. As a consequence the information and solutions provided in the framework of this exercise do not guarantee the optimal results.

The model document provided in the framework of this exercise may require amendments and certainly need fine-tuning and adjustment to the national and local circumstances.

Introduction

Licensing may take the form of unilateral granting of rights by the Licensor ('Licence') or incorporated into a bilateral agreement ('authority contract'). The Model Licence provided herewith follows the structure of a unilateral declaration by the Licensor and serves as a checklist and a practical guideline for the Administrations wishing to grant or review licences for DTTB and MTV services.

According to international standards, at least the following licensing criteria should be made publicly available:

- a) all the licensing criteria and the period of time normally required to reach a decision concerning an application for a licence; and
- b) the terms and conditions of individual licences.

The reasons for the denial of a licence should be made known to the applicant upon request.

Assumptions

The main assumptions applied in the Model Licence are:

- the Model Licence focuses on the licensing framework and assignment models for DTTB and MTV in the commercial market, as licensing of public broadcasters shows more unique than general characteristics;
- the Model Licence assumes – to simplify the model- that one Licensee is assigned for all available DTTB and MTV capacities/frequencies¹;
- the Model Licence is elaborated for Model A (as defined by the ITU Guidelines²), since Model B can more easily be derived from this structure than the other way around;
- the Model Licence assumes that the Licensee acts as
 - Multiplex Operator,

¹ DTTB and MTV services are not necessarily combined in one licence, they may be separated. When assigning MTV capacities, the licensor has to check whether a level playing field is maintained with 4G licensees which more and more also broadcast the same TV services.

² ITU Guidelines 2.2.1. General licensing framework for television services, p. 24;

- Service Provider and,
- Content Distributor³;
- the Model Licence focuses on DSO and ASO, but under Licence conditions also addresses some later key events; (a) spectrum re-farming (moving DTTB services out of the 700 MHz band) and (b) migrating to a 2nd generation transmission standard (like DVB-T--> T2);
- the Model Licence assumes that the licensee is also in 'charge' of analogue broadcasting.

Despite the above assumptions, either in case of Model B, or having more potential licensee, the main element of the Model Licence can be applied.

ARTICLE 1: Recitals

1.1 References

In this chapter all relevant legal and policy documents should be referenced (Broadcasting/Media Law, Electronic Communication Act, Digital Switchover Policy, etc.) and explicitly stated, what other sources of obligations, conditions, requirements are specifically recalled by the Licence (e.g. call for proposal, Bid Book, other tender documents, binding offers submitted by the Applicant/Licensee, etc.).

1.2 Terminology

This section of the Licence should list and define all relevant terms referred in the Licence, in accordance with the applicable laws and regulations. Furthermore, the terminology should define the roles of the Licensee in the value chain, presented in line with the definitions of the ITU Guidelines (2014) and should cover at least the following functions:

- *multiplex operations,*
- *service provision, and*
- *content distribution.*

Source: ITU

It should also be noted that the various functions – typically of the multiplex operator and of the service provider – can be aggregated into one entity/organization, while others might be outsourced. However, the terminology defined by the Licence should include reference to *all* possible roles within the value chain.

1.3 General purpose of the Licence

The general purpose of the Licence is to grant permission to the Licensee to provide DTTB and/or MTV services within the territory of [*Name of the country*] in accordance with the relevant local and international regulations.

³ In certain cases, these rights can be allocated to different licensees.

1.4 Priority of Licence

The provisions of the Licence shall prevail, if there is any contradiction between the provisions of the Tender Documents, the Bid Book, or any other statement or agreement made during the Tender procedure and the Licence.

1.5 Tasks and obligations of the Licensor

1.5.1 Fair and unbiased treatment

The Licensor is obliged to proceed vis-a-vis the Licensee according to the principle of fair and unbiased treatment when exercising its rights under the Licence and statutory provisions of laws.

1.5.2 Open, transparent and controllable procedures

In its own scope of authority, under the framework of the statutory provisions of laws, the Licensor ensures that any procedures concerning the Licensee's rights, obligations and activities will be unbiased, transparent and controllable.

ARTICLE 2: The Licence

2.1 The Licence

The Licensor in exercise of the powers conferred upon it by [referring to the relevant act or law] hereby grants to the "Licensee" a licence (the "Licence") subject to the conditions set out in the terms and conditions of the Licence (the "Conditions") and in the Appendices (the "Appendices"), to provide [DTTB and/or MTV services] – including multiplex operations, service provisioning and content distribution- as specified (the "Licensed Service"). The Licensee shall provide the Licensed Service for the period as specified in Article 3 ("Licence Period") in the coverage area specified in the Appendices ("Licensed Area") and in accordance with the Conditions.

Under this Licence the Licensee is entitled to roll out and operate (*inter alia* to establish, install and use the radio transmitting stations) [*Number of digital networks*] digital television broadcasting networks within the Licensed Area, for the Licensed Period, for the transmission of the digital terrestrial audio-visual services, by means of exercising the following rights:

- operating rights,
- spectrum rights,
- broadcast rights.

2.2 The contents of the Operating Right

The Licensee is granted with the following operating rights to roll out and operate a broadcasting infrastructure within the Licensed Area, for the Licence Period:

- implementation and roll out of the digital broadcasting network and broadcasting transmitter with technical parameters determined in the Tender Documents or by the Licensor in the Bid Book (e.g. the Licensee shall ensure that the licensed services are transmitted from the stations specified on each day of the week),
- extension of content distribution service, associated digital service and other electronic communications service (particularly multiplex technical service) on the network for content or

electronic communications service providers (particularly multiplex technical service providers), content providers, and associated digital service providers; and

- other relevant services.

The operating rights of the Licensee can potentially be subject to different limitations, e.g.:

- service level obligations (including aspects like broadcast standards, geographical/population coverage, service/network availability, allocated bandwidth/multiplexes per service, etc.);
- infrastructure sharing obligations
 - site sharing (including transmitter capacity), and
 - antenna sharing.

The Licensee must comply with the relevant national and international (e.g. IFC⁴) sustainability and performance standards, with special respect to pollution, environmental and health hazards.

2.3 The contents of the Spectrum Right

The Licensee is granted with the rights to have access and use part of the radio spectrum on the basis of the transmission plans⁵ submitted by the Licensee and under a frequency allocation procedure carried out by the Licensor, within the Licensed Area, for the Licence Period, in order to exercise operating and broadcast rights specified in the Licence.

Nothing in this Licence shall constitute or imply any warranty, representation or obligation on the part of the Licensor as to the size or location of the areas actually capable of receiving the programmes in the Licensed Service provided by the Licensee pursuant to the Licence, shall not be capable of reception in the whole or any part of the Licensed Area.

The Licensee shall use its reasonable endeavours to:

- extend, where reasonably practicable, the Coverage of the Licensed Service; and
- ensure that the coverage extension referred to above is coordinated with the Licensor.

2.4 The contents of the Broadcast Right

The Licensee is granted with the rights to broadcast linear audio-visual television programmes of licensed/authorized Content Aggregators on the network(s) within the Licensed Area for the Licensed Period. This right entitles the Licensee *inter alia* for the extension of content distribution service, associated digital service and other electronic communications service directly to the subscribers and/or to the users charge-free or for a subscription fee and extension of content distribution service, associated digital service and other electronic communications service (particularly multiplex technical service) on the network for other Content Distributors, Content Aggregators or electronic communications service providers (particularly multiplex technical service providers) and associated digital service providers.

The Licensee is entitled to the allocation of the available capacity- thus managing the bandwidth of the multiplex- to Content Aggregators of linear audio-visual television programs and/or programme bouquets beyond the specified must carry obligations.

⁴ International Financial Corporation Performance Standards on Environmental and Social Sustainability, 1 January 2012, www.ifc.org/wps/wcm/connect/115482804a0255db96bffd1a5d13d27/PS_English_2012_Full-Documents.pdf?MOD=AJPERES

⁵ The rights are typically defined in frequency tables stipulating the maximum allowed transmitting powers (ERPs), transmitter locations/sites and geographical area in which a specified frequency can be used (ITU Guidelines).

The Licensee shall be ensured that the Content Aggregators are holders of all necessary media permits and/or authorizations for the transmission of their programmes on the licensed network.

2.5 The Role of a Subcontractor

The Licence shall be allowed to unbundle the value chain and outsource the function of a service provider, multiplex operator or network operator to enhance the efficiency of its activities, provided that the Licensee shall retain sole responsibility for fulfilling the obligations.

2.6 Modification of the Licence

The Licensor has the power to make modifications and/or alterations to the Licence if the following conditions are met:

- any modification or alteration shall be carried out in an objective and non-discriminatory manner;
- it is necessitated by a requirement to comply with the provisions of any statutory laws which is relevant to the Licence;
- it is necessitated by a requirement of technological development or change.

Licensee may also apply to the Licensor for alteration of any term of his Licence and the Licensor has the right to effect such alterations if it considers it appropriate to do so, having due regard to the provisions of statutory legal provisions in force.

2.7 Transferability of the Licence

The Licence is not transferable except with the prior consent in writing of the Licensor.

ARTICLE 3: The Licence Period

3.1 The duration of the Operation Right

The Licensee obtains the Operation Right on the day of signing the Licence.

The Licensee obtains the Operation Right for a period of [*Number of years*] years from signing the Licence.

3.2 The duration of the Spectrum Right

The duration of the Spectrum Right is adapted to the duration of the Operation Right having regard to the fact that the Licensee obtains the Operation Right on the day of performing its payment obligation relating to the One-off Licence Fee, and terminates without any special notice upon the termination of the Operation Right.

3.3 The duration of the Broadcast Right

The duration of the Broadcast Right is governed by the provisions applicable to the Spectrum Right.

3.4 Renewal of the Licence

The Licensee may apply to the Licensor for renewal of the Licence not later than [*Number of months*] months before the expiry of the Licence. If the Licensee makes an application for renewal, the Licensor may require the Licensee to implement further technical requirements defined by the Licensor as well as specify a percentage of the revenues of the Licensee as the percentage for each accounting period of the Licensee, that will be payable by him during the period for which the Licence is to be renewed. The Licensor shall only refuse an application for renewal of the Licence by the Licensee if:

- the Licensee has failed to comply with any of the Conditions in this Licence; or
- the Licensee fail to meet the technical requirements notified to the Licensee or
- the Licensor is not satisfied that the Licensee would, if the Licence were renewed, provide a service which complied with the conditions to be included in the Licence, as renewed.

If the Licensee fails to renew its Licence or whose application for renewal is rejected by the Licensor, shall cease to have any legal authority to continue to operate or install the Licensed Service.

ARTICLE 4: Fees payable by the Licensee

The fees payable by the Licensee are:

- One-off Licence Fee,
- Frequency Fee, and
- Annual Turnover Based Fee (optional element to be considered in case of a beauty contest).

4.1 One-off Licence Fee

The Licence Fee to be paid once is [*Total amount of the One-off Licence Fee*]. The Licence Fee is not refundable in case of suspension or revocation of the Licensee for failure to fulfil any Licence obligation.

The One-off Licence Fee is payable within [*Number of days*] days from the date of the issuance of the Licence.

4.2 Frequency Fee

The amount and the conditions of the Fee the Licensee should pay for the use of the frequencies are calculated on the basis of 'Administrative Incentive Pricing' or 'Reflecting the Costs of Spectrum Management' mechanisms.⁶

The Frequency Fees are payable until [*Exact Calendar Date*] of each calendar year under the validity of the Spectrum Right, and the last annual fee is payable until [*Exact Calendar Date*] in the year following the expiry of the Spectrum Right.

4.3 Annual Revenue Based Licence Fee

The Licensee shall pay to the Licensor in respect of each accounting period of the Licensee falling within the Licence Period the amount representing the Annual Revenue Based Licence Fee. Annual

⁶ The exact formula used for fee calculation should be in accordance with the available general legal provisions on spectrum charging.

Revenue Based Licence Fee is [Figure] % of the share of revenue attributable to the Licensee for his last complete accounting period.

Revenues should be defined as the Licensee's revenues from sales as determined in the provisions of the relevant accounting provisions that originate from services provided under the operation right, spectrum and broadcast rights. The base of the Annual Revenue Based Licence Fee shall be calculated by consolidating the relevant income of the Licensee and economic association(s) engaged in a management partnership with the Licensee, if the Licensee extends any service(s) described above through other economic association(s) engaged in a management partnership with the Licensee.

The Licensee shall send to Licensor each year its own audited annual report and the audited annual report of economic associations being under its management, engaged in activities under the operation, spectrum and broadcast right, containing a detailed breakdown of income. Licensor or the auditor assigned by the Licensor may check sales revenue data. The Licensee shall supply the Licensor with all available data for such audit.

The Annual Revenue Based Licence Fee is payable subsequently each year within [Number of days] days from the date of adoption of the Licensee's audited annual report, but at latest until [Exact Calendar Date] of each calendar year under the validity of the Operation Right, and the last yearly fee is payable until [Exact Calendar Date] in the year following the expiry of the Operation Right.

The Licensee shall take no action to deliberately decrease or "conceal" its sales revenues. Violation of this point shall be classified as material violation of the contract.

4.4 Sanctions on the Licensee's defaults concerning the payment of fees

The Licensee should provide for a bank guarantee up to the sum of the foreseen payment obligations of the above fees ("Bank Guarantee"). The base sum of coverage of the Bank Guarantee serving as a guarantee for the Annual Revenue Based Licence Fee shall be determined in the first year of the Licensed Period on the basis of the sum of sales revenues in the business plan submitted by the Licensee, and from the second year on the Licensee's actual sales revenues in the preceding year.

The base sum of coverage of the Bank Guarantee serving as a guarantee for the Frequency Fee shall be determined in the first year of the Licensed Period in accordance with the network implementation schedule submitted by the Licensee, and after the overall implementation of the networks according to the actual Frequency Fee payable by the Licensee.

Under the validity of the Licence, the Licensee shall continuously renew the Bank Guarantee ensuring two-times the base of the above calculations or provide a Bank Guarantee that ensures constant coverage without renewal for the Licensed Period.

If the Licensee is late with the payment of any part of the above fees the Licensor may apply - at discretion- any or all of the sanctions below:

- draw the Bank Guarantee up to the sum of fees unpaid and their late interest;
- enforce any damages not covered by the Bank Guarantee against the Licensee;
- terminate the Licence with immediate effect.

ARTICLE 5: Allocation of frequencies

5.1 Main parameters of frequency allocation

The Licensee is granted with the right to use the frequencies as designated by UHF channel numbers in the Appendices (“Frequencies”) and as allocated in the Appendices on the basis of the transmission plans submitted by the Licensee including the radio transmitting stations and/or apparatus (“Radio Equipment”) established, installed and used for the Licensed Service and in accordance with the applicable laws and other relevant statutory regulations.

The allocation of the Frequencies should contain:

- identification of the network and the legal title for the use of it;
- transmitter locations and powers (e.g. TX location coordinates, ERPs per frequency, antenna height above ground level, horizontal radiation pattern, vertical radiation pattern, etc.);
- a reference that the frequency allocated can be exchanged with another frequency ensuring technical and service parameters aligned on the network or the Radio Equipment;
- the technical conditions and specifications of implementing and operating the Radio Equipment;
- the number and date of execution of the Licence;
- the system of conditions determined in respect of the Spectrum Right of the Network, the Radio Equipment and the Frequencies;
- any conditions determined in a separate statutory regulation.

5.2 Issue of radio permits

The Licensor issues the Radio Permits of the Radio Equipment, if the conditions in the final frequency allocation specified in the above point are fulfilled.

The Radio Permit of the Radio Equipment should expire together with the Operation Rights specified above.

5.3 Frequency change, withdrawal of the radio permit

If the Licensor withdraws the radio permit in relation to international commitments (inter alia ITU Radio Regulations), for reasons not attributable to the Licensee, the Licensor should:

- allocate another Frequency fulfilling the conditions of the Spectrum Right (the area covered by the new Frequency is identical, and the way of receiving the Licensed Service does not become less favourable); and
- issue a new radio permit for the same period.

The resolution on the withdrawal of the radio permit should enter into force only upon the issue of the new radio permit.

The Frequency change does not result in the modification of the Licence.

ARTICLE 6: Technical requirements

6.1 General Requirements

Under the validity of the Licence the Licensee obliges to perform and fully comply with the Technical Requirements enlisted in the Appendices.

The Licensee shall at all times comply with transmission and reception regulations contained in proprietary legal provisions and/or in provisions issued by the Licensor.

The Licensee shall carry out all actions required by the Licensor to provide the Licensed Service via a transmission system meeting the applicable technical standards.

The Licensee shall provide for an uninterrupted reception of services by viewers and avoiding any interference caused by the transmission of the Licensed Service.

If it is not against the explicitly stated conditions of the licence, the Licence has full discretion on the technology choice.

6.2 Obligation on compression standard to be implemented

The compression standard to be implemented by the Licensee is [e.g. MPEG 4].

6.3 Obligation on interoperability

The Licensee shall ensure interoperability as follows:

- all free-to-air programmes of Must-Carry Broadcasters and/or the Eligible Programme Providers shall be accessible without constraints to a single universal Set-Top-Box (STB) or integrated digital television (iDTV);
- all conditional access television programmes of Must-Carry Broadcasters and/or the Eligible Programme Providers shall be accessible through a single Set-Top-Box or integrated digital television using mechanisms such as smart cards, passwords or keys or any other mechanisms compatible with the single receiver system;
- provide capability to interface with any Must-Carry Broadcaster and/or the Eligible Programme Provider.

6.4 Safety measures

In general, the Licensee shall in respect of services operated, maintained or offered under its Licence take proper and adequate safety measures to safeguard life or property, including exposure to any electrical emissions or radiations emanating from equipment or installation from such operations.

ARTICLE 7: Fair competition requirements

7.1 General requirements

The Licensee should provide the Licensed Services in fair, reasonable and non-discriminatory manner ('FRND' obligation). Under this obligation the Licensee shall *inter alia*:

- not engage in any practice or enter into any arrangement or give effect to any arrangement (whenever made) which is prejudicial to fair and effective competition in the provision of the Licensed Services and other services connected with them; and
- comply with any direction, code or guideline from time to time issued by the Licensor to the Licensee for the purposes of ensuring fair and effective competition in the provision of Licensed Services and other services connected with them.

In order to ensure the Licensee comply with the FRND-obligations, the Licensee shall provide the Licensed Services under a Reference Offer (hereinafter: RO). The RO is subject to approval by the Licensor.

The RO shall include provisions which cover the following (where applicable):

- Scope: the design, build and operation of the system and the provision of the Licensed Service;
- System Build:
 - Acceptance testing,
 - Liquidated damages payable by the Licensee for any Station that is delivered late,
 - Customer Dependencies;
- Charges;
- Service credits (based on operational service levels);
- Suspension: rights to suspend the Licensed Service in certain specified circumstances;
- Customer responsibilities;
- Maintenance and planned works;
- Breakdowns;
- Liability: customary limitations and exclusions of liability;
- Force majeure: circumstances in which the Licensee will not be liable for any failure to perform any of its obligations;
- Change control procedure: to be used for all changes to the Licensed Service;
- Warranties;
- Content indemnity: from the Customer in favour of the Licensee in respect of any liability relating to content;
- Term: to be agreed on a case by case basis having regard to relevant licence periods;
- Termination: rights of termination;
- Arrangements on termination/expiry;
- Dispute resolution.

7.2 Contracting obligations

The Licensee is subject to contracting obligations as follows:

- the Licensee or the Content Distributor assigned by the Licensee is obliged to engage in contract *on priority* on the Licenced Services with Must-Carry Broadcasters. The Licensee may not differentiate without proper reason among the Must-Carry Broadcasters in respect of the supply of information, allocation of broadcasting capacities, preparation of commercial offers, operation and any network investments and expansions;
- the Licensee or the Content Distributor assigned by the Licensee is obliged to engage in contract on the Licenced Services on the DTTB and/or MTV networks with Eligible Programme Providers within the limits of the available capacity on 'FRND'-basis. The Licensee may not differentiate without proper reason among the Eligible Programme Providers in respect of the supply of information, allocation of broadcasting capacities, preparation of commercial offers, operation and any network investments and expansions;
- the conclusion of the service contract, its content, performance, modification and termination shall be reported to Licensor at least [*Number of days*] days before the launch of the content distribution service;
- if the Licensee was to terminate or suspend distribution of the Eligible Programme Provider's program, the Licensee shall notify the Licensor in writing, including detailed reasoning at least [*Number of days*] days before such termination or suspension;
- the Licensee and the Must-Carry Broadcasters and/or the Eligible Programme Providers may commence a legal dispute under the jurisdiction of the Licensor about the contract in case of potential conflicts on 'FRND'-conditions.

7.3 Obligations on mobile reception digital broadcasting services

The Licensee is obliged to engage in a contract on content distribution services on the MTV network(s) with mobile network operators, Must-Carry Broadcasters and/or the Eligible Programme Providers.

It is to be decided if Must-Carry Broadcasters should be served on the MTV network(s) *on priority* as well.

The Licensee shall create the terms and conditions of contracting on 'FRND'-basis. The Licensee should not differentiate without proper reason among the users of the service in respect of the supply of information, allocation of content distribution capacities, preparation of commercial offers, operation and any network investments and expansions.

7.4 Obligations on conditional access systems

The Licensee may not apply any Conditional Access System, where any Content Aggregator or Content Distributor or end-user is excluded from the use of the service without proper reason.

The Licensee should ensure that separate accountancy records be kept in respect of its own Conditional Access Services.

The Licensee should ensure that the implemented Conditional Access Systems enable parents to restrict access to adult content for children.

It is also to be considered that, in most cases, the PSB service provider is not allowed to be behind CAS.

7.5 Obligation to provide site and antenna sharing

The Licensee shall provide access to antennas and to transmitter equipment space, as well as share other spaces necessary for entitled service providers.

The Licensee is to provide site and antenna sharing on 'FRND'-basis, including the applicable pricing for entitled service providers. The Licensee is required:

- to provide network access to its respective masts and sites on reasonable request (where a Third Party reasonably requests network access, access provision shall occur as soon as reasonably practicable and shall be provided on fair and reasonable terms, conditions and charges);
- not to unduly discriminate in that provision of network access (with special attention to the grounds for refusing capacity, to the maximum (multiplex) capacity to be allocated to one single broadcaster or service provider and to the rules for capacity reservations);
- to provide network access to their respective masts and sites on cost-orientated terms (which are reasonably derived from the costs of provision and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital); and
- to publish a Reference Offer for that provision of network access (subject to be approved by the Licensor) on service description and levels, on technical interfaces and operations, on tariff structure, prices and billing procedures and on reference contract(s) .

7.6 Obligations related to the cooperation capability of interactive digital television services

The Licensee shall make efforts to use an open application programming interface (API) and create conditions of access to the manufacturers of digital end-user devices to this API on 'FRND' basis. The Licensee shall notify the Licensor on any agreement concluded with manufacturers of digital end-user devices.

7.7 Electronic programme guide

The Licensee shall ensure that the service provider of the electronic programme guide ("EPG") included in the Licensed Service by the Licensee or its contracted parties provides access to EPG services for all Must-Carry Broadcasters and/or to the Eligible Programme Providers under fair and reasonable conditions, in accordance with the principle of equal treatment.

The Licensee shall ensure that the service provider of the EPG Service included in the Licensed Service gives priority of access to the programmes of Must-Carry Broadcasters' forwarded in such multiplex over other programs.

If the service provider of the EPG Service included in the Licensed Service is engaged in a management partnership with a Must-Carry Broadcaster and/or Eligible Programme Provider distributed in the reception area of the service, a well-visible reference shall be made on the user interface of it.

The Licensee shall ensure that:

- any EPG Service included in the Licensed Service is provided using published technical standards which are freely available and have been standardised by an industry body as is recognised by the Licensor; and
- details of the broadcast datastream formats to be used in the provision of such EPG Service are made freely available to receiver manufacturers and to Must-Carry Broadcasters and/or to the Eligible Programme Providers.

ARTICLE 8: Content related obligations

8.1 Must carry obligation

The Licensee is obliged to provide access to the Licensed Services ('must-carry') for Content Aggregators of Linear Audio-Visual Television Programs designated - either by statutory regulations or by the Licensor - as Must-Carry Broadcasters, with special respect to Public Sector Broadcasters ("PSB"). The list of Must-Carry Broadcasters is published by the Licensor and is subject to the periodical review.

The Licensee undertakes to notify the Licensor of all and any programmes of Must-Carry Broadcasters and/or of Content Aggregators of Linear Audio-Visual Television Programs as holders or valid media permits or authorizations ("Eligible Programme Providers") and related applications included into its programme service within [*Number of days*] days of the date of releasing the programmes.

Should the Licensor issue a warrant to the Licensee to cease the distribution of a programme on the grounds of incompatibility of the programme with the legal and constitutional order or incitement to hatred or other, major violations of the law as defined by specific legislation, the Licensee is obliged to terminate the distribution of such channel within [*Number of days*] days upon the reception of the warrant.

8.2 Obligations related to the extension of associated digital services

8.2.1 Obligation to supply information

If the distribution of programs does not occupy the entire data transmission capacity available for the Licensee under the Licence, and the Licensee uses the remaining vacant capacity for associated digital services and/or electronic communications services, or hands it over to another party for the extension of such service, the Licensee shall provide information to the Licensor about such use of the data transmission capacity, its manner and extent.

8.2.2 Extent of use of vacant capacity

The Licensee may use the vacant capacity specified above up to maximum [*Figure of percentage*] % of the data transmission capacity available in the transmission network for associated digital service and/or electronic communications service on the DTTB and/or MTV network operated by the Licensee under the Licence.

8.2.3 Obligations on the content of the associated digital services

The Licensee shall comply with the provisions of the separate statutory regulation in respect of the content of the associated digital services extended by the Licensee.

ARTICLE 9: Consumer protection requirements

9.1 Obligation on the supply of information to users and subscribers

The Licensee shall supply information to users and subscribers in line with the followings.

9.1.1 Website

The Licensee should launch a dedicated website for the supply of information on DTTB and MTV services, at least [*Number of months*] months before the launch of the simulcast transmission, and operate it continuously for [*Number of months*] months after switchover.

This website should:

- supply information to users, subscribers and retailers;
- being well-structured and easy to handle to make any information related to the digital switchover (switch off deadlines, devices needed for reception, receiving decoder services, its price, availability, and their suitability for the reception of associated digital services, etc.) easily available;
- be in [*Languages used in the country*] and written in an easy to understand manner.

9.1.2 Information campaign

The Licensee should plan and release an information campaign on the process and impacts of digital switchover with particular regard to the date and method of switching off analogue broadcasting in different Service Areas. The Licensee should also cooperate with all persons and organizations to supply information on digital switchover.

The Licensee shall:

- prepare and publish an information booklet on the available and eligible devices needed to use for the reception of the digital broadcasting service, particularly with regard to digital receiving decoders (availability in retail trade, technical parameters, suitability for the use of associated digital services, etc.) and to roof aerials needed for reception (technical parameters, availability, installation, etc.);
- distribute the information booklet free of charge before the launch of the Licenced Service;
- update the content of the information booklet quarterly.

9.1.3 Information Centre

The Licensee is to set up an Information Centre on digital switchover. The Licensee should provide for accessibility of the Information Centre as follows:

- the Information Centre shall have at least one premise (customer service office) open for consumers, where customer service staff in necessary number is available during office hours and easily available ('Information Point');
- the operation of the Information Centre and the Information Point should start at least [*Number of days*] days before the launch of the Licensed Service and [*Number of days*] days after the switchover;
- the Information Centre shall be available by phone on a 24/7 basis with live customer service in 12 hours/day and the Licensee shall provide a toll-free number for reaching the Information Centre.

9.2 Publication obligation on consumer complaints

The Licensee shall make available at all potential contact points with users and/or subscribers of the Licensed Service *inter alia* the following information:

- average time needed to set up a new access to the service;
- the number of complaints reported by users and/or subscribers;
- the number of complaints on QoS;
- the number of complaints on billing;

- the number of complaints on administration;
- the number of rightful complaints in each categories.

The Licensee shall report all the above information on a quarterly basis.

9.3 Complaints received from users and/or subscribers of the licensed service

The Licensee shall adopt procedures acceptable to the Licensor for handling complaints received from the users and/or subscribers in respect of the Licensed Service and shall ensure that such procedures are duly observed.

Such procedures shall, inter alia, include a requirement that the users and/or subscribers who complain to the Licensee about the Licensed Service are informed that they have the right to refer the matter complained of to the Commission.

ARTICLE 10: Quality of service requirements

10.1 Obligations on quality of service and on general terms of services

The Licensee shall do all he can to ensure that the contents carrying the Licensed Service attain high standards in terms of technical quality and reliability throughout so much of the Licensed Area as is for the time being reasonably practicable, in particular the Licensee shall do all that he can to ensure that the relevant provisions of the relevant statutory regulations are observed in all operations under his direct control and by any third parties involved in the provision of other services in the Licensed Services or in the provision and operation of a system for the distribution and transmission of the Licensed Service.

The Licensee shall provide the Licensed Services at minimum service quality (“QoS”) targets. The Licensee shall determine as a minimum the QoS target values *inter alia* determined below in the general terms and conditions of contracts to be concluded with the users and subscribers of the Licenced Service:

- a) deadline undertaken for the establishment of a new subscriber access point to the Licenced Service in days;
- b) remedy deadline of quality complaints reported in hours;
- c) inspection and settlement period of billing complaints reported in days;
- d) availability of the Licensed Service in percentage rate;
- e) in case of calls to the customer service desk the percentage rate of calls answered by the Licensee’s administrator within [Number of seconds] seconds;
- f) signal/noise ratio [in dB];
- g) bitfault rate before and after repairs;
- h) modulation fault rate.

The Licensee shall select and include among its general service terms miscellaneous target values on the quality of the electronic communications service, not listed in this point, so that the consumers can compare the data with the data of other service providers extending similar services.

The Licensee shall for a period of [Number of years] years keep a written record of any complaints received from the users and/or subscribers in respect of the Licensed Service and of any response

given in relation to any such complaint by the Licensee and shall make such records available to the Licensor at such times as the Licensor may require.

10.2 Checking of service quality requirements

The Licensee should take every measure generally expectable in a given situation to ensure that its service complies with requirements for QoS.

The Licensee shall prepare an inspection plan, containing as a minimum the number of inspections for the reference period, their schedule, the place of the inspection, and if measurements were carried out the number of measurements per inspection. The Licensee shall hold periodical inspections in respect of all requirements for QoS as determined in the Licence, in the general terms and conditions of contracts with users/subscribers and in the provisions of relevant statutory regulations in such a way, that the inspection complies with the schedule contained in the inspection. The Licensee shall make public at its customer service desk and on its homepage the results of such inspections within [Number of days] days after the inspection.

The Licensee shall submit an annual report to the Licensor on the results of his quality monitoring activity.

10.3 Restoration of quality of services

The Licensee shall take immediate measures to restore quality, if the service fails to comply with any requirement for QoS. The requirement for QoS defaulted shall be inspected again after measures had been taken. The Licensee shall make public at its customer service desk and on its homepage the results of such inspections within [Number of days] days after the inspection.

ARTICLE 11: Obligations on cooperation in switching off the analogue terrestrial broadcasting.

The Date of Analogue Switch Off is set to [Calendar date] in accordance with the international obligations.

The Licensee is obliged to survey and report to the Licensor the actual size of the Serviced Area and identify unserved areas.

Switching off in a given region is to be undertaken at an agreed date with the Licensor, if reception and other conditions of the digital switchover are ensured (e.g. availability of digital receiving decoders).

The Licensee should coordinate with relevant content aggregators the detailed conditions and schedule of switching off the analogue transmitter network.

ARTICLE 12: Pricing mechanisms of the Licensed Service

12.1 The fees applicable to Must-Carry Broadcasters

The Licensee shall provide access to and distribute the programs of Must-Carry Broadcasters at the following maximum net service fee ("Applicable Fee"):

Type of service	Sign transfer speed	Applicable Fee
	[Mbit/sec/hour]	

The Applicable Fee contains all taxes and potentially applicable other fees. The Applicable Fee can be reviewed annually by the Licensor as initiated by the Licensee.

12.2 The fees applicable to other broadcasters

The Licensee is required to publish a Reference Offer as set in Section 6.5 on the terms and conditions for the provision of the Licensed Service, subject to approval by the Licensor.

ARTICLE 13: Deployment of the network(s) and access to the Licensed Service

13.1 Deployment of the network(s)

The Licensee shall deploy the Licenced Service on the DTTB and/or MTV networks according to the following schedule⁷:

Coverage % [Of population or Geographical]						
Network	Date [DD. MM.YY]	Date [DD. MM.YY]	Date [DD. MM.YY]	Date [DD. MM.YY]	Date [DD. MM.YY]	Date [DD. MM.YY]
A						
B						
C						

The Licensee shall report to the Licensor all transmitter activation according to the above schedule.

13.2 Access to the Licenced service

The Licensee shall provide access to the broadcasting services according to the following schedule:

Network	Date [DD.MM.YY]	Date [DD.MM.YY]	Date [DD.MM.YY]	Date [DD.MM.YY]
A	X*			
B				
C				

⁷ It might be separately stipulated if certain regions shall be covered *on priority*.

ARTICLE 14: Reporting and controlling

In order to enable checking of its obligations stipulated in the Licence, the Licensee shall perform reporting and controlling obligations as follows.

14.1 Data supply on the performance of the licence

The Licensee shall prepare a detailed written report bi-annual on the Licenced Service, containing data as follows:

- changes in individual services in respect of coverage and availability to the users and/or subscribers;
- number of subscribers broken down by month and area;
- information on subscription packages sold to subscribers and programme fees payable for those;
- accounts on revenues realised by the Licensee in relation to the Licenced Service per income type, and in monthly breakdown;
- data on the implemented technical standards, continuity of operation, number and duration of operation faults.

The Licensee shall submit to the Licensor the bi-annual report within [*Number of days*] days after the reference period in electronic and printed format. Should the Licensor comment the report or put questions and request additional information about it, and the Licensee shall reply to those within [*Number of days*] days.

14.2 Making available of registries and reports

The Licensee shall:

- enable viewing registries kept in accordance with the specifications of the Licence;
- give and allow any assistance and information requested by the Licensor, and making extracts or duplicate copies of such registries;
- send to the Licensor authentic copies of each (bi-) annual report under the validity of the Licence, within [*Number of days*] days from the adoption of the (bi-) annual report.

14.3 Controlling

The Licensor is entitled to check the performance of all obligations of the Licensee under the Licence on a continuous basis as determined herein. The Licensor may cooperate with other organisations or persons in the course of controlling activities.

14.4 Obligation concerning the request of information

The Licensor may request from Licensee any time under the validity of the Licence information about the performance of the Licence, and as part of that request data, information, accounts and miscellaneous information. The Licensor shall request the information in writing including reasoning.

The Licensee shall supply the Licensor with information as requested in writing within [*Number of days*] days from the request.

14.5 Provisions on confidential information

The Licensee may not deny performance of information provision to the Licensor with reference to confidentiality. The Licensor shall handle in a confidential manner and prevent the access of unauthorised persons to information obtained in the course of controlling activities as specified above.

14.6 Violation of obligations related to reporting and controlling

It constitutes violation of the Licence terms and condition if the Licensee supplies faulty or false data in its bi-annual report or the written information supplied on the request of the Licensor, conceals any data, fails to supply information or fails to supply information by deadlines, or prevents access to his registries, and the Licensor may enforce sanctions as stipulated in Article 10.

ARTICLE 15: Sanctions of misconduct and causes for withdrawal of the frequency permit

15.1 Causes of revocation of the Licence

The Licensor may revoke the Licence in part or in full, if:

- the Licensee has repeatedly and seriously violated the provisions of the Licence or relevant statutory legal provisions or
- the Licensee is guilty of fraud.

15.2 Sanctions

If the Licensor detects during any controlling or supervision procedure that the Licensee violated any obligation specified in the Licence, sanctions are applicable in the following order:

- notice of warning in which the Licensor orders the Licensee to proceed in accordance with the Licence or statutory provisions of laws within *[Number of days]* days;
- levy a fine up to *[Figure of percentage]* % of the annual turnover of the Licensee⁸;
- oblige the Licensee to disclose specific information;
- publish at the cost of the Licensee a communiqué on the violation by the Licensee (particularly, if it serves the purpose of preventing serious breach or restriction of consumers' interests);
- oblige the Licensee to publish a communiqué on correction, if any information or statement by the Licensee was capable of misleading a large number of consumers;
- in case of serious and repeated violation of obligations, provided that the sanctions applied previously had no effect, the Licensor may suspend or prohibit performance of any activity under the Licence.

⁸ The Licensor shall determine the sum of the fine levied in accordance with the impact of the violation on the market, the consumers and the fulfilment of the Licence as a whole.

ARTICLE 18: Miscellaneous provisions

18.1 Applicable law and jurisdiction

The Licence shall be applied and interpreted in accordance with the statutory legal provisions of [*Name of the country*]. Legal disputes shall be decided under the exclusive competence of [*Name of the country*] courts.

18.2 Severability

Any invalid provisions in this Licence shall become invalid only in parts affected by the reason for invalidity and the other provisions shall remain in force unchanged.

18.3 Changes in statutory regulations

If the applicable statutory legal provisions may change under the Licence Period in such a way that the rights and obligations governed by the Licence are affected, such rights and obligations shall be governed by the renewed statutory legal provisions and shall not require modification of the Licence.

18.4 Content and copyrights

Without prejudice to any other provision of this Licence, the Licensor shall have no liability for any content or copyrights to be paid by the Licensee, and the Licensee and/or the Must-Carry Broadcasters and Eligible Programme Providers hold the responsibility for clearing all these rights and pay for the relevant levies of content distribution.

18.5 Communications

Communications and other notifications under the Licence shall be made by mail or e-mail sent to the official address of the Licensor and the Licensee.

18.6 Confidential information

The provisions in Appendix [*Naming of confidential Appendix*] to this Licence containing are confidential and shall not be disclosed to any third person during and after the validity of Licence without the prior written approval of the Licensee.

18.7 Appendices

The following documents are inseparable appendices of the Licence:

Appendix 1: Tender Documents

Appendix 2: The Bid Book of the Licensee

Appendix 3: Technical Requirements

18.8 Entry into force

The Licence enters into force on the day of signing.

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