
Plan

Terrestrial Digital TV Switchover

Version 1.0

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Article (1)

Purpose

The terrestrial TV broadcasting is used to have analog transmissions since the inception of commercial TV. However, the analog TV has many disadvantages like:

- Poor reception especially indoors.
- Poor quality.
- Less spectrum efficient. (one channel means one program)
- More interference.
- Use of very high power transmitter. (coordination issues)
- Difficult to reuse the frequencies.
- Designed for only fixed reception i.e. no mobile reception.
- Limited or no possibility for data transmissions. (text info etc.)

To overcome all these disadvantages, new terrestrial digital TV broadcasting technologies have been developed. Digital TV offers a number of advantages like:

- ✓ **Quality**
 - Better picture and sound quality.
 - High Definition (HD) is available.
 - Multiple error correction techniques.
- ✓ **Spectrum efficiency**
 - One channel multiple program.
 - Low power transmitters and repeaters.
 - Single frequency networks.
- ✓ **Mobility**
 - Reception in mobile.
 - Portable / small receivers.
 - Good indoor / outdoor coverage
- ✓ **Multimedia transmission**
 - Audio / video, text & data.
 - Interactive Services.

Because of the advantages offered by the digital TV, many countries especially in Europe have already switched over to digital TV broadcasting and have switched off analog TV transmissions.

Keeping in view the advantages offered by digital TV and inline with the international best practices, this Plan has been prepared to initiate digital TV switchover process in the country. This Plan will provide general guidelines and time frame for digital TV switchover process and is aimed to maximise the benefits of the switchover and to have smooth and seamless transition to digital TV.

(Note: Throughout this document, the TV broadcasting services refer to the Terrestrial TV Broadcasting Services only.)

Article (2)

Regional Radiocommunication Conference & Geneva 06 Agreement

The United Arab Emirates (UAE) which is located in the ITU-R Region-1, previously observed Geneva-89 Agreement for terrestrial analog TV broadcasting and related coordination issues. In 2006, the 2nd session of the Regional Radiocommunication Conference (RRC-06) held in Geneva under the terms of the ITU convention and constitution. RRC-06 established a new regional agreement and plan for terrestrial digital broadcasting services which is called Geneva-06 Agreement & Plan. The key features of the Geneva 06 Agreement and Plan are:

- ❖ Planning bands: 174-230 MHz & 470-862 MHz
- ❖ Planning areas: Region-1 and part of Region-3 (Arab Countries, Europe, Africa & Iran)
- ❖ Planning Services: DVB-T (TV) and T-DAB (Sound)

The Geneva 06 Agreement geared up the conversion of analog TV to digital and this agreement has set **2015** as the deadline for protecting the analog TV transmissions.

The UAE actively participated in the RRC-06 and successfully coordinated a number of frequency assignments to use for digital broadcasting services which are now part of the Geneva-06 Plan i.e.

- 58 Assignments for Analog TV to be used during transmission period.
- 225 digital terrestrial assignments / allotments (TV & Sound)

Article (3)

Digital TV Broadcasting Switchover Plan

Recognising the obligations of the Geneva-06 Agreement and to get maximum benefit of the digital broadcasting, this Plan has been prepared for switchover to digital TV and to switch-off analog TV. The main objective is to harmonize the planning and efforts of the analog TV broadcasting operators in the country towards switchover and also to facilitate introduction and operation of digital TV.

1. The UAE Plan for Digital TV Switchover

This Plan consists of four main phases and proposes maximum dates for the major milestones to be achieved towards a successful switchover process. A summary of the timelines as proposed in this Plan is also attached.

All the dates mentioned in this Plan are tentative and depended on many factors including the following:

- Switchover plans adopted by other GCC Administrations (interference issues).
- Availability of sufficient budgets with the existing operators to switchover.
- Readiness of the general public for adopting digital TV.

2. GCC Plan for Digital TV Switchover

The UAE is also working at the GCC level for finalization of a GCC Regional Plan to accelerate the switchover process. This Plan is likely to be finalised in **May 2010**. During the 1st GCC Working Group Meeting for switchover held in June 2009 in Bahrain, the GCC Administrations honoured the Administration of UAE to prepare the GCC Regional Switchover Plan. Accordingly a draft of the GCC Regional Switchover Plan has already been submitted by the UAE to the GCC Telecom Bureau for discussion and adoption in the next meeting.

Article (4)

Phase – 1 Legislative Decision and Licensing Model

1. Legislative Decision

All legal and regulatory requirements to facilitate the digital TV switchover and analog TV switch-off process should be completed maximum by **February 2011**. A consultation process with the concerned broadcasting operators and other stakeholders including National Media Council shall be carried out in this regard.

2. Licensing Model

There are various business models possible for digital TV and the licensing of digital TV broadcasting services is also tailored accordingly. A suitable Licensing Model to be adopted for the digital broadcasting services in the State, shall be finalised maximum by **May 2011**.

3. Budget Allocation

Depending on the Licensing Model that will be adopted, the existing terrestrial analog TV broadcasting operators in the State shall consider allocation of adequate budgets for switchover to digital transmissions during the year **2011** and onward.

Article (5)

Phase - 2 The UAE National Plan & Public Awareness

1. Publication of the UAE National Switchover Plan

“The UAE National Plan for the digital TV Switchover and Analog TV Switch-off” shall be published in the public domain maximum by **August 2011**. The same shall also be made available on the Arab Spectrum Management Group (ASMG) website and other related GCC and International web portals for information.

2. Media Campaign

To make the general public in the State aware of the digital TV switchover and analog TV switch-off process, a media campaign, both in print and electronic media shall be initiated by the broadcasters involved in the process. This media campaign shall start from the date of introduction of digital TV broadcasting services (or before), and continue until the switch-off of analog TV broadcasting (or after). The broadcasting operators shall allocate adequate budget for media campaign purposes.

Article (6)

Phase - 3 Launch of Digital TV & Analog TV Switch-off

1. Digital TV Switchover

The existing analog TV broadcasting operators who planned to continue with the terrestrial TV broadcasting services in future shall have to launch digital terrestrial TV broadcasting service. The maximum date to launch terrestrial broadcasting services is set as **December 2011**.

2. Simulcast Period

In order to give more flexibility and to have a seamless implementation of the switch-over process, the broadcasting operators shall be given a transition period between the launch of digital TV broadcasting and the complete switch-off of analog TV. This transition period shall be named as “**Simulcast Period**” during which both terrestrial analog TV and digital TV broadcasting services may operate together in appropriate frequency bands.

3. Analog TV Switch-Off

The existing analog TV broadcasting operators shall switch-off their analog TV transmitters maximum by **December 2013**. After this date analog TV transmission shall no longer be available. The broadcasting operators shall ensure that all analog terrestrial TV transmissions have been switch off after this date.

4. Priority of Bands for Switch-off

In inline with the decisions taken at the GCC level, it has been decided to use the frequency band **790-862 MHz** for Mobile Services. It has also been decided to introduce Terrestrial Digital Audio Broadcasting (T-DAB) Service in the country, therefore the maximum date to switch-off analog terrestrial TV transmitters in the following bands shall be **December 2012**:

- a. 790 – 862 MHz
- b. 174 – 230 MHz (VHF TV Band III)

The existing analog TV broadcasting operators shall ensure that the terrestrial Analog TV transmitters operating in the above mentioned frequency bands have been switched off or tuned to other suitable frequencies by the above mentioned date as determined by the TRA.

Article (7)

Phase - 4 Optimization of the Digital Broadcasting Coverage

The digital TV broadcasting operators shall take prompt response to solve any cross boarder harmful interference issues, and should continuously work in enhancing the spectrum efficiency & optimization of the digital TV broadcasting services and coverage.

Article (8)

Compliance with Geneva 06 Agreement and Plan

The Administration of UAE is a signatory to the Geneva-06 Agreement and therefore all the terrestrial TV broadcasting operators in the country shall have to comply with all the provisions of the Agreement and associated Plan throughout the switchover and switch-off process and thereafter.

Article (9)

Standardization

1. Harmonization of Standard

The digital TV broadcasting operators shall be encouraged to adopt harmonized standards for digital broadcasting services as recommended at the GCC level so that full benefit of a regional approach to switchover can be achieved.

2. Mandating the digital TV Tuners and HD TV Sets

The suppliers of the TV sets in the country shall have to provide digital video broadcasting tuner with each TV Set sold after the Analog TV Switch-off date i.e. maximum by **December 2013**. The suppliers of the TV sets in the country shall provide only full High Definition TV Sets (as per the ITU standards) after the analog TV switch-off date i.e. maximum by **December 2013**.