



THE JOURNEY TO DTT

IMPLEMENTING THE TRANSITION TO DIGITAL TERRESTRIAL TELEVISION (DTT)

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Digital terrestrial television is a technology in which land-based (terrestrial) television stations broadcast television content by radio waves to televisions in consumers' residences in a digital format. The main characteristic of DTT broadcasting is that the technology uses much less spectrum as compared to analogue broadcasting. A single spectrum band can only air one analogue TV channel whereas up to 16 Standard Definition (SD) TV channels can be aired on the same spectrum band using DTT technology. In brief, DTT is more spectrum-efficient, freeing up spectrum capacity. This translates to a Digital

Dividend of 700 MHz once analogue broadcasting is switched off. The frequency bands allocated for DTT are from 470 MHz to 742 MHz (Ultra High Frequency (UHF) bands IV and V).

DTT is a Government initiative, spearheaded by the Ministry of Communications and Multimedia Malaysia (KKMM) and monitored by the Malaysian Communications and Multimedia Commission (MCMC). This initiative aims to ensure a smooth transition from analogue to digital broadcasting on a terrestrial platform for the current Free-to-Air (FTA) Government-owned and private TV stations.

WHAT IS ANALOGUE SWITCH OFF?

The Analogue Switch Off (ASO) is a process of switching off FTA analogue terrestrial television broadcasting service. In many countries around the world, their governments ensure ASO is carried out without disadvantaging the citizens.

APPOINTMENT OF COMMON INTEGRATED INFRASTRUCTURE PROVIDER (CIIP)

The Government has decided that a CIIP shall be the responsible party to build the DTT infrastructure and network in Malaysia. The appointed CIIP shall facilitate common infrastructure sharing amongst FTA broadcasters resulting in lower access charges on the DTT platform. As a result, the FTA broadcasters are not required to invest in high capital for TV transmitters to provide coverage in targeted areas. Rather, the CIIP is responsible to make the DTT platform ready for lease by FTA broadcasters. Thus, FTA broadcasters can optimise their resources and focus on creation and production of more content and value added services. As many parts of the broadcast network are common, having a single CIIP means savings in Capex, access rates, manpower and related resources.

The tender Applicant Information Package No. 1 of 2012 issued in late April 2012 saw 8 companies submitting their bids to the MCMC at the close of the tender on 24 July 2012. Upon evaluation of the said tender bids, MCMC awarded Puncak Semangat Sdn Bhd in April 2014 as the CIIP to build, operate and manage the infrastructure for DTT service. Subsequently, Puncak Semangat transferred its rights, obligations and responsibilities to MYTV Broadcasting Sdn Bhd (MYTV) in October 2014.

DIGITAL TERRESTRIAL TELEVISION TRANSITION IN MALAYSIA

Malaysia is among 3 countries in Southeast Asia that have successfully completed the transition from analogue TV broadcasting to DTT broadcasting. Brunei and Singapore also completed the same on 31 December 2017 and 1 January 2019, respectively.

MYTV has committed to build 60 DTT transmission stations to provide 98% population coverage nationwide as follows:

- Phase 1: 14 transmission stations (to reach 85% population coverage) and;
- Phase 2: 46 transmission stations (to reach 98% population coverage).

The journey began in April 2015 when MYTV rolled out the Signal Test Phase/DTT trial service in the Eastern region and Sabah whereby 4 transmission stations were built. Subsequently, the deployment was expanded to other regions in phases through building the remaining DTT transmission stations. Phase 1 was completed in late April 2016, reaching 85% population coverage nationwide. MYTV has successfully completed Phase 2 to reach 95.3% of the population by the end of March 2019 bringing the total to 44 DTT transmission stations nationwide.

MYTV launched its Direct to Home (DTH) service in November 2018 to complement DTT service coverage by ensuring the DTT coverage would be available at remote and in blind spot areas within the remaining transmission stations. The DTH solution has already been successfully implemented to complement DTT coverage across many countries such as United Kingdom, Chile, Finland, France and Italy. DTH service enables 98% population coverage nationwide as committed by MYTV.

| 44 DTT Transmission Stations by Region and State | | | |
|--------------------------------------------------|---------|-------------------|--------------|
| No | Region | Sites | States |
| 1 | Eastern | Bukit Bakar | Kelantan |
| 2 | | Telipot | Kelantan |
| 3 | | Bukit Besar | Terengganu |
| 4 | | Bukit Bauk | Terengganu |
| 5 | | Bukit Bintang | Terengganu |
| 6 | | Kemuning | Terengganu |
| 7 | | Bukit Pelindung | Pahang |
| 8 | | Kuala Rompin | Pahang |
| 9 | | Bukit Senggora | Pahang |
| 10 | | Bukit Sembilan | Pahang |
| 11 | | Bukit Fraser | Pahang |
| 12 | Central | Gunung Ulu Kali | Pahang |
| 13 | | Menara KL | Kuala Lumpur |
| 14 | | Bukit Sungai Besi | Kuala Lumpur |

| 44 DTT Transmission Stations by Region and State | | | |
|--------------------------------------------------|----------|------------------|-----------------|
| No | Region | Sites | States |
| 15 | Northern | Gunung Jerai | Kedah |
| 16 | | Gunung Raya | Perak |
| 17 | | Gunung Kledang | Perak |
| 18 | | Bukit Larut | Perak |
| 19 | | Pulau Pangkor | Perak |
| 20 | | Penang U4 | Pulau Pinang |
| 21 | | Seberang Jaya | Pulau Pinang |
| 22 | Southern | Gunung Pulai | Johor |
| 23 | | Gunung Ledang | Johor |
| 24 | | Pelangi | Johor |
| 25 | | Skudai | Johor |
| 26 | | Bukit Tinggi | Johor |
| 27 | | Bukit Tampin | Negeri Sembilan |
| 28 | Sarawak | Gunung Serapi | Sarawak |
| 29 | | Sarikei | Sarawak |
| 30 | | Bukit Singgalang | Sarawak |
| 31 | | Bukit Lambir | Sarawak |
| 32 | | Bukit Temuduk | Sarawak |
| 33 | | Bukit Ancharang | Sarawak |
| 34 | | Bukit Nyabau | Sarawak |
| 35 | | Bukit Mas | Sarawak |
| 36 | | Belaga | Sarawak |
| 37 | | Bukit Kapit | Sarawak |
| 38 | | Bukit Lima | Sarawak |
| 39 | | Saratok | Sarawak |
| 40 | Sabah | Bukit Karatong | Sabah |
| 41 | | Gunung Andrassy | Sabah |
| 42 | | Bukit Trig | Sabah |
| 43 | | Gunung Silam | Sabah |
| 44 | | Bukit Kelapa | Sabah |

Digital and analogue broadcasting run simultaneously during the transition period (simulcast). The simulcast period enables viewers who do not possess a compatible receiver to continue receiving the broadcasts in analogue mode. This allow time for consumers to purchase receivers and eventually receive broadcasts in digital.

The transition to DTT service was conducted in phases commencing from 21 July 2019 to 30 October 2019 covering 13 states in Peninsular Malaysia and East Malaysia (Malaysian Borneo) as follows:

| REGIONS | DATE |
|-----------------------------|-------------------|
| Langkawi, Kedah (pilot ASO) | 21 July 2019 |
| Central & Southern | 30 September 2019 |
| Northern & Eastern | 14 October 2019 |
| Sabah & Sarawak | 31 October 2019 |

As of today, Malaysians are able to enjoy 15 TV and 6 radio channels on myFreeview Digital TV platform. myFreeview Digital TV is the brand name for Malaysia's Digital Terrestrial TV, which offer popular TV and radio channels without any subscription fees.

The DTH solution has already been successfully implemented to complement DTT coverage across many countries such as United Kingdom, Chile, Finland, France and Italy. DTH service enables 98% population coverage nationwide as committed by MYTV.



DIGITAL MULTIMEDIA RECEIVERS

Malaysian Technical Forum Sdn Bhd (MTSFB), a technical forum comprising manufacturers and retailers, deliberated on the standards and specifications of multimedia receivers. SIRIM QAS International Sdn Bhd (SIRIM) also instituted guidelines to ensure only standard receivers are marketed to the public.

Malaysia mandated the adoption of Digital Video Broadcasting - 2nd generation (DVB-T2) standard via the Commission Determination No.1 of 2011 which was registered in December 2011. DVB-T2 is the latest broadcasting standard which enables a wider coverage and the airing of more High Definition (HD) channels. The DVB standard is also the most widely used standard for broadcasting. The mandate on Digital Multimedia Receiver Specification (Integrated Digital TV (IDTV) and Set Top Box (STB)) was registered on 31 January 2013 (Doc No: SKMM MTSFB TC T004:2013).

PROVISION OF FREE STBS TO THE ELIGIBLE HOUSEHOLDS

The Economic Council in 2013 agreed that the Government shall provide free STBs to the eligible Bantuan Rakyat 1Malaysia (BR1M) households. In supporting the Government's effort, MYTV is committed to provide and distribute 2 million free STBs to the eligible households nationwide to ensure none of them are left out from receiving the myFreeview Digital TV service and to expedite ASO. The provision and distribution of the 2 million STBs by MYTV was carried out on the premise of allocation to the first 2 million of B40 households from the lowest household income category.

MYTV commenced the distribution since 2016, based on the following distribution methodology:

- STB delivery via courier services by Pos Laju to the recipient's address registered with BR1M
- The STB is returned to the nearest Post Office and stored for 14 days for collection, in the event the said STB failed to reach the recipient during the delivery by Pos Laju
- STB not collected by the recipient after 14 days, considered as failed or Returned to Sender (RTS)

MYTV completed the distribution of 2 million STBs to the Bantuan Sara Hidup Rakyat (BSHR) households nationwide by end of March 2019. However, there is a high number of RTS STB due to the following:

- Incomplete/incorrect address;
- The recipient has relocated;
- The recipient has passed away;
- The recipient's name is not recognised

Following the completion of ASO's implementation on 31 October 2019, MCMC received several requests by Members of Parliament nationwide to provide and distribute additional STBs to B40 households including those who were not in the MYTV's list of 2 million recipients.

As such, MYTV has taken the initiative whereby the RTS STB units were successfully redistributed via 'Serahan Kelompok' method to some of the recipients who failed to receive it earlier and also to the recipients beyond the 2 million list. MYTV aims to continue its effort to distribute the balance RTS STB to those that are interested to receive the STBs, through various platforms.

Noting the additional demand, the Government through MCMC decided to allocate another 300,000 units of free STBs for distribution to cater to the demand from the

B40 households and Orang Kurang Upaya (OKU), who are not in the list of 2 million recipients allocated by MYTV. Consumers who are not eligible to receive free STBs are still able to enjoy myFreeview by purchasing digital multimedia receivers that are available in the market. The consumers have options in receiving myFreeview service, either by purchasing an STB or an IDTV (Integrated Digital Television) that comes with a built-in digital tuner which is able to receive myFreeview directly without STB. STBs and IDTVs can be purchased through various platforms such as online portals and retail electrical outlets. Consumers are always advised to purchase DTT receivers with the DTTV label certified by SIRIM.

The following STB brands are available for purchase in the market:

- MYTV
- Green Packet
- Botato
- MPay

To date, 21 IDTV brands from Samsung, Sony, Toshiba, Panasonic, Sharp, LG, Philips, Hisense, Daewoo, Skyworth, Haier, TCL, A&S, Singer, iSONIC, Hitec, Daema, Pensonic, COOCOA, AOC and AIWA are available for purchase in the market.

EDUCATION AND AWARENESS (EA) CAMPAIGN

An EA campaign was launched to enhance the awareness of myFreeview Digital TV service. The EA campaign began in Quarter 3, 2016 on various multimedia platforms to create awareness to the viewers in Malaysia. The EA campaign has been conducted under several phases, as follows:

- Phase 1: July – October 2016
- Phase 2: November 2016 – February 2017
- Phase 3: March 2017 – August 2017
- Phase 4: August 2017 - January 2019
- Phase 5: August 2019 - December 2019

An alliance comprising the FTA broadcasters and MYTV has been established to formulate and strategise effective communication campaigns to educate and spread awareness in the community on the availability of myFreeview Digital TV service, which is free without any subscription fee.

Media Prima Berhad (MPB) has been appointed to lead the said EA campaign with a budget allocation of RM29.3 million by the MCMC. Following its appointment, MPB has selected the following three agencies:

| No. | Agency | Company | Responsibility |
|-----|----------|------------------------------------------------|------------------------------------------------------------------------------------------|
| 1 | Research | Zest Research and Consultancy Sdn Bhd | To conduct research on the public perception of DTT and the concepts of creative designs |
| 2 | Creative | Star Reacher Advertising Sdn Bhd (Leo Burnett) | To produce creative designs for EA Programme |
| 3 | Media | Symworld Sdn Bhd | To engage the advertising and media platforms |

EA Campaign was carried out on various platforms, as follows:

- Digital Marketing
- TV advertisements
- Radio advertisements
- Host mentions
- Newsprint advertisements
- Infographic and Documentary Videos
- Out of Home (OOH)
- Social media
- Cinema advertisement

IMPLEMENTATION OF FREQUENCY RESTACKING

Another MYTV commitment to the Government is to conduct a frequency restacking exercise for myFreeview Digital TV broadcast upon completion of ASO. This is in line with the Government's plans to prepare the 700 MHz band for high speed broadband services or 5G. myFreeview Digital TV broadcast signals through two frequencies from each transmission station. This exercise involves changing a single or both frequencies in 23 out of 44 transmission stations nationwide, in stages (22 sites in Peninsular and 1 site in Sabah).

MYTV commenced a pilot restacking exercise at Gunung Raya on 6 January 2020. As of today, 18 transmission stations were completed. The remaining 4 stations that were scheduled in April 2020 had to be re-scheduled, following announcement made by the Prime Minister of Malaysia, Tan Sri Muhyiddin Yassin on the Movement Control Order (MCO) due to Covid-19.

| No | Transmission Station | State | Date |
|----|----------------------|-----------------|------------------|
| 1 | Gunung Raya | Kedah | 6 January 2020 |
| 2 | Bukit Fraser | Pahang | 4 February 2020 |
| 3 | Gunung Ulu Kali | Pahang | 6 February 2020 |
| 4 | Bukit Sungai Besi | Kuala Lumpur | 11 February 2020 |
| 5 | Menara KL | Kuala Lumpur | 13 February 2020 |
| 6 | Bukit Tinggi | Johor | 18 February 2020 |
| 7 | Gunung Jerai | Kedah | 18 February 2020 |
| 8 | Gunung Ledang | Johor | 20 February 2020 |
| 9 | Seberang Jaya | Pulau Pinang | 20 February 2020 |
| 10 | Penang U4 | Pulau Pinang | 21 February 2020 |
| 11 | Bukit Tampin | Negeri Sembilan | 25 February 2020 |
| 12 | Bukit Larut | Perak | 25 February 2020 |
| 13 | Gunung Kledang | Perak | 27 February 2020 |
| 14 | Kuala Rompin | Pahang | 8 March 2020 |
| 15 | Pulau Pangkor | Perak | 8 March 2020 |
| 16 | Bukit Bintang | Terengganu | 11 March 2020 |
| 17 | Bukit Bakar | Kelantan | 13 March 2020 |
| 18 | Telipot | Kelantan | 15 March 2020 |
| 19 | Bukit Karatong | Sabah | Re-scheduled |
| 20 | Gunung Pulai | Johor | |
| 21 | Pelangi | Johor | |
| 22 | Skudai | Johor | |
| 23 | Bukit Bauk | Terengganu | |

myFreeview DIGITAL TV CHANNEL SEARCH GUIDE

STEP 01 Press the "MENU" button on your remote control

STEP 02 Choose Auto Search Channel OR Manual Search Channel (Please enter your area frequency and press ok)

Please wait until the search has been completed

STEP 03

STEP 04 Enjoy myFreeview Digital TV broadcast!

*You are encouraged to put the decoder in standby mode when you are not watching myFreeview

More information at www.myfreeview.tv | Customer Careline 1800-18-1088

In ensuring the viewers are well informed on this, parties such as MCMC, MYTV, KKMM, FTA broadcasters and Jabatan Penerangan Malaysia have participated in the establishment and promotion of a frequency restacking communication campaign. The communications are disseminated over various platforms, such as Public Service Announcement (PSA) TV and radio, press releases, social media, flyers, local announcements and digital infographics.

Viewers are encouraged to put their STB or IDTV on standby mode after the restacking exercise to allow for auto tuning, which automatically accepts all myFreeview Digital TV channels. myFreeview.tv