

IMPLEMENTATION STATUS OF DIGITAL TERRESTRIAL TELEVISION BROADCASTING IN BRUNEI DARUSSALAM

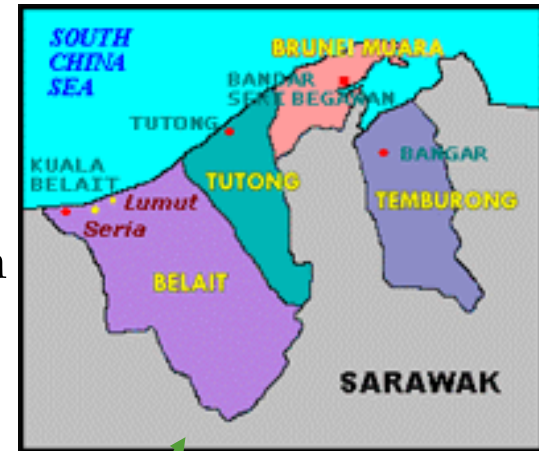
AIBD/ITU/ABU Pre-Summit Regional Workshop on
Enabling & Enhancing the DTT Broadcasting Experiences

23 May 2016



About Brunei Darussalam

- Located north-western coast of Borneo
- Bordered by Sarawak (Malaysian State) and South China Sea.
- Land Area: 5,765 sq km
- Four districts
- Capital: Bandar Seri Begawan.
- Population : 422,700
- Households : 68,208
- Official language : Malay



Broadcasting Environment



Radio Television Brunei (RTB)

- National Broadcaster
- Free-to Air
- Terrestrial and Satellite TV

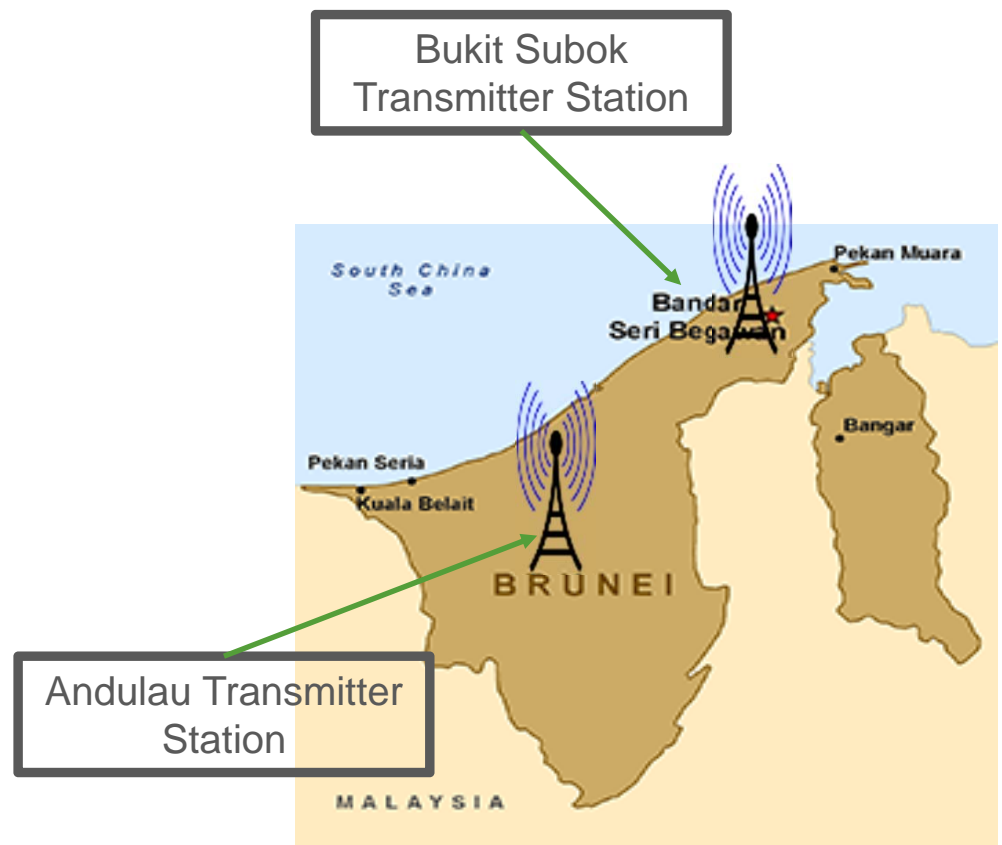


- Private Broadcaster
- Multi-channel Pay-TV Operator
- Direct-to-Home (DTH) Satellite TV

Broadcasting Environment

RTB's two main transmitters:

- Bukit Subok Transmitter Station
 - Andulau Transmitter Station
- Bukit Subok Transmitter Station
 - Analogue on VHF
 - DVB-T on UHF
 - DVB-T2 on UHF
 - Andulau Transmitter Station
 - Analogue on VHF
 - DVB-T2 on UHF





DIGITAL TRANSMISSION

DVB-T

- From Bukit Subok Station only
- 5 kW
- UHF (Ch. 28)
- MPEG4
- Roof-top reception

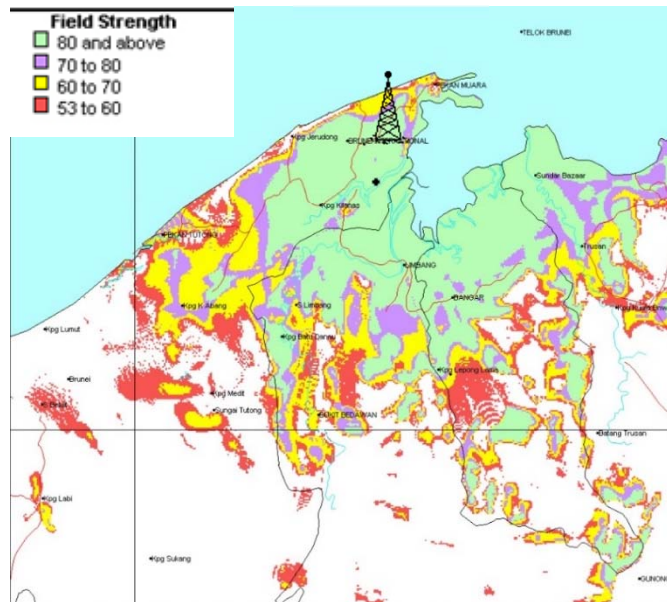
DVB-T2

- Both Bukit Subok and Andulau Stations
- 5 kW
- UHF (Ch. 30)
- MPEG4
- Roof-top reception
- Single-Frequency Network (SFN)

Digital Transmission Coverage

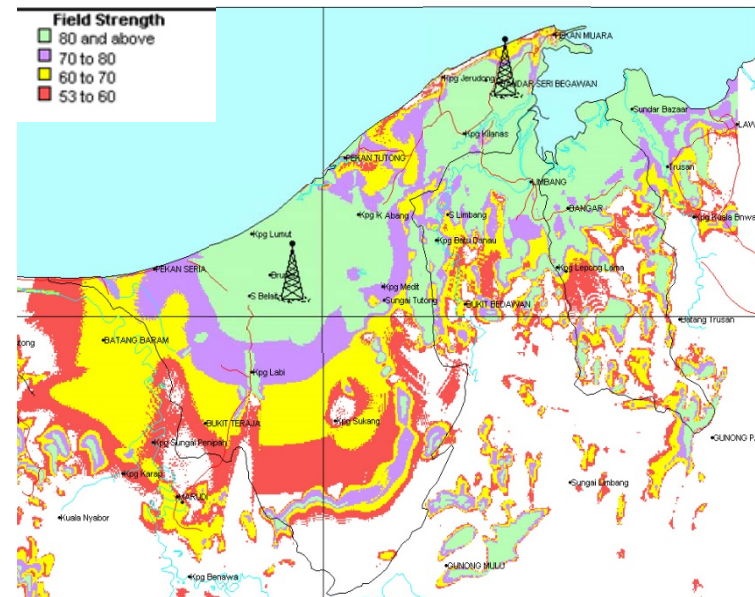
• Transmission in DVB-T

- From Bukit Subok Station only.
- Coverage 70% population / 60% land area



• Transmission in DVB-T2

- From RTB's both main transmitter stations.
- Coverage 99% population / 95% land area



SUPPORTING PRODUCTION FACILITIES

- TV studios in High Definition (HD)



- OB Vans in HD



SUPPORTING PRODUCTION FACILITIES

... cont'd ...

- Post Production Systems and editing systems in HD
- Production Fly-Away Kit
- Digital Studio-to-Transmitter Link
- HD News Gathering Camera.
- Digital archive system





PROJECT MILESTONES

- 2000 Nov : Digital Transmission Master Plan Framework Document
- 2006 July : Officially adopted DVB-T as the DTTB standard.
- 2009 May : Digital DVB-T transmission started.
- Only from Bukit Subok Transmitter Station.
 - Coverage - 70% population / 60% land area.
- 2013 Feb : Officially adopted DVB-T2 as DTTB standard.
- 2014 Jan : Digital DVB-T2 transmission started
- Both Bukit Subok & Andulau Transmitter Stations
 - Coverage - 99% population / 95% land area
- 2017 : Target ASO

DIGITAL TV RECEIVERS

DVB-T2 STB

- Approx B\$60 (US\$44)



DVB-T2 iDTV

- 32" : Approx B\$300 (US\$220)



aifa BRUNEL BRAND | **LG** KOREA | **30% OFF** AIFA 30% BHD | **2 AIFA KALI MENANG** (Lucky Draw Promotion until 20 February 2015, Grand Draw Period: 21 Feb. 2014 - 24 Feb. 2015)

BIG SCREEN BIGGER SAVINGS, LOWEST PRICE!

55" Built-in DVB-T2 Tuner 4 Channel LED FULL HD LED-55C20 (iDTV) 55" LED TV \$899	40" + 29" aifa LED-40LH4 (iDTV2) 40" + 29" LED TV \$439	55LB561T 55" LED TV \$1499
16" aifa LED LED-16E2 16" LED TV \$139	29" aifa LED-29E2 (iDTV2) 29" LED TV \$299	47LB561T 47" LED TV \$999
32LB563D 32" HD LED LCD TV \$389	42LB561T 42" LED TV \$599	

Authorized Dealers:
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 BSB: Audiomart 2453800 (Gadong), 2457416 (Kulueh), 2335719 (Serl Complex), 2871027 (Bukit) • Golden Star 2860818 (ASB), 2624229 (Sempurung)
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CONSUMERS AWARENESS CAMPAIGN

- Continually organizing community outreach and campaign to alert viewers on this migration and disseminate information on digital TV.
- Among the activities:
 - Dialogue / Meeting with TV sets distributors, retailers and vendors
 - Promos in TV and Radio
 - Briefing to village heads, government and private agencies, students and public



CONSUMERS AWARENESS CAMPAIGN

Among the activities (...cont'd...)

- Roadshows
- Participating in Exhibitions
- Distribution of Information leaflets, brochures, etc



CONSUMERS AWARENESS CAMPAIGN

- The Roadshow has been rebranded from January 2016
 - Renamed as “Badudun”.
 - With own logo.
 - New approach
- Among some of the concepts:
 - More frequently
 - Less formal
 - Reaching out the grassroots level and students
 - The popular DJ’s will be joining to be with the audience.
 - Allowing the community to also participate and be part of the roadshow – “buy-in” .
 - Etc.



CONSUMERS AWARENESS CAMPAIGN



CONSUMERS AWARENESS CAMPAIGN

Temburong terima siaran TV RTB Digital dengan baik

Wednesday, 17 February, 2016 | THE BRUNEI TIMES | A11

NATIONAL NEWS

RTB's digital TV broadcasting covers 90% of Belait district

Waqiuddin Rajak
BELAIT

OVER 90 per cent of areas in the Belait district including the stretch encompassing Seria to Kg Sungai Teraban have been covered for Radio Televisyen Brunei's (RTB's) Digital TV Broadcast, said RTB's supervisory engineer yesterday.

Speaking on the sidelines of an RTB roadshow to promote the Digital TV Broadcast in Mukim Labi, Mohamad Shamsul Hj Sanif said that most areas in the district, including those in the interior areas are already under RTB's broadcasting coverage.

The roadshow, he said, was selected to be at Mukim Labi yesterday to show to the community that their areas too are able to access the digital TV broadcasting services, given that their TVs are IDTV types that could receive RTB's

digital signal.

They also need to use a UHF aerial to properly receive the signals.

While most of the areas are now able to access the digital signal, Mohamad Shamsul said that there are those areas identified as "blind-spots", which include those behind the hills where they have yet to cover.

The RTB, he said, is looking to carry out a "field-strength measurement" to see the extent of the coverage of the digital signal to areas in Brunei to ensure which parts of the country are the "blind-spots".

A "gap-filler" will then be installed, together with an antenna base station to certain areas to boost the signal so it could be extended to these "blind-spots".

He explained that this "gap-filler" acts in the same way as a



"wifi-extender", with the "gap-filler" specifically dealing with broadcasting digital signals.

Since it was introduced nationwide in 2014, he said RTB digital broadcasting is an initiative to replace the transmission of analog



(Above) Belait District Officer Hj Haris Othman enquiring about an equipment at one of the booths during the RTB roadshow in Labi, with YB Hj Mohd Shafiee Ahmad (L) looking from behind. (Left) RTB's Supervisory Engineer Mohamad Shamsul Hj Sanif. Pictures: BT/Waqiuddin Rajak

signals in the country.

The termination of analog broadcasting, he said, was agreed upon internationally in the region, where a period of five years, from 2015 to 2020 were given for countries to terminate their analog transmission.

Brunei, he said, has yet to give a definite date on the termination, but the suggested years include this year, 2017 and 2018.

He however hoped that RTB

would be able to cover most areas in the country for its digital TV broadcasting soon.

Held at Rempayoh Community Hall Mukim Labi II, the event saw the attendance of the Belait District Officer Hj Haris Hj Othman and Legislative Council members Yang Berhormat Hj Mohd Yusof Hj Dulamin and Yang Berhormat Hj Mohd Shafiee Ahmad, as well as grassroots leaders in Belait.

The Brunei Times

UTAMA HASRAT NEGARA HALUAN NASIONAL AGAMA KESIHATAN PENDIDIKAN IKLAN

RENCANA CERPEN PUISI CETUSAN MINDA SASTERA DAN BUDAYA IKON REMAJA REMAJA BISNES

Borneo Bulletin, Thursday 18 February 2016

Page 17

Borneo Bulletin Spectrum

COMMUNITY FEATURES ENTERTAINMENT

Still with analogue TV? Get ready for digital

By FAMA SUAI

MEMBERS of the public are advised to upgrade their TV receiver systems from analogue to digital as the former will eventually be discontinued. This was revealed during Radio Televisyen Brunei's (RTB) "Jawatara Badahut" ke Pevitaran Digital" or the "Badahut" Towards Digital Broadcasting Roadshow.

The roadshow was held on Tuesday at Rempayoh Multi-Purpose Hall of Mukim Labi II of the Belait District in an effort for RTB to uphold its wish to mould an informative and conversant society through quality TV programmes.

At the event various activities were held such as presentations on digital broadcasting which included topics such as the wide availability of the channels and programmes.

Speaking to the bulletin was Mohamad Shamsul bin Haji Sanif, a Supervisory Engineer for RTB, where he explained that the visit was aimed at promoting the awareness of RTB's Digital Broadcasting System.

"We want to ensure that the people know that the system is already available for public consumption even in places far inland such as Labi," said Mohamad Shamsul. He added that even though there are still "blind spots" in some areas, most of the Belait District can already receive digital broadcasting signals.

"We are moving towards the digital advancement to give the public the best picture quality that comes with the technology." He said analogue broadcasting will be phased out when residents have upgraded to the digital broadcasting system.



Mohamad Shamsul bin Haji Sanif, a Supervisory Engineer for RTB, during the interview.

"The Sultanate has reached to a level where digital broadcasting coverage is more than 90 per cent," he added while saying that those who have upgraded enjoyed five channels in higher quality while being offered various programmes.

During the event, the public were informed of the equipment needed to upgrade to be able to receive digital broadcasting. RTB also took the opportunity to disseminate issues on receiving broadcast usually faced by the public which are often caused by the improper usage of the aerial and also the



Belait District Officer, Hajj Haris bin Haji Othman and a member of the Legislative Council, YB Awang Haji Abdul Latiff bin Ahmad looking at the equipment being displayed.

lack of equipment. For members of the public who do not have a built-in TV tuner, they may opt to purchase a decoder after upgrading the aerial to be able to view the broadcast.

We hope that the public will start upgrading as we ensure that more information will be delivered with more channels available for viewing with the addition of more programmes," added the supervisory engineer while informing that RTB is in the planning phase of doing a survey to find out the level of acceptance amongst the public through the sales of the

decoder by various agents. We also aim to provide digital broadcasting to those who live further inland such as Melilas and Suai, he said.

The guest of honour at the event was the Belait District Officer, Hajj Haris bin Haji Othman, also present were Legislative Council members, YB Awang Haji Abdul Yusof bin Haji Dulamin and YB Awang Haji Mohd Shafiee bin Ahmad, as well as mukim and village heads, and representatives from the government agencies within the district.



Attendees at the event

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CHALLENGES

- a) Willingness and readiness of the public to convert their analogue receivers to digital.
- b) Monitoring compatibility of the TV sets in the market
- c) Mandating DVB-T2 tuners in TV sets
- d) High Investments – Capex and Opex
- e) Installation of common antenna in high rise dwellings
- f) Competitive media landscape



WAY FORWARD

- To continue the consumers awareness campaigns and finds ways to enhance its effectiveness.
 - Organized more frequently
 - Reaching to grass root level and students
 - With new concepts - “buy-in”
- To strengthen the reception of ‘blackspot’ area.
 - Field strength measurement
 - Gap Filler Stations
- To coordinate with relevant authorities on monitoring and management of the digital receivers in the market and related issues
- To strategize and rebrand the digital contents



SUMMARY

- The plan for digitization in Brunei Darussalam began since year 2000.
- Infrastructure has been developed and nationwide digital transmission has began.
- Currently, RTB simulcast both analogue and digital transmission.
- Brunei Darussalam plans and target ASO in 2017.
- This is a complex multi-year project with many challenges
- It requires thorough and careful planning as well as effective implementation.
- The commitment and involvement of all stakeholders is required to ensure the smooth implementation of ASO.



Thank You



www.rtb.gov.bn