



INTRODUCTION OF DIGITAL TERRESTRIAL TELEVISION SERVICES IN MALAYSIA

-Policy and Regulatory Framework

Pre-Summit Workshop on Enhancing Digital Terrestrial Television

Broadcasting Transition Experience

Monday 25 May 2015

Kuala Lumpur, Malaysia

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MCMC in brief



- A statutory corporation established by the Malaysian Communications and Multimedia Commission Act 1998 (MCMCA), effective from 1 November 1998

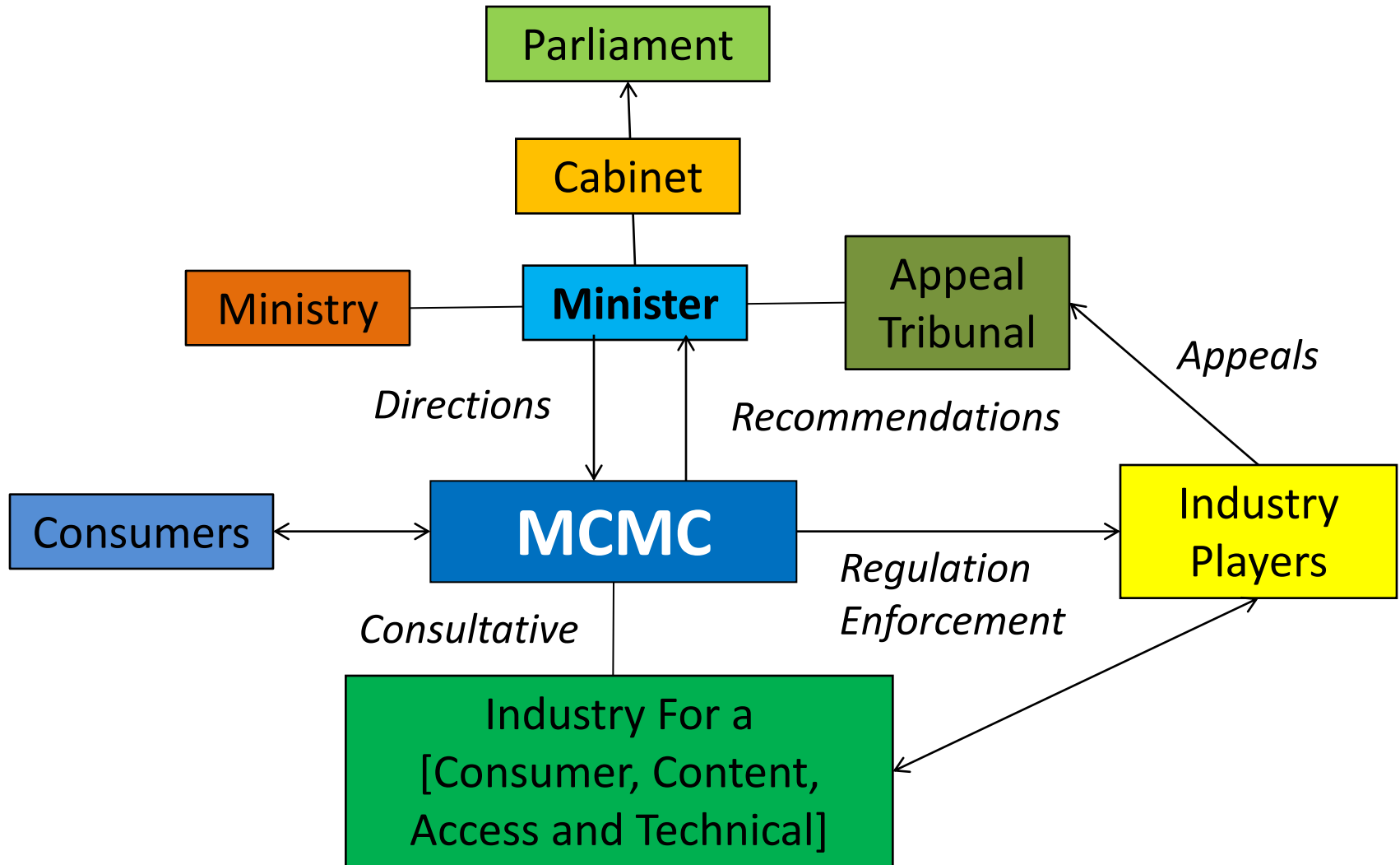
Pursuant to the :

- Communications and Multimedia Act 1998 (CMA)**
- Postal Services Act 1997 (PSA)**
- Digital Signature Act 1997 (DSA)**

- Industry developer and regulator for converging communications and multimedia industry :
 - Telecoms, broadcasters and Applications Service Provider SPs
 - Postal and courier services
 - Digital Certification authorities




Institutional Framework under the Communications and Multimedia Act (CMA) 1998



Sectors Under the Purview of MCMC



BROADCASTING

| | |
|--------------|--|
| TV | <ul style="list-style-type: none"> ▪ Satellite – ASTRO (sole provider) ▪ Internet Protocol TV (IPTV) ▪ Free to Air (FTA) – 7 private channels  |
| Radio | <ul style="list-style-type: none"> • Analogue system • Free to Air (AM & FM) - more than 24 stations |

COMMUNICATIONS

| | |
|--------------------------|---|
| Cellular Services | 4 main operators (Maxis, Celcom, Digi, Umobile) |
| Broadband | Telekom Malaysia (HSSB), Maxis, Time, Celcom, Digi, Umobile, YES, P1, WiMax |
| Fixed Services | Telekom Malaysia (TM), Maxis, Time |

POST & COURIER



| | |
|---|---|
| Post | Pos Malaysia |
| Courier | More than 110 small and big courier companies |
| Overlaps with a few logistics companies, regulated by Ministry of Transport (MoT) | |

E-COMMERCE INFRASTRUCTURE

| | |
|--|---|
| Digital Signature | 3 companies under Digital Signature Act 1997 (DSA) |
| Strategic Trade | Managed by MITI-MCMC licensing body and enforcement |
| Cooperation with agencies – MITI, MoSTI, SIRIM, KPDNKK, MyIPO, Bank Negara | |

CONVERGENCE OF CONTENT & COMMUNICATIONS

- Concept of self-regulation
- New media, social media i.e. facebook, twitter, blog, websites
- ‘Klik Dengan Bijak ‘ Campaign



4 Categories of Licenses Under The CMA 98



Network Facilities Provider (NFP)

- Towers, poles, ducts and pits used in conjunction with other network facilities
- Radio communications, transmitters and links
- Submarine cable landing centre
- Earth Stations
- Fixed links and cables
- Satellite control station
- Satellite hubs
- Space station
- Broadcast towers



Network Services Provider (NSP)

- Bandwidth services
- Broadcasting distribution services
- Cellular mobile services
- Access application service
- Space services
- Switching services
- Gateway services



Application Services Provider (ASP)

- PSTN telephony
- Audio text hosting services provided on an opt-in basis
- Public cellular services
- IP telephony
- Public payphone services
- Directory services
- Internet access services
- Messaging services



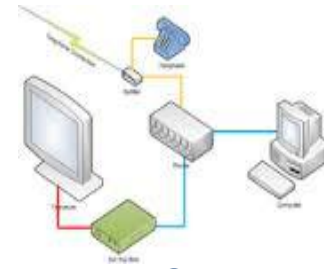
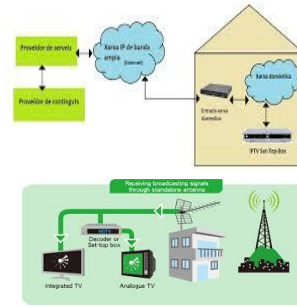
Content Application Services Provider (CASP)

- Satellite broadcasting
- Subscription Broadcasting
- Terrestrial free to air TV
- Terrestrial radio broadcasting



Malaysian TV Broadcasting

–The changing landscape from a single to multi-platform services



1963



Black and White Analog TV (Terrestrial)

1978-1995



Colour Analog TV (Terrestrial)

1996



Digital TV (Satellite)

1998-2005



FTA TV consolidation ('05)



IPTV & DTT trial



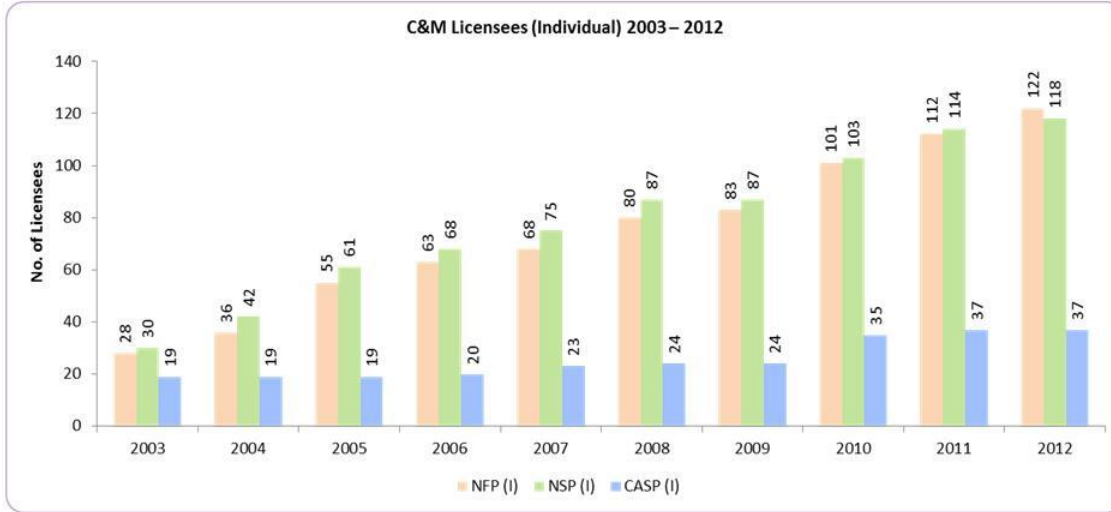
2006 till now



Transit TV, Cable TV, IPTV, Internet TV & DTT

| Platform | No of Operators Today |
|-------------|-----------------------|
| Terrestrial | 3 |
| Satellite | 1 |
| Cable | 1 |
| IPTV | 3 |
| Internet TV | 14 (approximately) |

Growth of Licensees

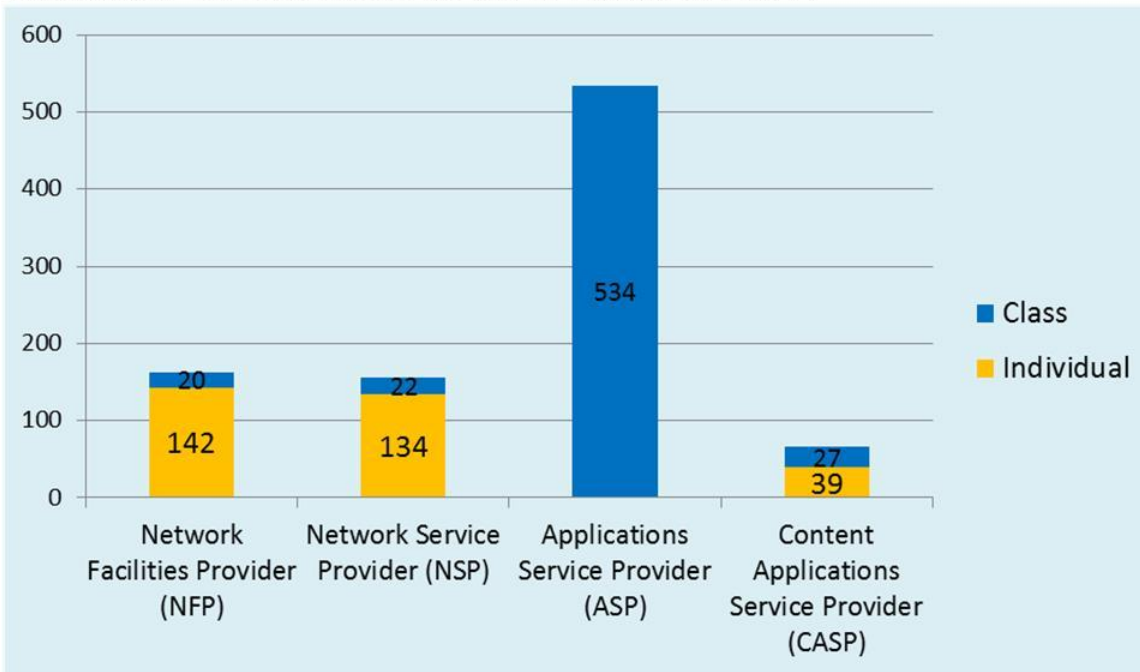


➤ 94.7 % increase in CASP licensees within 9 years

Legend:
 NFP : Network Facilities Provider
 NSP : Network Service Provider
 CASP : Content and Applications Service Provider

Source: MCMC Annual Report 2012

Number Of Licenses as at 31 March 2014

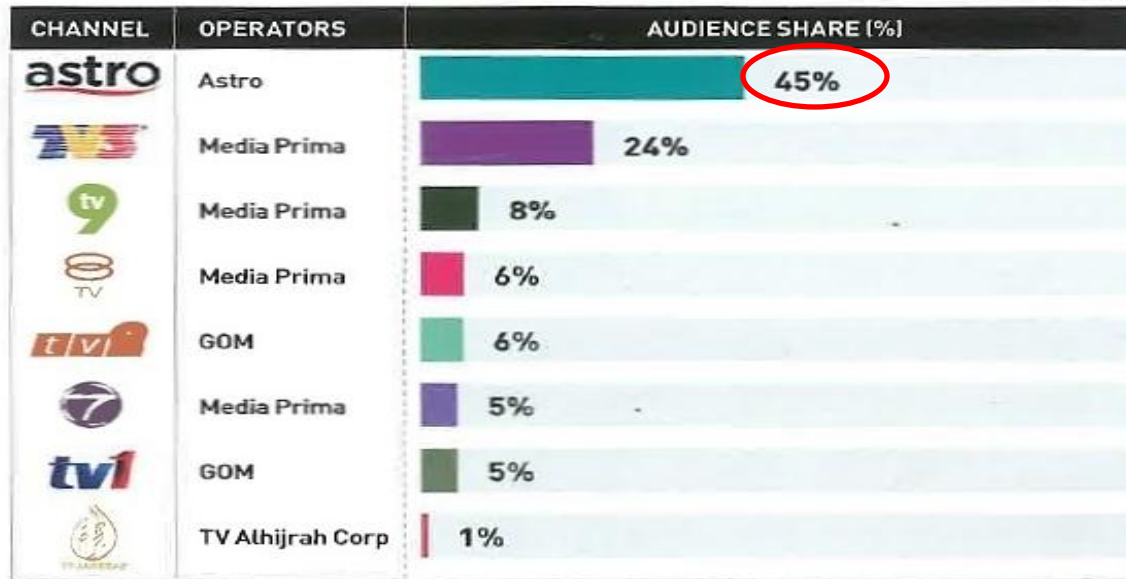


➤ The migration to digital and internet platforms have attracted the largest number of applications service providers

TV Audience Share

2012

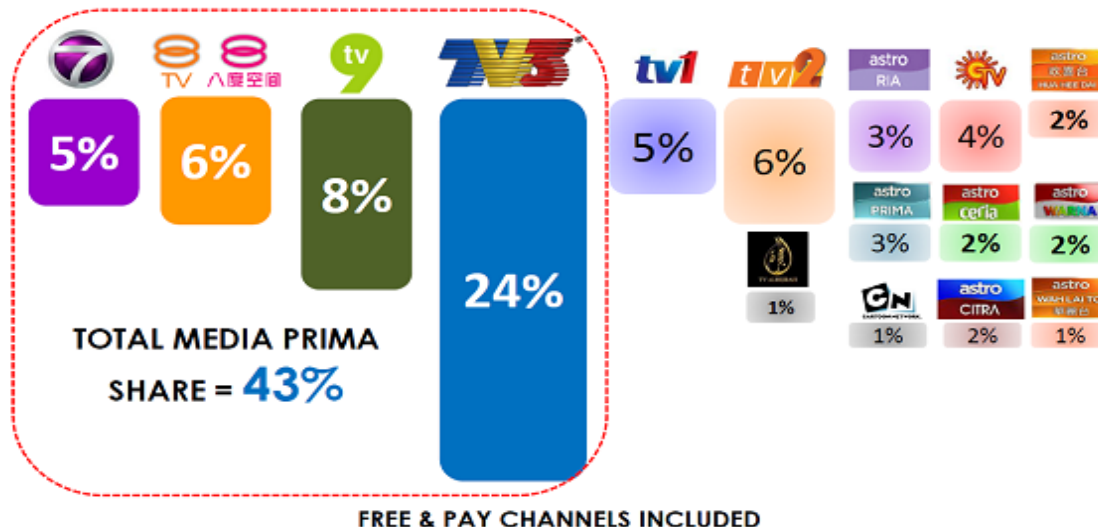
Total 4+



2013



| | |
|--|---------------------|
| ASTRO | Total Free to Air |
| Over 3.5 mil residential customers (approx 52% households) | Over 40% households |



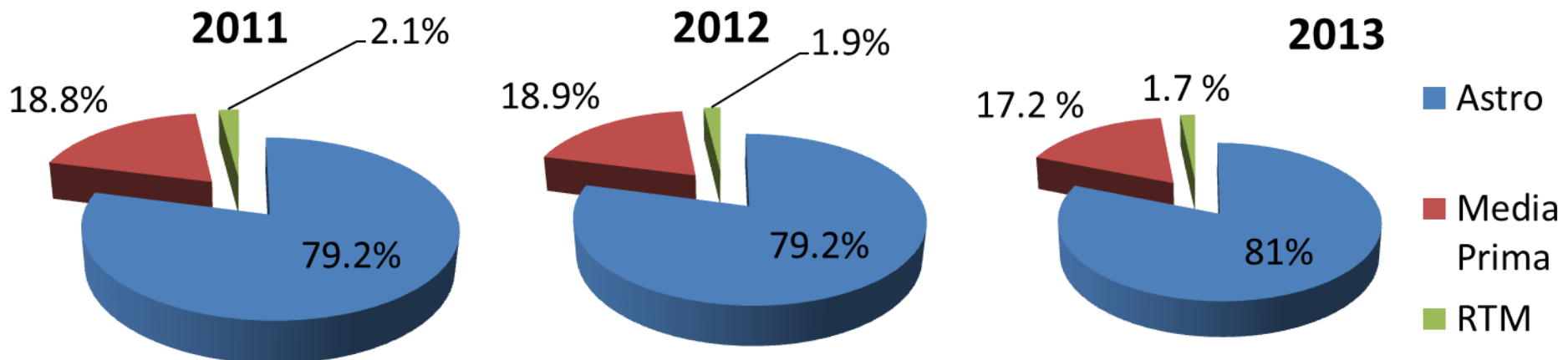
Satellite Pay TV audience share has increased by 7% for 2013 more consumers opted for premium content and value added services

Broadcasting Revenue

On the rise since 2011. Up 9.4% to RM5.8 billion for 2013



MARKET SHARE – FTA TV down 1.9%, Pay Satellite TV up 1.8% for 2013



Source: Industry, MCMC

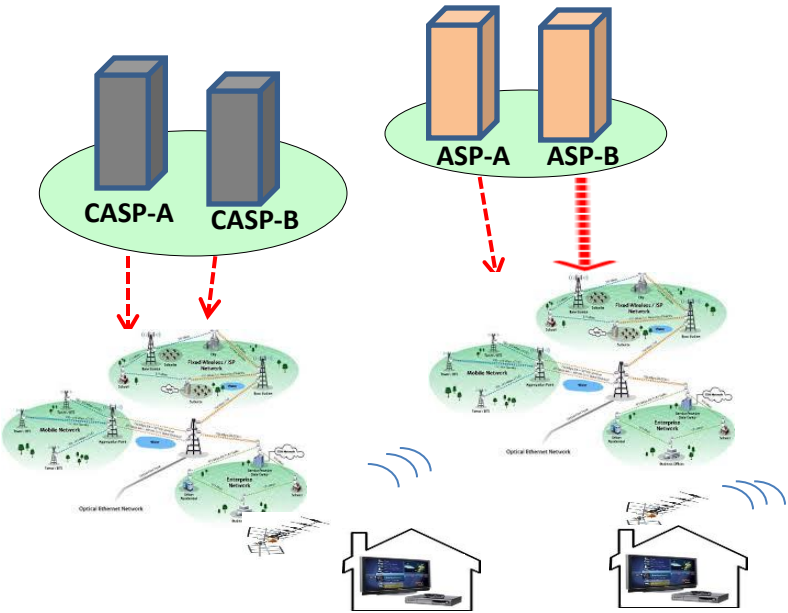
Note: Excludes Media Prima print revenue of an average revenue of RM0.7 billion per year
 ASTRO revenue adjusted on a calendar year basis

Analog and DTT Licensing Environment Under the CMA 1998



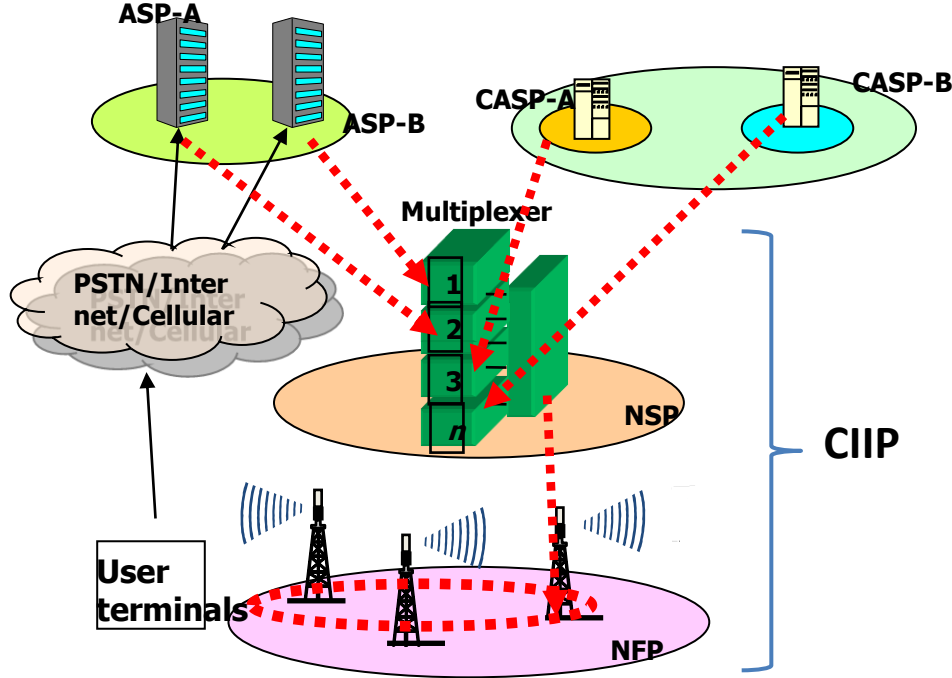
Analog

- **Content & Applications Service Provider (CASP) and Application Service Provider (ASP)**
 - procure own transmission equipment
 - lease access and networks from a Network and Facilities Service Provider
 - lease transmission operations and maintenance services
- **Multiple Infrastructure Provider**



DTT

- **Structural separation between Infrastructure Provider and Content & Applications Service Provider**
- **A single Common Integrated Infrastructure Provider (CIIP) to build and provide access to DTT infrastructure to all CASPs and ASPs**



Policy and Framework



IMPLEMENTATION MODEL

- Private Sector Driven : A single private company to build, operate and own DTT infrastructure for 15 years
- Fully funded by the private sector company
- An independent infrastructure company (NSP, NFP) and not a CASP

TECHNOLOGY & STANDARDS

- Transmission: DVB-T2 technology was mandated in Sept 2009
- Set Top Box Middleware : Hybrid Broadband Broadcast TV (HbbTV) was registered in Jan 2013

COVERAGE REQUIREMENT

- 85% coverage shall be provided to populated areas by Q4 2015
- 98% coverage shall be provided to populated areas by Q4 2016
- DTT coverage shall be at no worse off than analogue coverage
- Reception mode: Fixed roof top coverage

SPECTRUM ASSIGNMENT

- By way of licenced frequency assignment by service area
- 470 to 742MHz (before ASO) and 470 to 694MHz (after ASO);
- 3 Multiplexers before ASO and up to 8 Multiplexers after ASO;
- Adherence to border countries coordination

HELP SCHEME

- CIIP shall subsidise to 2 million eligible households
- Government Linked Companies will be invited to complement subsidy program

Policy and Framework/cont...



INDUSTRY DEVELOPMENT

- CIIP to assist in capacity building and content related skills training

RETAILERS & MANUFACTURERS

- Program is managed by MCMC and Malaysian Technical Standards Forum
- Include recommendation on standards adoption, multimedia receivers test suite and antenna installers training program

EDUCATION & AWARENESS

- Broadcasters Alliance was established since 2014 to steer Education & Awareness programs in collaboration with KKMM/MCMC
- Digital Tick and Mascott's implementation is currently in progress

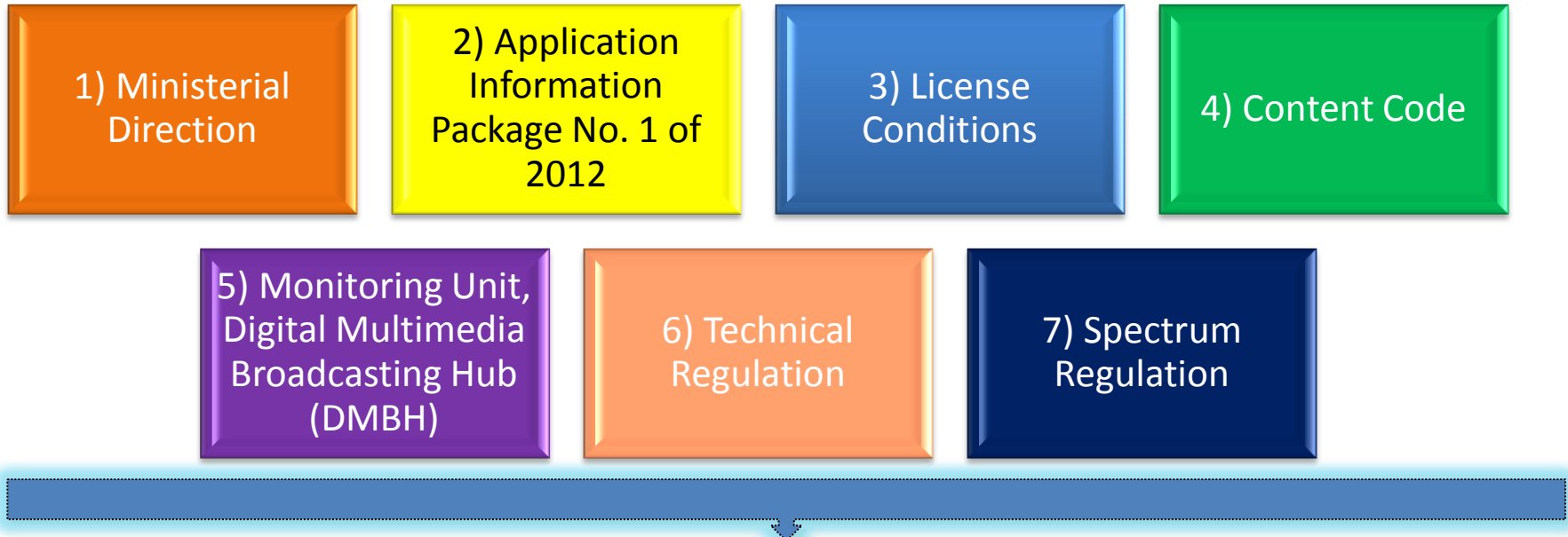
QUALITY of SERVICE

- Per service coverage requirements
- CIIP to ensure annual 98% SLA
- Quarterly/Bi-Annual audit by MCMC
- Benchmark with ITU and other industry practice

SIMULCAST AND TARGET ASO

- Simulcast period : less than 3 years target
- ASO : target to begin in phases by 2018

Monitoring and Regulation of DTT Content (Communications and Multimedia Act 1998)



- Policy decision
- Allows a licensee to undertake activities that are market specific
- Effective utilization of Network Infrastructure
- Optimal and effective spectrum usage and assignment
- Guidelines for a responsible approach toward the provision of content (self regulation)
- Mandatory standard to air content
- Live monitoring of DTT content prior to transmission usage

Help Scheme



Definition: Provision of DTT reception equipment including installation and tuning (as necessary) to eligible recipients

- ✓ `Set Top Box' ("STB")
- ✓ `Remote Control Unit'
- ✓ `Portable Indoor Antenna' or `Fixed Roof Top Antenna'
- ✓ `Smart Card'



Eligible Recipients



Total individuals:
6,966,182

Household income less
than RM3,000



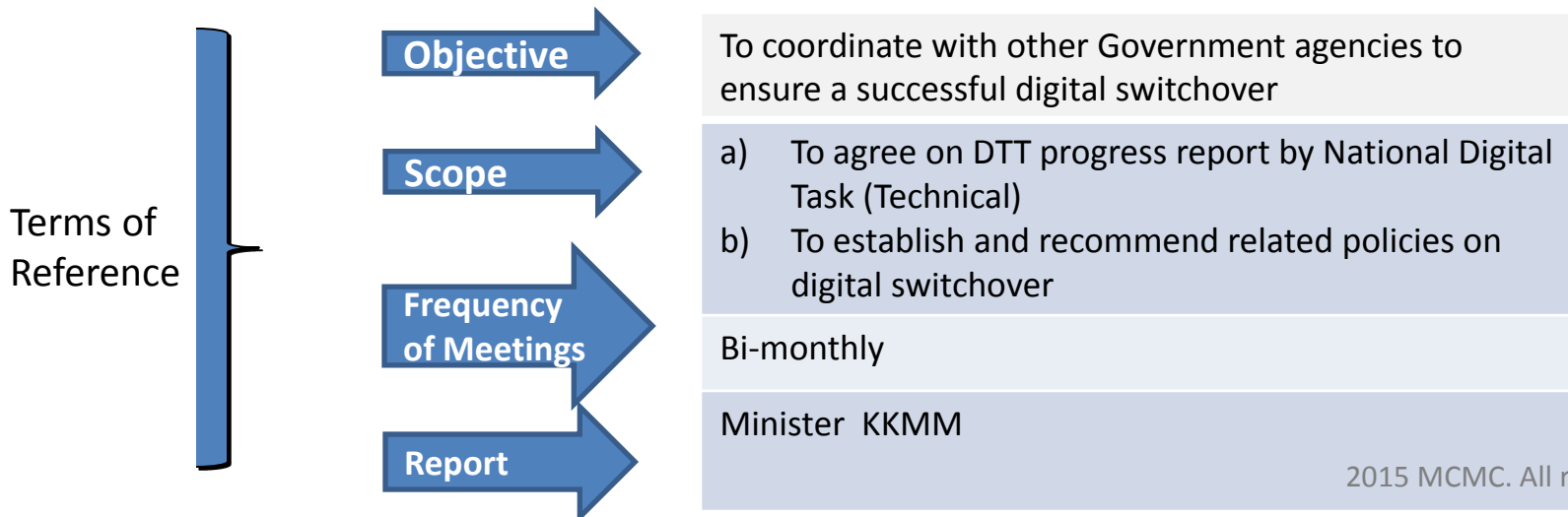
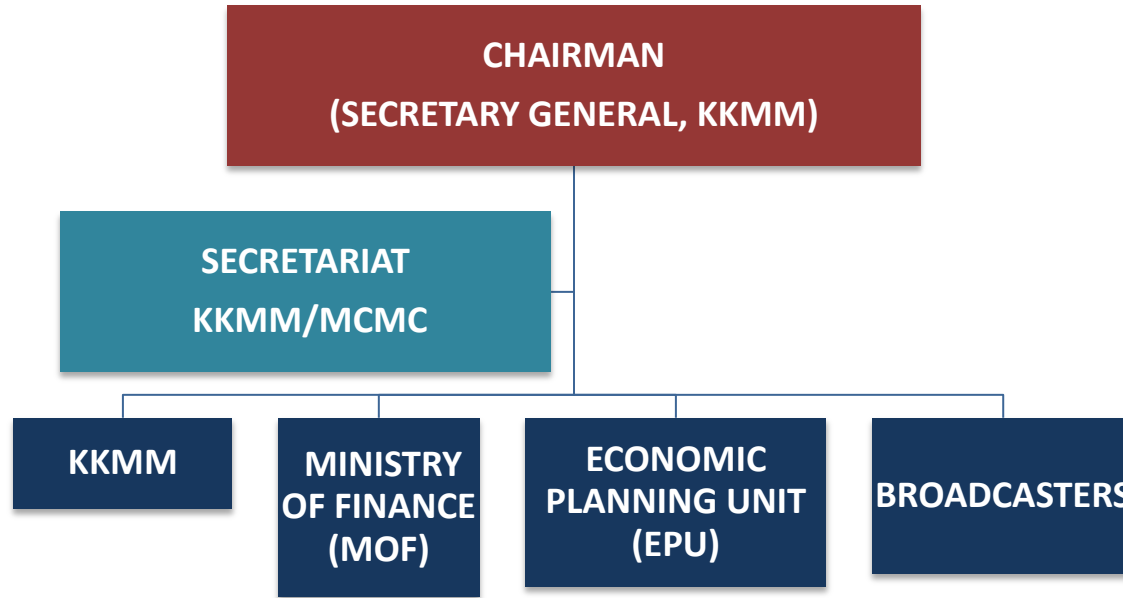
Total individuals:
179,637

Household income
less than RM1,120

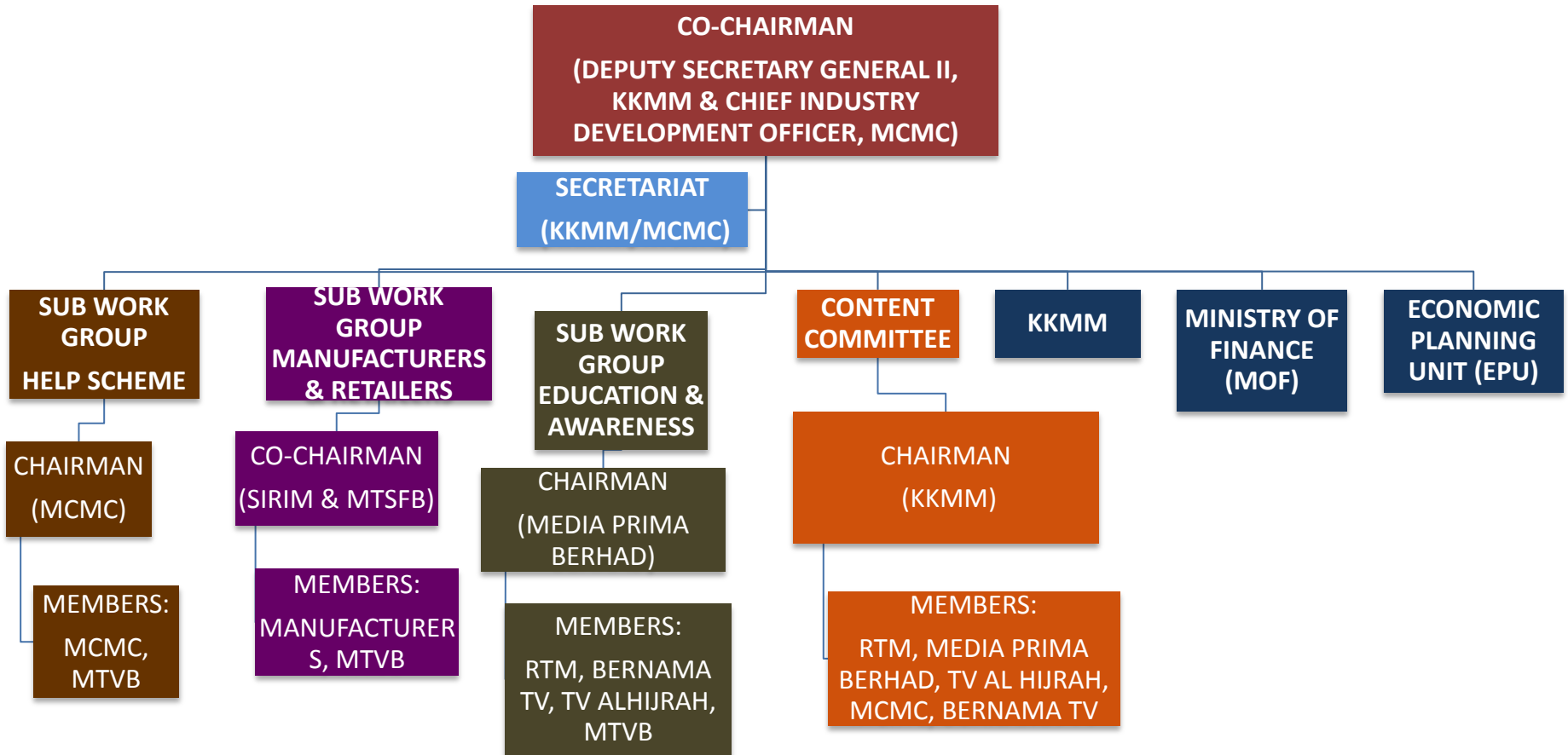
National Steering Committee Established Since 2009



NATIONAL DIGITAL TASK FORCE (“NDTF”)



NDTF Technical Committee Established in 2012



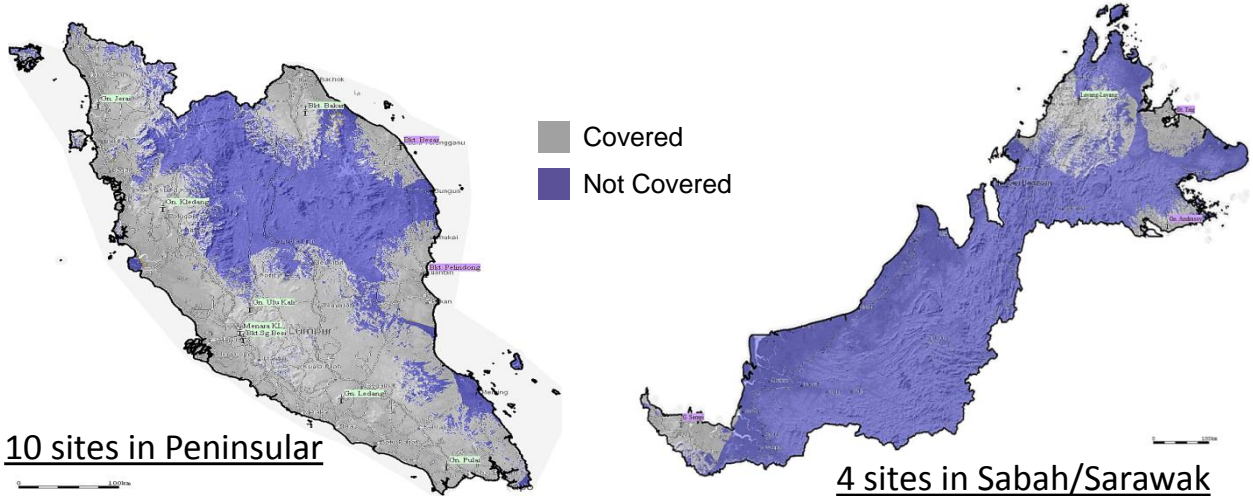
Terms of Reference

| Objective | To monitor and resolve project implementation related issues |
|----------------------|---|
| Scope | a) To oversee MYTV and Sub Work Group's deliverables b) To escalate and recommend issues and policy related matters to NDTF Steering Committee |
| Frequency of Meeting | Monthly |
| Reports to | Minister KKMM |

SERVICE ROLL OUT TIMELINE

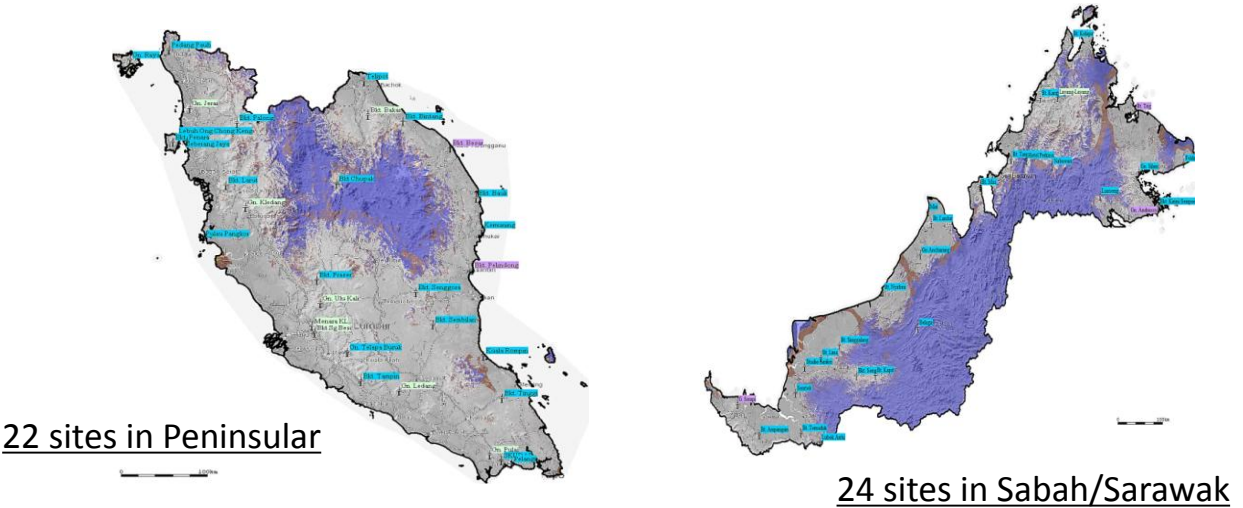
Phase 1 : 14 sites nationwide (85% coverage)

➔ **By October 2015**



Phase 2 : Additional 46 sites + gap fillers nationwide (98 % coverage)

➔ **By December 2016**

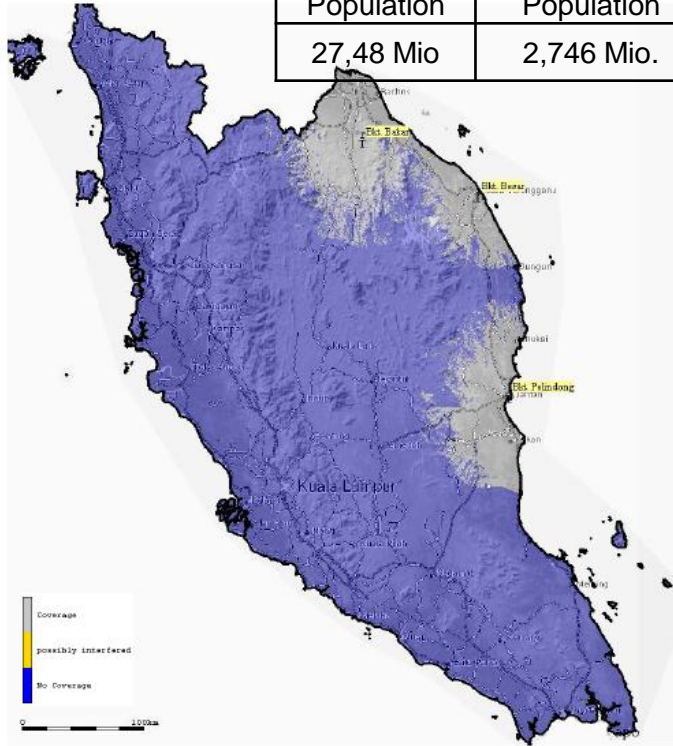


Status To Date...

3 transmitter sites in the eastern region have been installed by MYTV for the initial test transmission



| Total Population | Covered Population | Covered Population |
|------------------|--------------------|--------------------|
| 27,48 Mio | 2,746 Mio. | ≈ 10% |



Transmission from:

- 1) Bukit Pelindung (Kuantan) began on 27 Apr '15
- 2) Bukit Besar (Terengganu) began on 30 Apr '15
- 3) Bukit Bakar (Kelantan) began on 3 May '15

| System & modulation | FEC | GI | Reception mode | Capacity per multiplex (Mb/s) | Current population coverage (%) | Intended percentage population coverage | Content per mux |
|---------------------|-----|--------|---------------------------|-------------------------------|---------------------------------|---|-----------------|
| DVB-T, 256-QAM | 2/3 | 19/256 | Fixed and portable indoor | 34.8 Mbps | 10.0% | 85.0% | 1 HD and 6 SD |

DTT Trial Services



- There are 7 SD channels currently transmitted on the DTT platform with enhanced picture quality



RTM (Government)



Dunia Ria
RTM (Government)



Media Prima
Berhad



feel good
www.ntv7.com.my



di hatiku
Media Prima
Berhad



8
TV
Media Prima
Berhad



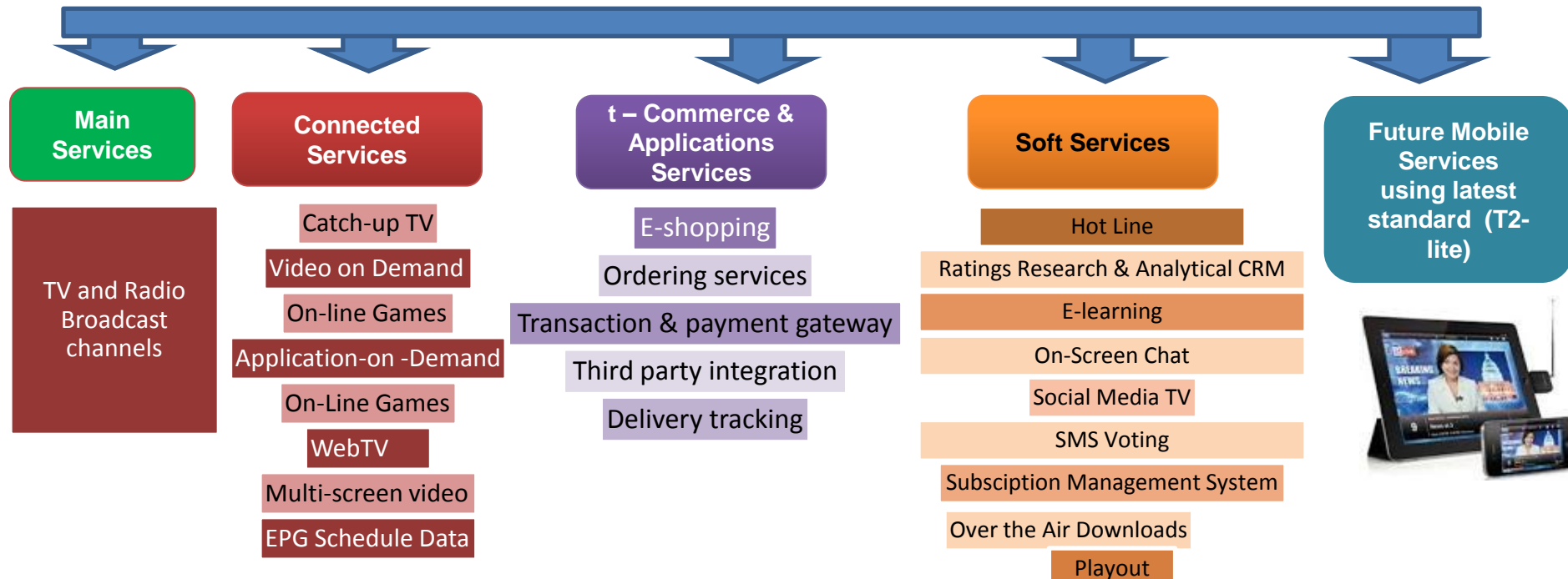
TV ALHIJRAH



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DTT Services At Launch....

MYTV will provide a range of services to incumbent and potentially new broadcasters



Malaysia's Digital Dividend



| | | | | |
|-----------------|-----|-----|-----|--------|
| Band I (VHF) | 47 | 54 | 61 | 68 MHz |
| | CH2 | CH3 | CH4 | |

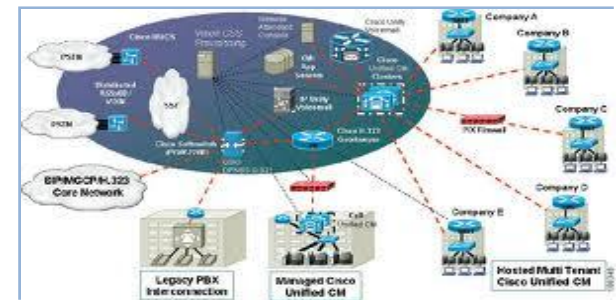
| | | | | | | | | | |
|-------------------|-----|-----|-----|-----|-----|------|------|------|---------|
| Band III (VHF) | 174 | 181 | 188 | 195 | 202 | 209 | 216 | 223 | 230 MHz |
| | CH5 | CH6 | CH7 | CH8 | CH9 | CH10 | CH11 | CH12 | |

| | | | | | | | | | | | |
|------------------|------|------|------|------|------|------|------|------|------|------|---------|
| Band IV (UHF) | 470 | 478 | 486 | 494 | 502 | 510 | 518 | 526 | 534 | 542 | 550 MHz |
| | CH21 | CH22 | CH23 | CH24 | CH25 | CH26 | CH27 | CH28 | CH29 | CH30 | |
| | 550 | 558 | 566 | 574 | 582 | | | | | | |
| | CH31 | CH32 | CH33 | CH34 | | | | | | | |

| | | | | | | | | | | | | |
|-----------------|------|------|------|------|------|------|------|---------|------|------|---------|--|
| Band V (UHF) | 582 | 590 | 598 | 606 | 614 | 622 | 630 | 638 | 646 | 654 | 662 MHz | |
| | CH35 | CH36 | CH37 | CH38 | CH39 | CH40 | CH41 | CH42 | CH43 | CH44 | | |
| | 662 | 670 | 678 | 686 | 694 | 702 | 710 | 718 | 726 | 734 | 742 MHz | |
| | CH45 | CH46 | CH47 | CH48 | CH49 | CH50 | CH51 | CH52 | CH53 | CH54 | | |
| | 742 | 750 | 758 | 766 | 774 | 782 | 790 | 798 MHz | | | | |
| | CH55 | CH56 | CH57 | CH58 | CH59 | CH60 | CH61 | | | | | |

SUMMARY

- The introduction of DTT services in Malaysia is driven by the private sector while the government facilitates in terms of policy formulation and approach
- A private sector driven approach will create more job opportunities and spur the multi-media industry
- A Common Integrated Infrastructure Provider (CIIP) enables common infrastructure sharing thus optimising access cost
- DTT free services will provide an alternative Digital TV platform and more programming choices to the people
- A cohesive effort between the relevant stakeholders is important to ensure a successful ASO
- Digital switchover will pave the way for the introduction of more communication services to the people





THANK YOU