



Digital Terrestrial Television Broadcasting: in Thailand

**The National Broadcasting and
Telecommunications Commission,
Thailand**

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Outline



- ✓ **Broadcast TV Industry in Thailand**
- ✓ **NBTC Regulations**
- ✓ **Digital Switch Over: DSO**
- ✓ **DTT Roll-out Plan**
- ✓ **Commercial Spectrum Allocation**
- ✓ **Conclusion**



Broadcast TV Industry in Thailand



6 Analog Terrestrial TV channels

About 700 Satellite + Cable TV channels

Public TV

Government TV



Thai PBS

Commercial TV

Army Ch,



State enterprise



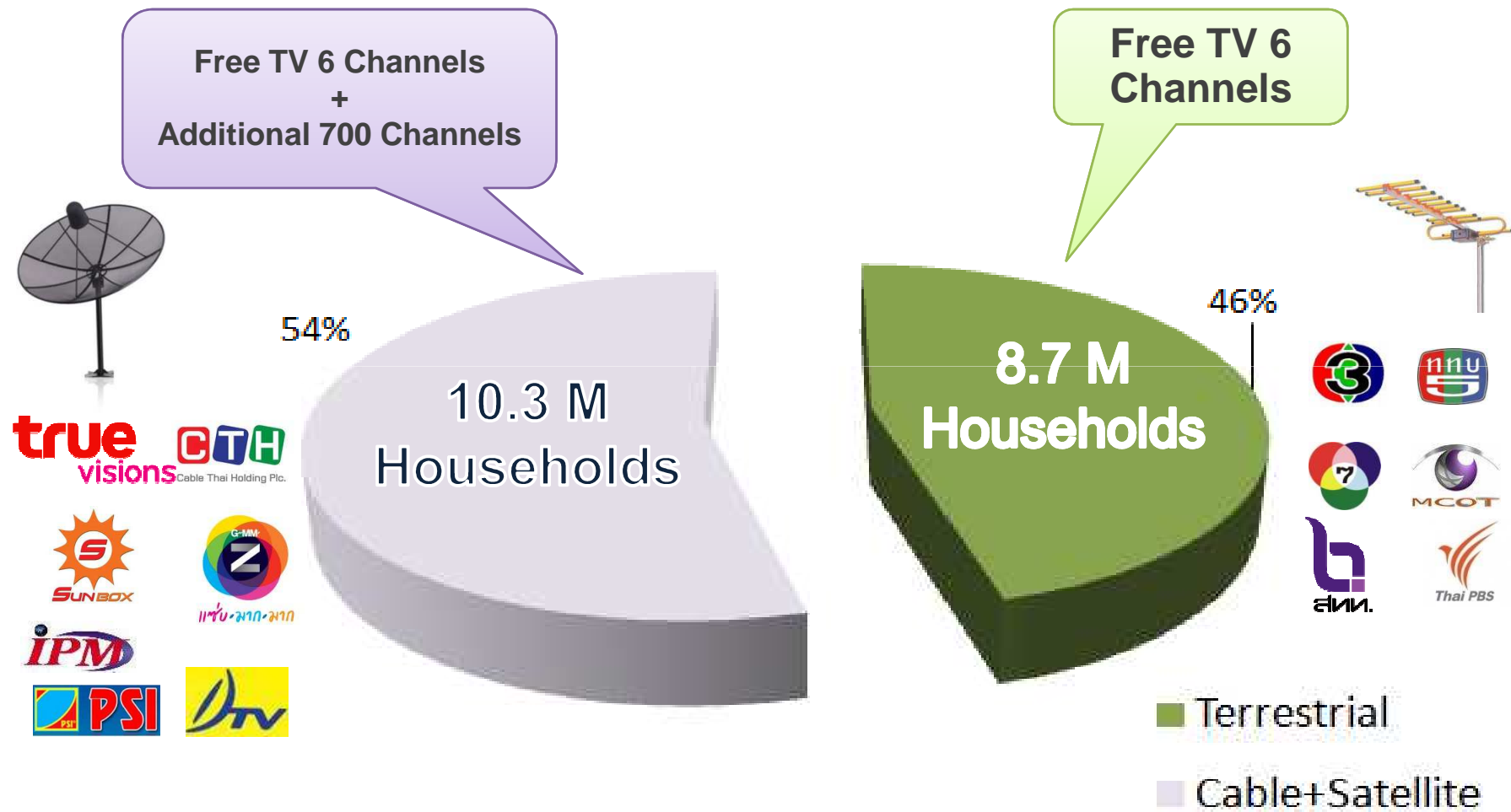
Concession from Ch 5,



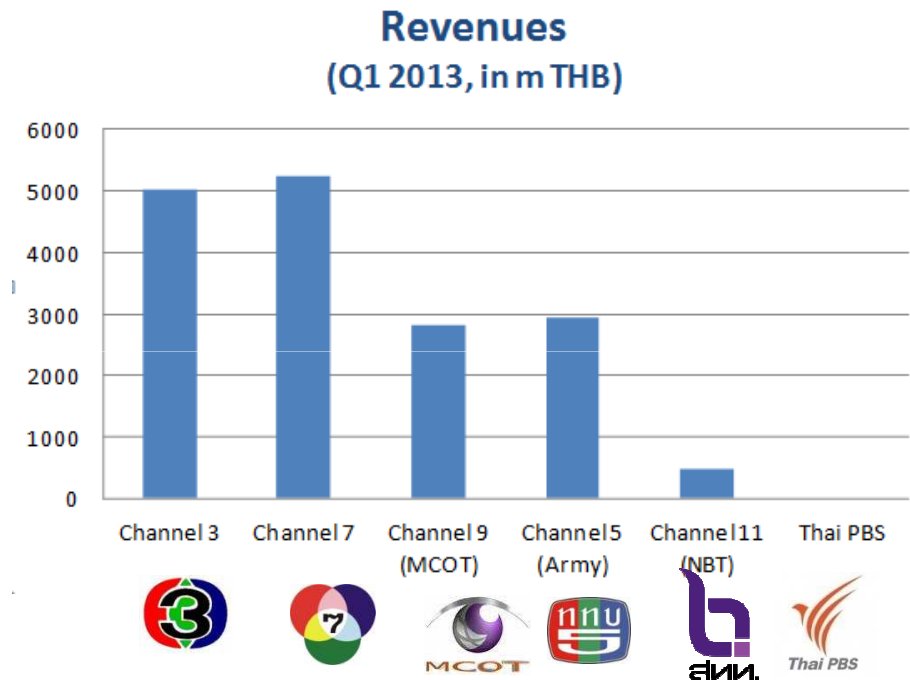
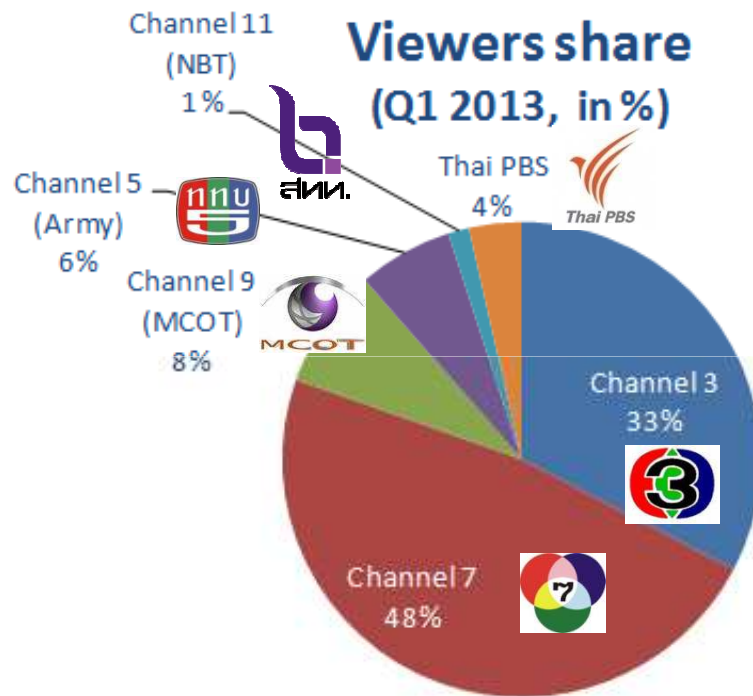
Concession from MCOT



Market Share Platform Based



Market Share of Analogue TV Broadcaster



Viewers

Revenue



Context & Strategy for Transition to Digital TV

- ✓ **Regulatory Vacuum in broadcasting sector in Thailand for almost 15 years**
- ✓ **Support old analog/incumbent operators (government organizations & concessionaries) – before transition**
- ✓ **Support new Digital/license broadcasting system**
- ✓ **Within scope of Broadcasting Law**



Important NBTC Regulations

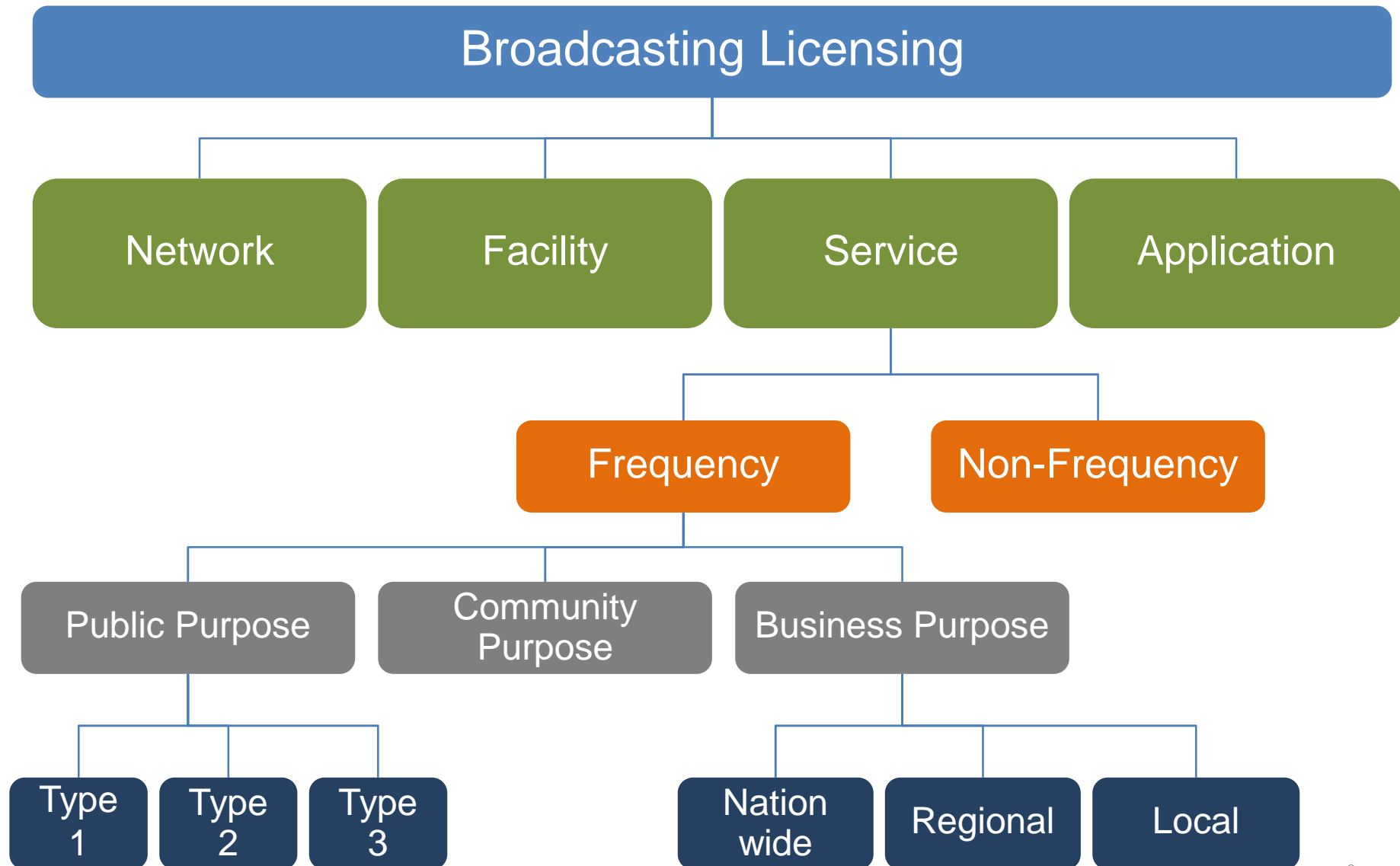


✓ **Types/Categories of Broadcasting Licenses:**

- ✓ Infrastructure/Network/Service/Application Licenses
- ✓ Operating Rights: Networks License
- ✓ Spectrum/Broadcasting Rights: Service License
- ✓ Application License to support future convergence

✓ **Free TV Services: Must Carry Rule and Must have Rule**

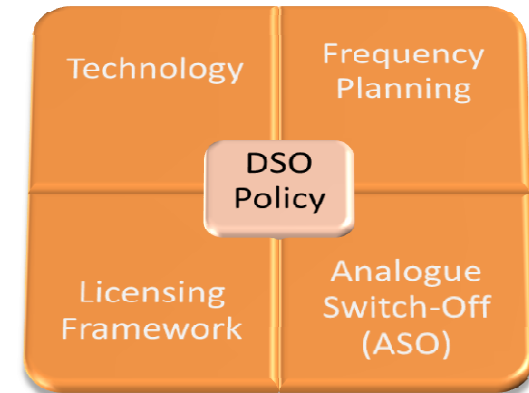
Broadcasting Licensing Scheme



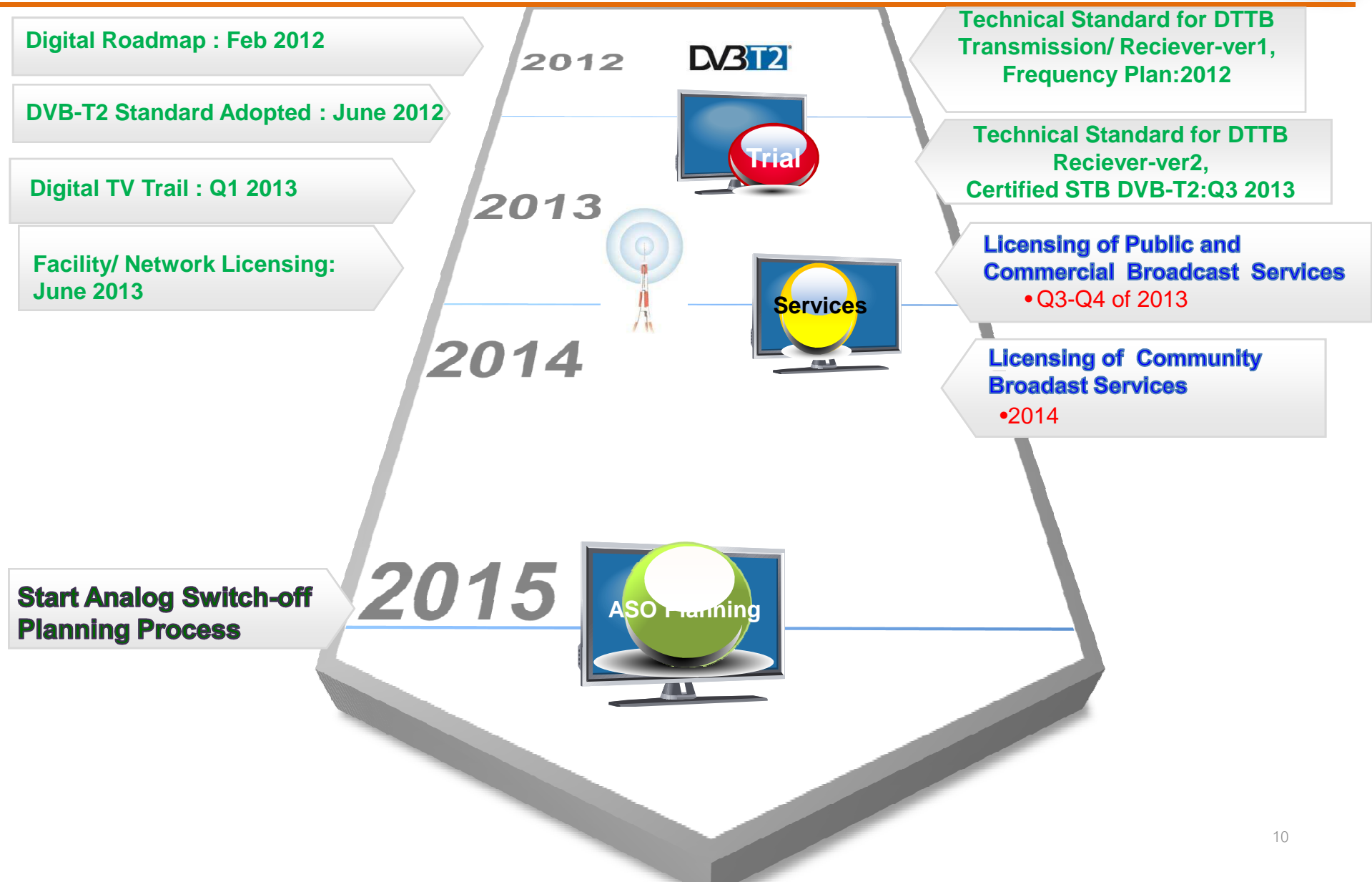
Digital Switchover Milestones



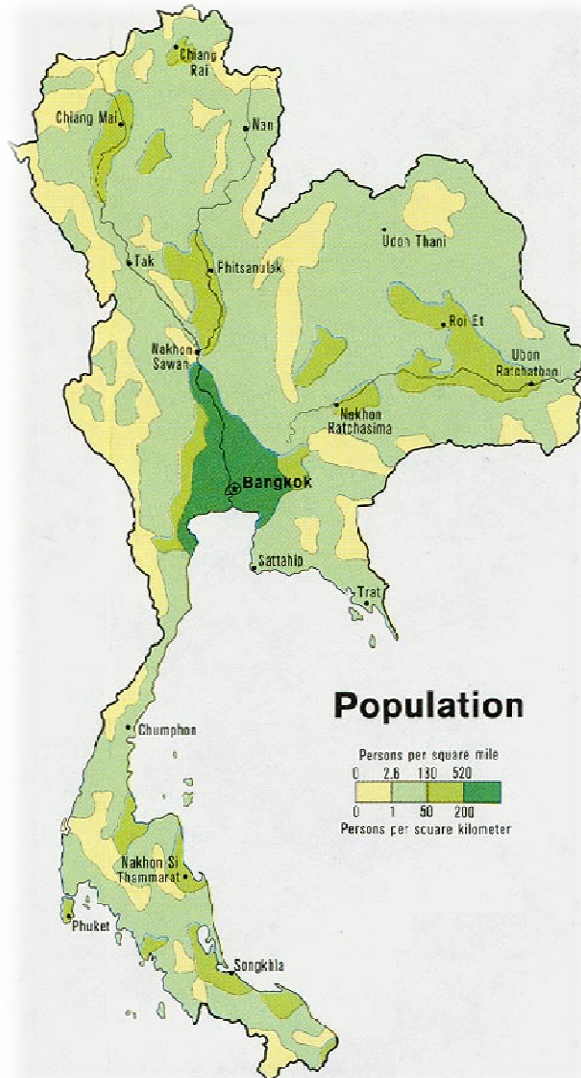
- Digital Roadmap: Feb. 2012
- DTTB standard Adopted: **DVB-T2** in June 2012
- Regulations: **2012**
 - DTTB Transition Plan
 - DTTB Transmitter Technical Standard
 - Minimum DTTB Receiver Technical Standard
 - Radio Frequency Planning for DTTB
- Regulations: **2013**
 - Issue Facility Licenses
 - Issue Network Service Licenses
 - Issue Service Licenses – Commercial (by Auction)
- Regulations: **2014**
 - Issue Service Licenses – Public (by beauty contest)
 - DSO transition support programs e.g. Subsidization by issue coupons to every household (22M households)



Digital Switchover Status in Thailand



Regulations on DTT Network Providers



Coverage Requirements

– Network Obligations:

- Year 1: > 50% of households
- Year 2: > 80% of households
- Year 3: > 90% of households
- Year 4: > 95% of households

Use of DVB-T2 system

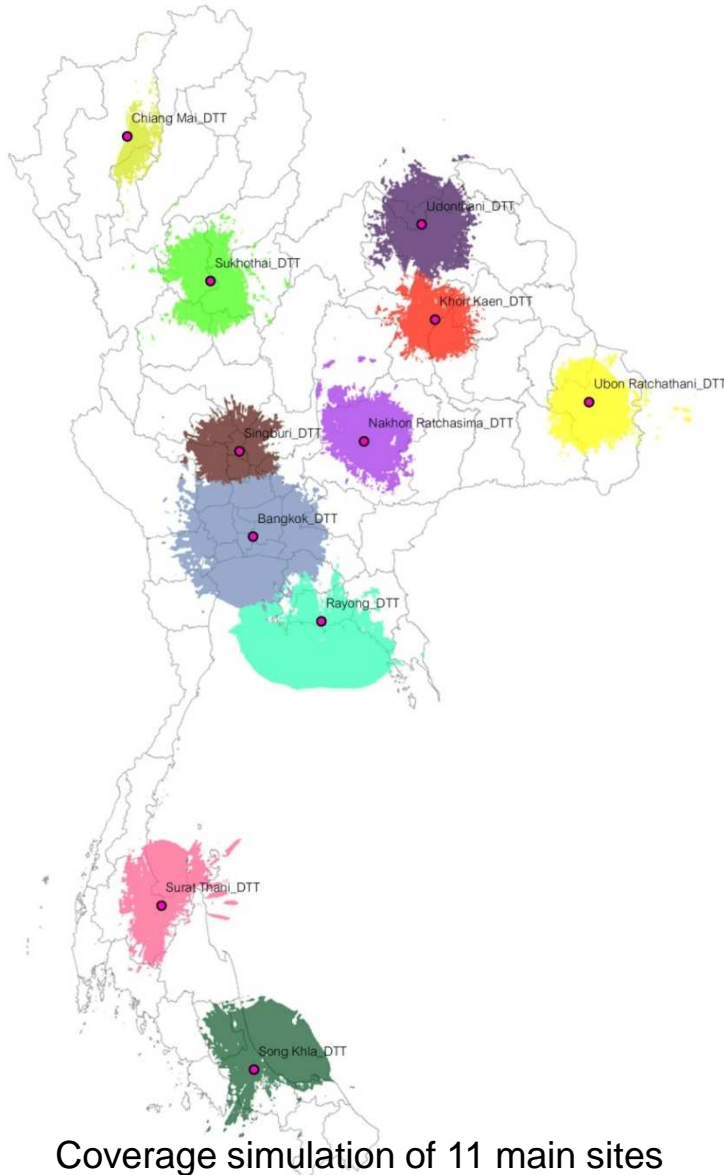
Requirement for **Portable Indoor Reception** in Urban areas

Use of MFNs for 39 main sites, and use of SFNs where possible for additional 127 sites and numbers of gap fillers for improving indoor reception

5 MUX at the beginning then introduce 6th MUX after ASO

20% of MUX Capacity for Community TV services

DTT Roll-out Plan by Network Providers



Coverage simulation of 11 main sites

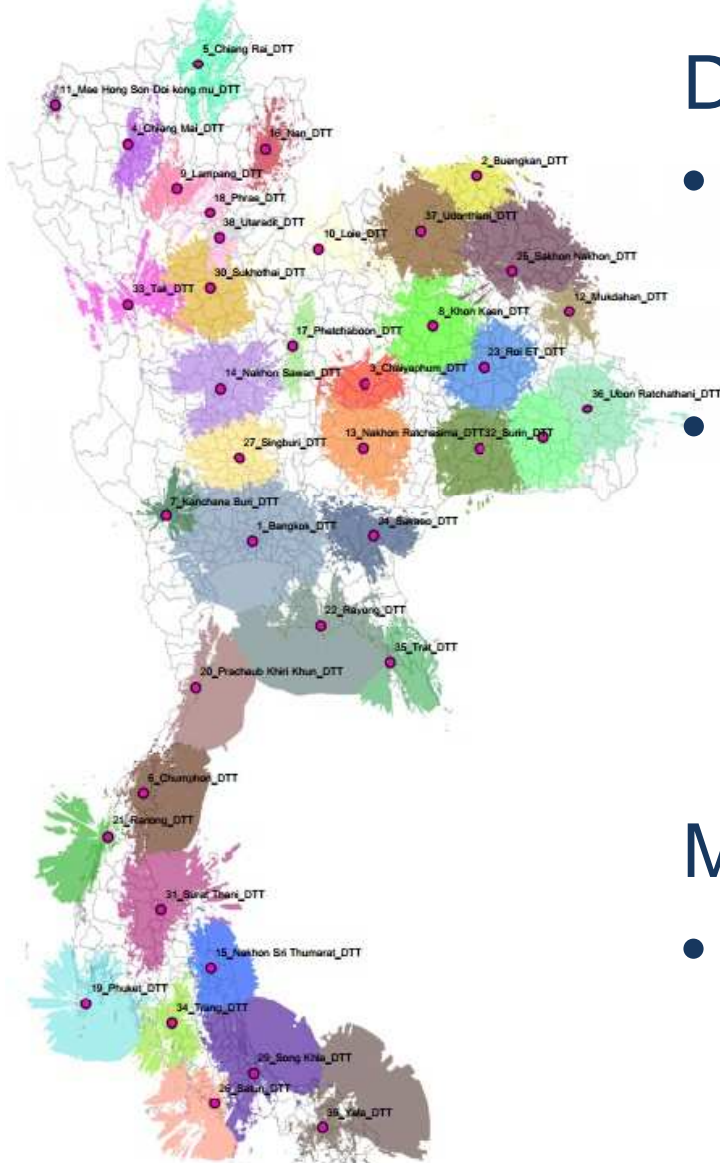
- All 4 Network Providers agree to share common facilities e.g. towers, antennas, combiners
- Also agree to have common roll-out plan as following:-
 - **April'14 – Jun'14:**
Complete 11 main stations which will cover > 50% of total household (about 11 mil. HH)

DTT Roll-out Plan by Network Providers



DTT roll-out plan (Continue)

- **Jul'14 – Jun'15:** Complete 39 main stations which will cover > 80% of total household (about 17.6 mil. HH)
- **Jun'17:** Complete 95% of total household with gap fillers in some urban areas to improve portable indoor receptions



Coverage simulation of 39 main sites

Must Carry Rule

- **May'14:** Complete carry over all DTT channels on satellite and Cable TV platform



Mandating the Digital Receivers

- Minimum requirement of technical spec. for STB and iDTV were defined since Q4-2012
- Self Conformance scheme: Submit test reports to conform and to eligible for conformance sticker and Digital TV Mascot & Logo



14
Set-top-box



Regional Cooperation - ASEAN



- Singapore, Malaysia, Indonesia, Brunei, Vietnam, Thailand and Myanmar have opted to leap-frog to DVB-T2
- These 7 countries have about 470M population in total
- ASEAN Digital Broadcasting initiative to develop common specifications for DVB-T2 receivers
- Analogue TV Switch-off by 2020





Auction Design: DTT Commercial Services

✓ Specify 48 programs for DTT

- 12 Community
- 12 Public
- 24 Commercial



✓ Categorize 24 Commercial programs into 4 groups:

- 3 Kids
- 7 News
- 7 Variety SD
- 7 Variety HD



Auction Design: DTT Commercial Services

- ✓ **Spectrum Valuation by several organizations/
Starting = Reserve price**
- ✓ **4 rounds auction, one for each group**
- ✓ **Auction results: Total revenue of 1,590 M USD
(compare to reserve price of 474 M USD)**

	Starting price (=Reserve price) (mil. USD)	Auction Result (mil. USD)
Variety HD (7 Services)	330 \$	741 \$
Variety SD (7 Services)	83 \$	498 \$
News (7 Services)	48 \$	289 \$
Kids (3 Services)	13 \$	62 \$
Total	474	1,590 \$

Digital Switch Over: DSO



- ✓ Revenue from Auction go to Broadcasting Development Fund
- ✓ NBTC have agreement with Dev. Fund Committee to have some part of the revenue for DTT Subsidize program
- ✓ The DTT Subsidize program will be by Cash Coupon to every household in Thailand
- ✓ Coupon value should be enough for DTT STB + Active indoor or outdoor antenna



Active Indoor Antenna

Conclusion

- DTT will be significant Free-To-Air TV Platform in the future better QoS and better specific contents
- DTT is public utility including Community/Public/Commercial Service
- Up to 7 HD for Commercial Service and 4 HD for Public Service (total of 11 HDTV for Thailand)
- Analog TV Switch-off By 2020



DTTB Activities: Network & Auction

Network Provider Licensing



Commercial Service Licenses Auction



Digital TV Logo & Mascot

