

# INTERNATIONAL TELECOMMUNICATION UNION



**RadioAsia 2017 Conference**

## **Radio spectrum challenges in Thailand**

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# Topics

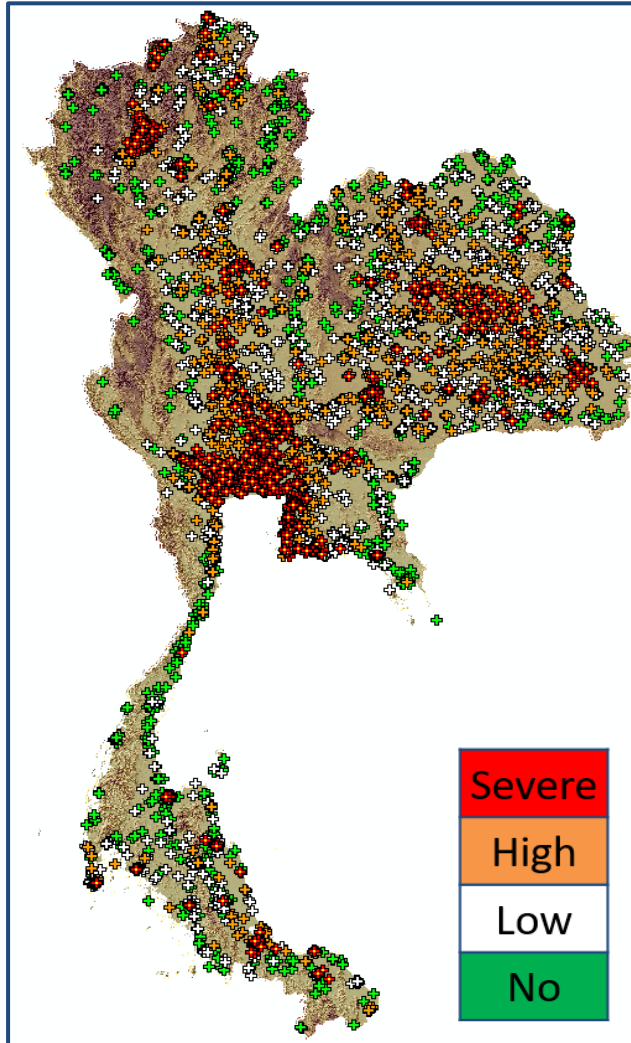
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## Topics

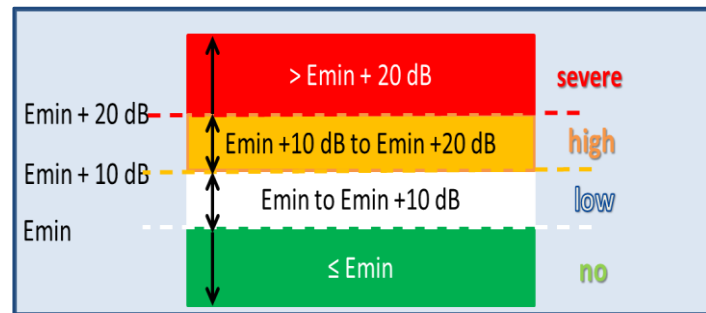
1. Spectrum challenges in the FM band
2. Spectrum challenges in the VHF (DAB) band

# 1. Spectrum challenges in the FM Band

Thai FM  
Band  
(87.0 to 108.0  
MHz)  
Congested



- Congestion is Severe or High mainly in central, north and east
- Due to the high number of local FM stations (~ 5,500)
- Without local FM, the 313 main FM stations are interference free

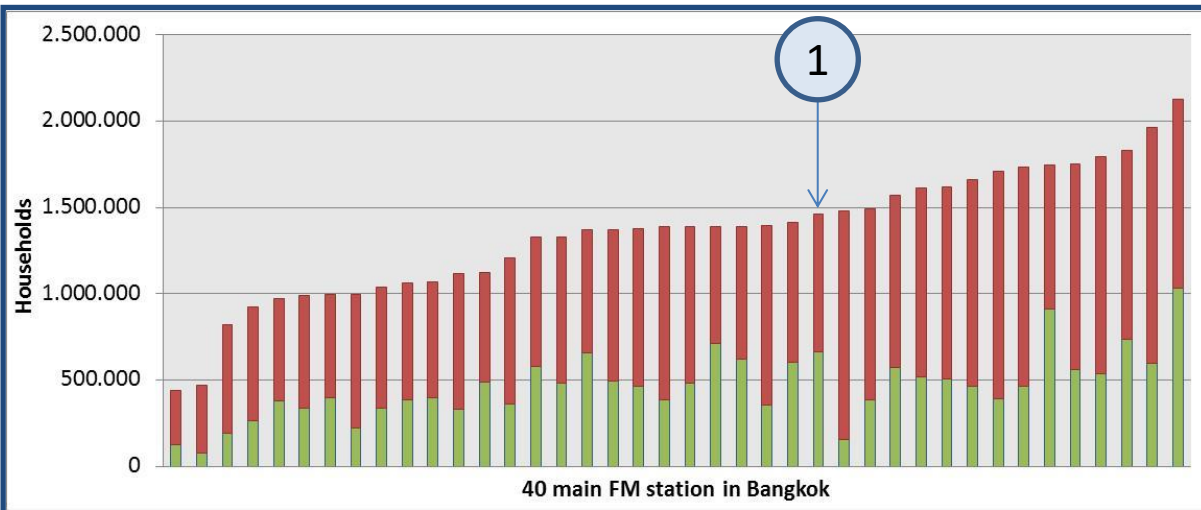


# 1. Spectrum challenges in the FM Band

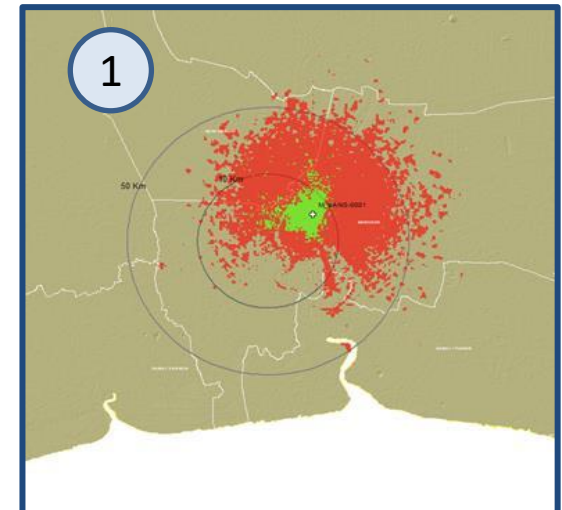
## Thai radio industry under pressure

- Radio revenues stable (at best) and competition increasing:
  - Already an extreme high number of FM broadcasters (> 5,500)
  - Radio streaming services from (foreign) OTT providers
- Broadcasters turning to IP streaming as an alternative to FM:
  - To get a better reach due to poor FM coverage
  - To increase the number of services
  - To reach larger audiences without regulatory costs

Interference free PI reception Interfered Households



Portable Indoor (PI) Coverage

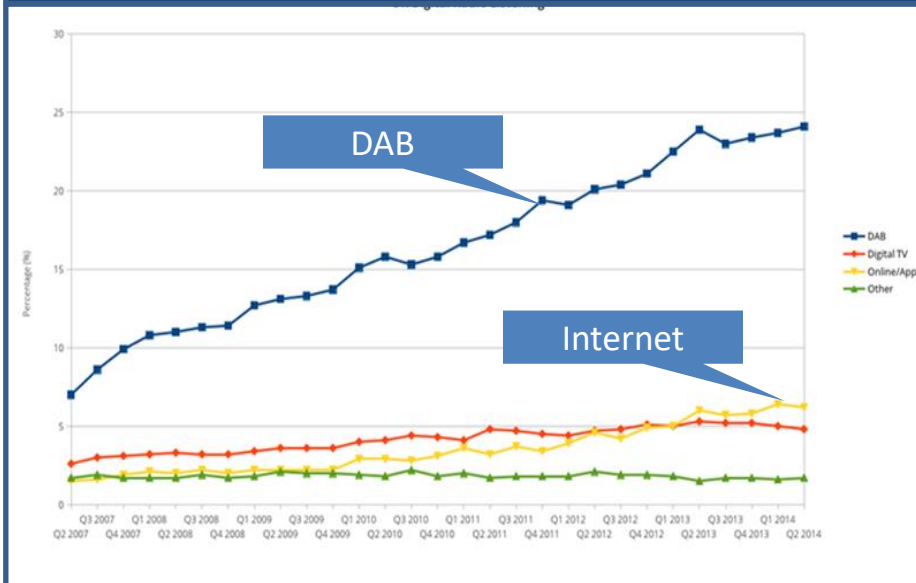


# 1. Spectrum challenges in the FM band

Good FM needed for **Digital** future

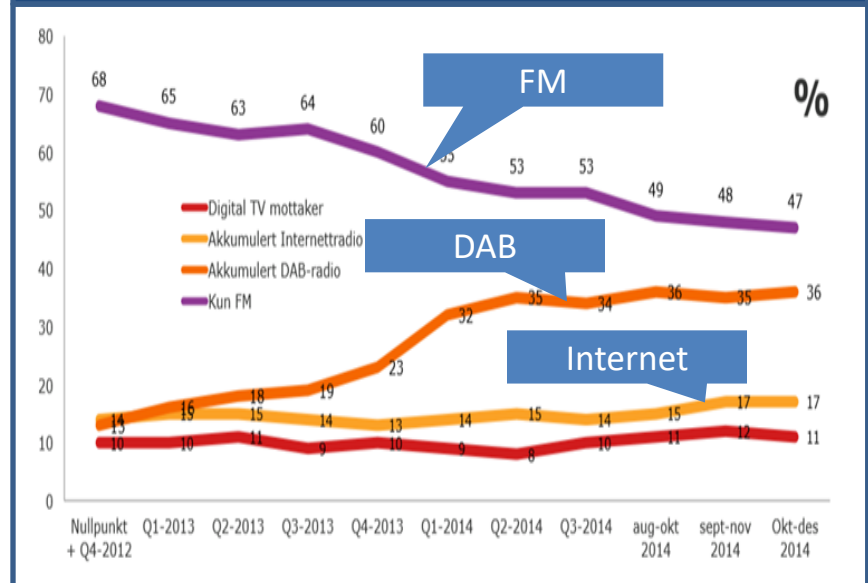
- Internet's listening share is limited compared to (digital) broadcasting platforms, even in Broadband countries
- Building-up an digital listeners base, can not be done without a broadcasting platform (FM, DAB or both)
- FM revenues needed to finance the digital future

Digital Listening Shares – UK <sup>(1)</sup>



(1) ITU ICT Development Index (2016) global ranking: 5

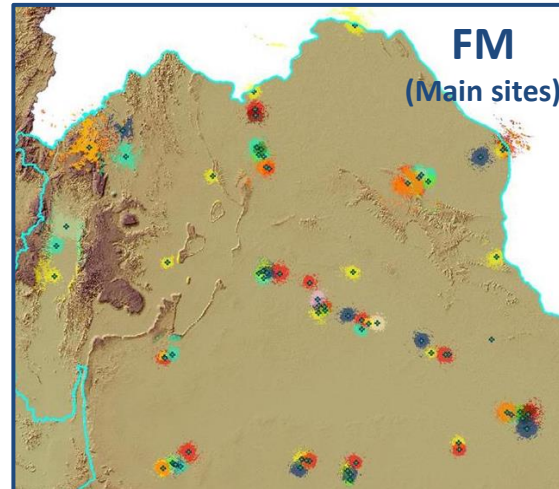
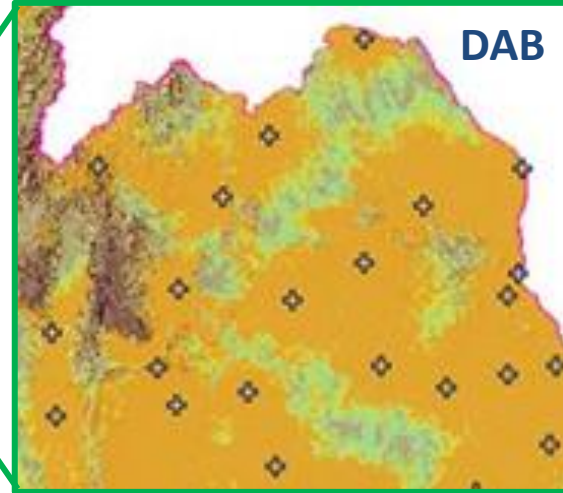
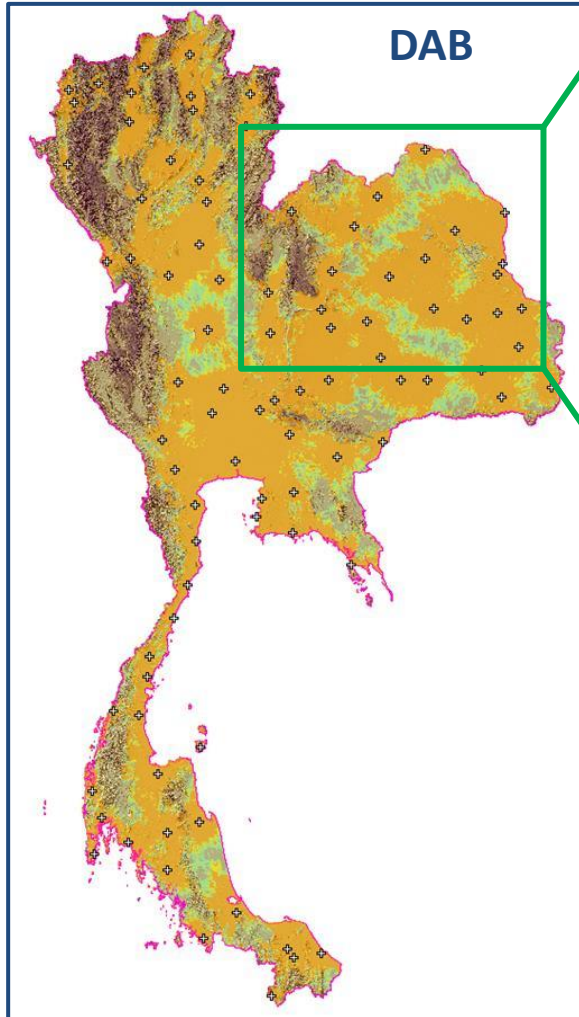
All Listening Shares - Norway <sup>(2)</sup>



(2) ITU ICT Development Index (2016) global ranking: 9

## 2. Spectrum challenges in the VHF band

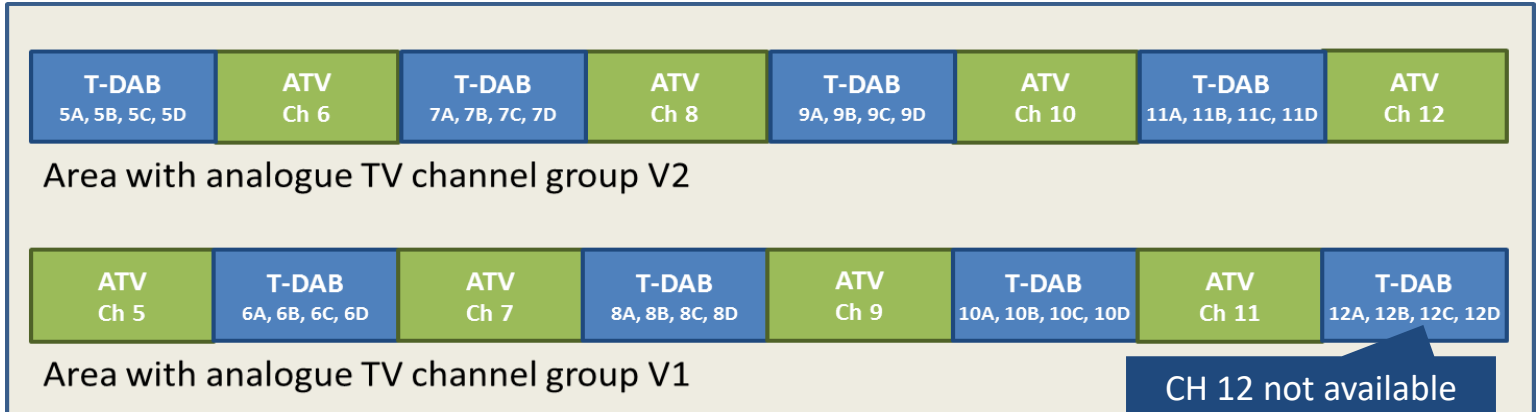
Nation-wide  
DAB  
only  
after TV  
ASO (in  
VHF band)



	DAB	FM (Main sites)
# Sites	90	313
Av. ERP per site	10.1 kW	21.6 kW (BKK) 4.5 kW (Rest)
Coverage (PI) per service	80%	Max 4.5% per site (BKK)

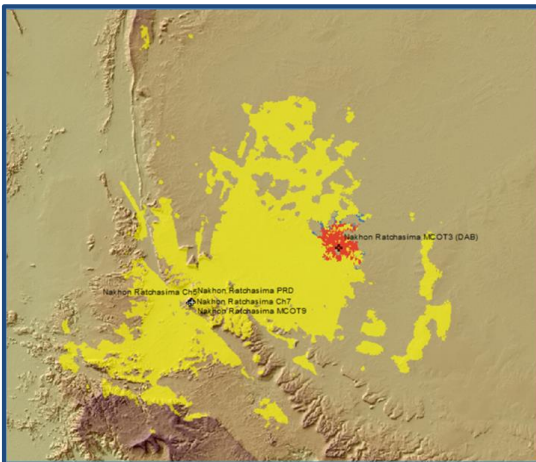
## 2. Spectrum challenges in the VHF band

DAB  
Trial to  
protect  
ATV



CH 12 not available  
for DAB in Thailand

Adjacent channel interference to be avoided



- DAB Trial Frequency Plan includes:
  - 8 given/existing sites with each 3 DAB Blocks (block C)
  - ERPs ranging from 0.2 kW to 10 kW
  - All transmitters in MFN (excepting 2)
- Without ATV protection all transmitters can operate at 10 kW (set as a maximum)