Technical collaboration between PSUs and Global Companies

DRM Digital Radio
Features & Opportunities

New Delhi, INDIA
27th August 2013

WHAT IS DRM?

- Global Digital Radio standard by ITU
- Only global open standard for digital radio,
  Recognised worldwide
- Applies equally for AM and FM → FM quality in any case
- Can cover large geographic areas as well as rural and local markets

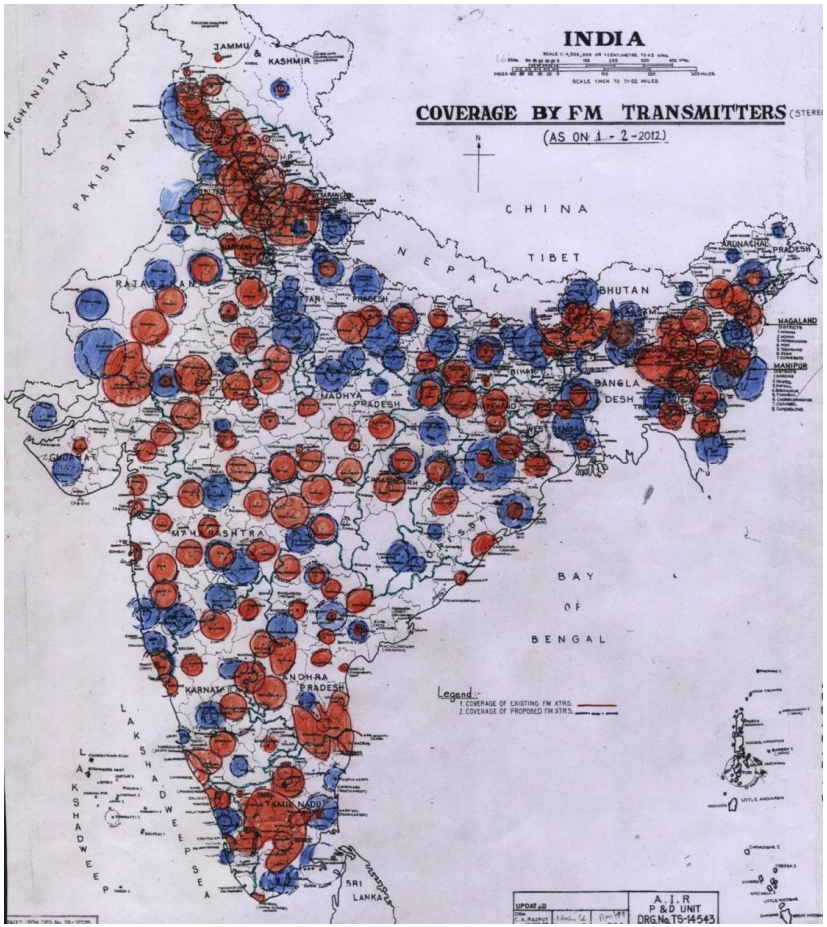
- Up to 4 programmes on 1 frequency
- Option for stereo and even 5.1 Surround sound (Bollywood content!)
- Offers more than audio: Data and Multimedia (images, text, news, …)
- Emergency & Disaster Warning Alerts

All India Radio – MW analogue coverage

Covered Area
Uncovered Area

- Coverage – about 99% by population
- Over 60% population of country depends only on MW coverage
- There are plans for FM expansion by Private Stations as well as AIR but still coverage would be limited
- Quality concerns on MW:
  - Poor quality
  - Only one service per transmitter
  - No Value Added Service

All India Radio – FM coverage



Existing FM Coverage –

42% of population

Overlapping with Private FM

FM Expansion Schemes being implemented

India Digital Overview

- DRM trials: In MW, SW (DRM30) in 2007 and in DRM+ in 2011

- Jan 2009: Regular All India Radio DRM SW service started from Delhi
- Oct. 2011 AIR increased DRM SW to 16 hours/day

- April 2010: Indian government announced adoption of DRM for India

- AIR: Renewing, replacing 72 MW transmitters with DRM30
  2 x 1000 kW already operational (Rajkot, Kolkatta)
  6 x 20 kW transmitters already delivered / tested / operational
  6 x mobile transmitters used for training

- Dec 2012:
  - AIR ordered 6 x 300kW MW DRM transmitters
  - AIR ordered 21 x 200 kW / 100 kW transmitters

- August 2013:
  - 4 transmitters under inspection
  - 4 more offered for inspection

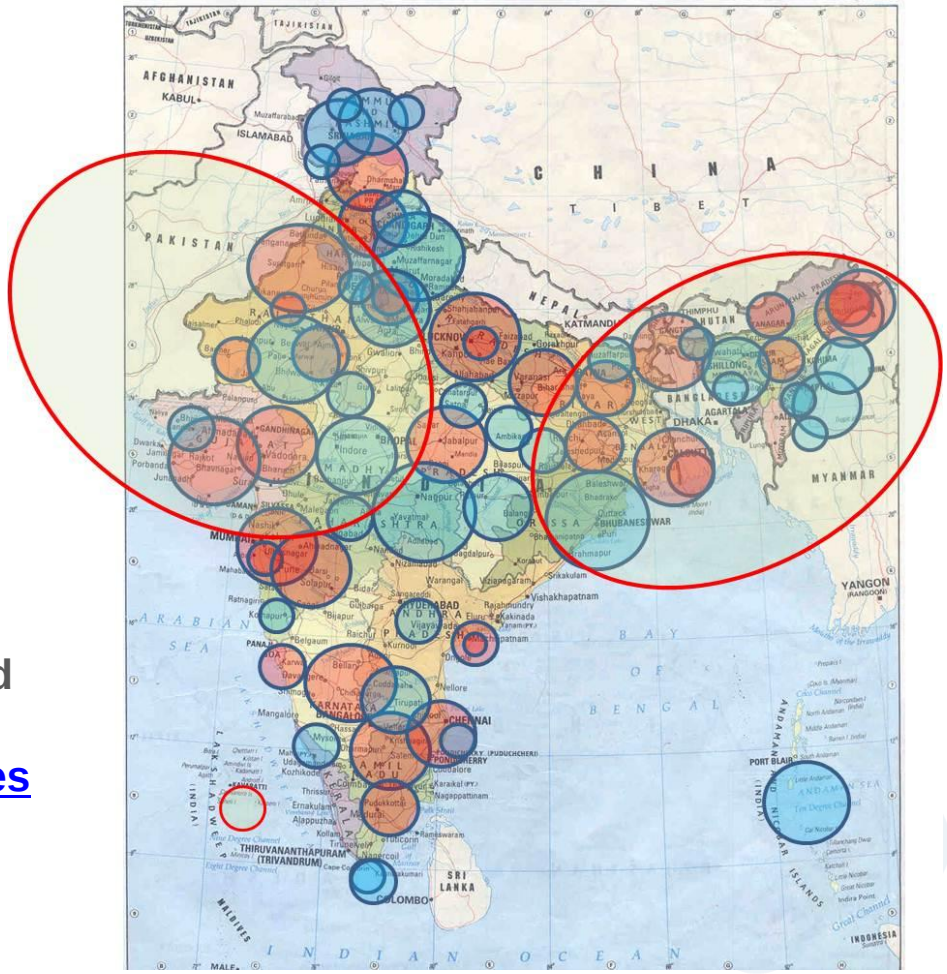
SUMMARY OF MW TRANSMITTERS COMMISSIONING

S. No.	Tentative Date of Commissioning	Transmitters	Places
1.	June, 13	20kWx 6	Guwahati, Delhi, Barmer, Bikaner, Chennai, Tawang,
2.	Dec., 13	20kWx 19	Aizwal, Ambikapur, Bhuj, Chhattarpur, Chennai, Darbanga,Gangtok, Jalgaon, Kota, Udipi, Rewa, Hyderabad, Leh, Ratnagiri, Rohtak, Silchar, Trivendrum, Tiruneveli, Tura,
		200kWx1	Delhi
		300kWx3	Jammu, Jalandhar, Lucknow
3.	Jan., 14	100kWx 4	Vijayawada, Patna, Ranchi, Tiruchirapalli,
4.	Feb., 14	200kWx 4	Bangalore, Dharwad,Chennai A', Kolkatta B'
5.	Mar, 14	20kWx 2	Kupwara, Naushera,
		100kWx 7	Cuddaph, Delhi, Kohima, Port Blair, Shillong, Shimla, Raipur,
		200kWx 3	Kargil, Indore, Najibabad,

S. No.	Date	Transmitters	Places
		300kWx 5	Cuttack, Srinagar, Imphal, Jodhpur, Nagpur
6.	May, 14	100kWx 3	Goa, Mumbai A', Mumbai B', Pune
	Jun., 14	300kWx 3	Dibrugarh, Suratgarh, Rajkot
	Aug., 14	100kWx3	Varanasi, Kolkatta A', Passighat,
		200kWx5	Ahmedabad, Jabalpur, Ajmer, siliguri, Itanagar

When Completed –
Over 70% of India
covered by area
will be covered
with DRM Broadcasts

AIR digitisation plans - dedicated website page:
http://allindiaradio.gov.in/Services/Digital%20Transmission

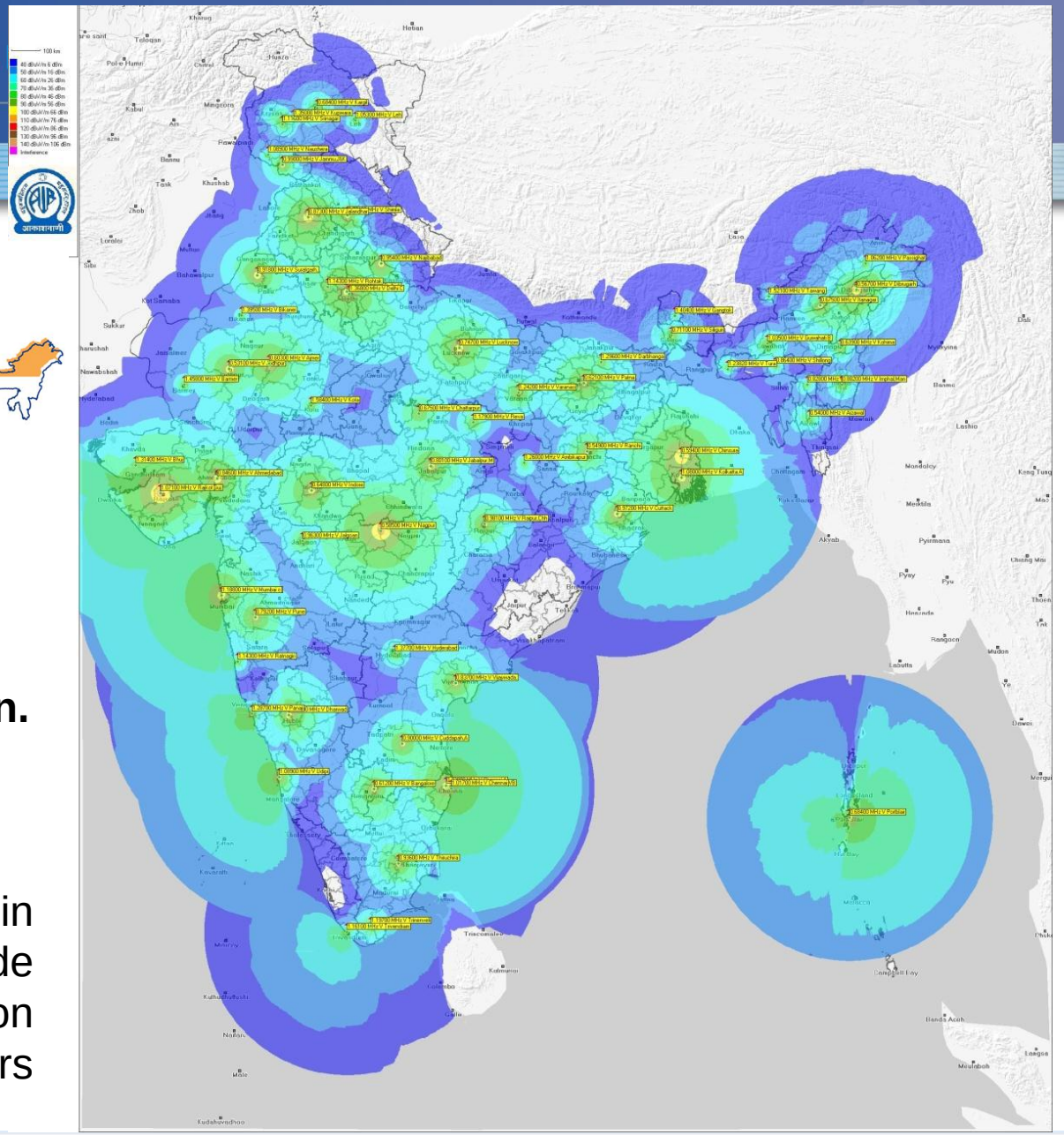


India:

DRM roll-out
in process;

Coverage of 70% population.
Expected fall 2014

DRM Coverage in
Simulcast Mode
on Digitalisation
of 72 Transmitters



DRM is Excellent in Multimedia

DRM Radio menu

Journaline,
live information

Main menu

Pictures menu

Videos

Application: Emergency Information

- Shortwave broadcast -> reaching trouble spots
- Natural disaster strikes-> local communications infrastructure is OFF
- Diveemo -> can reach disaster areas from far away
- Diveemo -> guiding, informing and comforting the stricken people

DRM Emergency & Disaster Warning

- All receivers switch,
  present audio and text information
- Should be mandatory feature for all radios

Use case:

- Immediately spreads urgent information
- E.g. to be used in case of natural disasters or pending catastrophes (earthquakes, tsunamis, …)

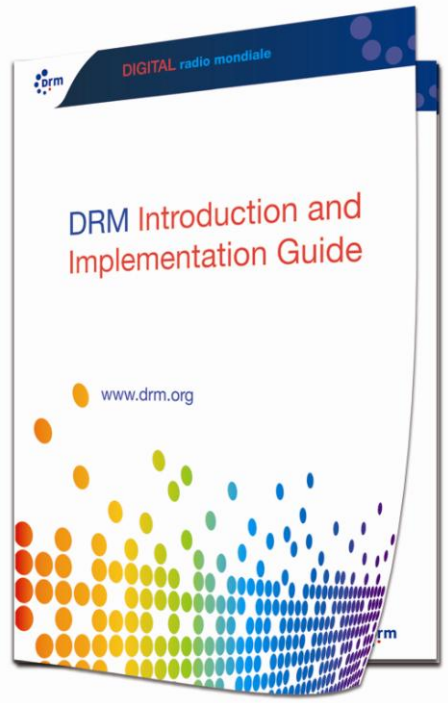
Benefits:

- Deploys **wide-spread radio sets**
- Provides **spoken announcements** on alert channel
- Provides **detailed textual information (Journaline)** for immediate look-up by listeners, explaining alert reason and behaviour recommendat.
- Textual information to be **multi-lingual/-script**

India can and will lead the way technologically in audio broadcasting

Download All you need to know on DRM Free

DRM Introduction and Implementation Guide



http://www.drm.org/wp-content/uploads/2012/10/DRM-Introduction-Implementation-Guide.pdf

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