Technical collaboration between PSUs and Global Companies

DRM Digital Radio Features & Opportunities

New Delhi, INDIA
27th August 2013
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
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
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

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Tentative Date of Commissioning</th>
<th>Transmitters</th>
<th>Places</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>June, 13</td>
<td>20kWx 6</td>
<td>Guwahati, Delhi, Barmer, Bikaner, Chennai, Tawang,</td>
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<td></td>
<td></td>
<td>200kWx1</td>
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<td></td>
<td>300kWx3</td>
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<tr>
<td>2.</td>
<td>Dec., 13</td>
<td>20kWx 19</td>
<td>Aizwal, Ambikapur, Bhuj, Chhattarpur, Chennai, Daranga, Gangtok, Jalgaon, Kota, Udipi, Rewa, Hyderabad, Leh, Ratnagiri, Rohtak, Silchar, Trivendrum, Tiruneveli, Tura, Delhi, Jammu, Jalandhar, Lucknow,</td>
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<tr>
<td>3.</td>
<td>Jan., 14</td>
<td>100kWx 4</td>
<td>Vijayawada, Patna, Ranchi, Tiruchirapalli,</td>
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<tr>
<td>4.</td>
<td>Feb., 14</td>
<td>200kWx 4</td>
<td>Bangalore, Dharwad, Chennai A’, Kolkata B’</td>
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<td>5.</td>
<td>Mar, 14</td>
<td>20kWx 2</td>
<td>Kupwara, Naushera,</td>
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<td></td>
<td>100kWx 7</td>
<td>Cuddapah, Delhi, Kohima, Port Blair, Shillong, Shimla, Raipur,</td>
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<td></td>
<td></td>
<td>200kWx 3</td>
<td>Kargil, Indore, Najibabad,</td>
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<td>S. No.</td>
<td>Date</td>
<td>Transmitters</td>
<td>Places</td>
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<tr>
<td></td>
<td></td>
<td>300kWx 5</td>
<td>Cuttack, Srinagar, Imphal, Jodhpur, Nagpur</td>
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<tr>
<td>6.</td>
<td>May, 14</td>
<td>100kWx 3</td>
<td>Goa, Mumbai A’, Mumbai B’, Pune</td>
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<tr>
<td></td>
<td>Jun., 14</td>
<td>300kWx 3</td>
<td>Dibrugarh, Suratgarh, Rajkot</td>
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<tr>
<td></td>
<td>Aug., 14</td>
<td>100kWx3</td>
<td>Varanasi, Kolkatta A’, Passighat,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200kWx5</td>
<td>Ahmedabad, Jabalpur, Ajmer, siliguri, Itanagar</td>
</tr>
</tbody>
</table>
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

Main menu

DRM Radio menu

Journaline, live information

Pictures menu

Videos

www.drm.org
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

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