



# India's DRM Journey



**2007**



Trial of DRM on MW and SW by All India Radio (AIR)

*All India Radio (AIR) conducted extensive experiments with DRM on MW/ SW (NVIS) and on 26 MHz – 07-12 May, 2007 with the participation of the DRM Consortium and ABU. Adopted DRM as standard for digitisation.*

**2009**



**16<sup>th</sup> Jan 2009**

*Regular DRM service by AIR on SW from Delhi, from 250 kW transmitter, 7 hrs/day, to UK and Western Europe*

**2010**



**April, 2010**

**Indian Government approves AIR's Digitisation Plan on MW & SW Using DRM transmitters**

*Approval to the proposal from the Ministry of Information and Broadcasting regarding the 11<sup>th</sup> Plan of Digitalisation where Rs 9.20 billion (approx. 200 million USD) had been earmarked for AIR to convert 35 MW and 3 SW transmitters to DRM digital which will cover approx. 70 per cent of the country.*

# 2011



**30<sup>th</sup> Oct 2011**

**Increase of DRM SW service by AIR**

*AIR increased DRM SW service from Delhi to 16 hrs/day, also to Nepal, Sri Lanka, NE Asia, Mauritius and East Africa*

**DRM for local coverage (DRM+) Trial by AIR**

*Trial of DRM in VHF Band II by All India Radio (AIR) with excellent results (coverage and power consumption)*

**Launch of the DRM India Platform**

*Mr Yogendra Pal was elected Honorary Chairman of the DRM Platform. Since 2017, He is also Honorary Member of the DRM Consortium*

**October, 2011**

**ITU Recognises DRM activity in the developing world**

*DRM Receives ITU Award For its Outstanding Contribution in the Field of Telecommunications*



# 2012



July, 2012

**India Noticeboard**

[India Noticeboard](#) set up by DRM Consortium on [www.drm.org](http://www.drm.org)

10<sup>th</sup> Sept 2012

**Rajkot 1000 kW DRM transmitter commissioned**

*AIR commissioned 1000 kW MW DRM transmitter at Rajkot/Gujarat with regular service in simulcast mode*

Dec 2012

**27 high power MW DRM transmitters ordered from Nautel by AIR**

*AIR ordered MW DRM transmitters – 6 of 300 kW and 21 of 200 & 100 kW*



DIGITAL radio mondiale

#### DRM IN INDIA

The DRM Consortium have created this webpage to bring together useful information about India and All India Radio's (AIR) plans for the launch of DRM digital radio in the country. It should be of interest to the wider digital radio community and especially receiver manufacturers, distributors and retailers.

**\*NEW\*** Latest Update – DRM Digital Broadcasting in India

AIR FINAL PLANNED DRM COVERAGE



**2013**



**28<sup>th</sup> Jan 2013**

**Workshop on DRM jointly with ICA - Delhi**  
*DRM Consortium conducted a workshop on DRM in Delhi jointly with Indian Cellular Association (ICA)*

**24<sup>th</sup> Jun 2013**

**1<sup>st</sup> Webinar on DRM aimed at Indian specialists**  
*DRM Consortium conducted a webinar on 'DRM – the flexible way from FM to digital'*

**22<sup>nd</sup> Aug 2013**

**DRM Seminar at AIR Chennai**  
*DRM Consortium conducted a seminar on 'Digital Radio: Features and Implementation Plan' with BES chapter in Chennai*

**18<sup>th</sup> Nov 2013**

**2<sup>nd</sup> Webinar on DRM aimed at Indian specialists**  
*DRM Consortium conducted 2<sup>nd</sup> webinar on 'DRM – Extra Features & Benefits – A better choice for listeners'*

**22<sup>nd</sup> Nov 2013**

**DRM EWF Seminar at Gandhinagar, Gujarat**  
*DRM Consortium conducted a seminar on 'Emergency Warning in coastal areas' for NDMA officials at Gandhinagar (capital of Gujarat)*

# 2014



**January 2014**

**Report of Expert Committee on Prasar Bharati by  
Dr Sam Pitroda**

*"It is expected that the complete transition to DRM transmission will be done by 2016. It is suggested that AIR continues with a simultaneous broadcast of MW transmission till 2016 to consistently deliver on the social responsibility. After the complete transition, AIR should shift to Stereo transmission." [Part 2 page 81]*

**28<sup>th</sup> Feb 2014**

**Seminar jointly with Confederation of Indian Industry (CII) in Delhi**

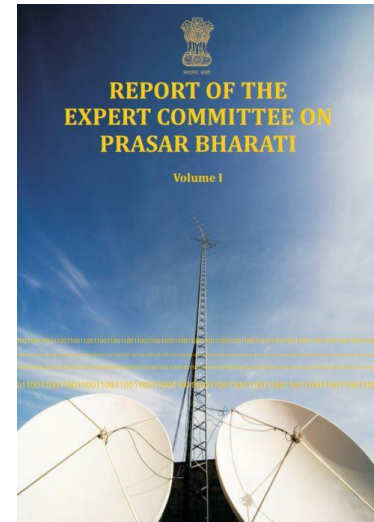
*DRM Consortium conducted a seminar on 'Future of Indian Radio – Business opportunities for stakeholders' in association with CII in Hotel Le Meridien Delhi*

**September, 2014**

**1<sup>st</sup> DRM Receiver produced in India launched**

*DRM launches the first DRM receiver produced in India (Avion) at IBC, Amsterdam, The Netherlands*

**9 DRM Nautel transmitters installed and commissioned by AIR**



# 2015



**July 2015**

**Pure DRM from Delhi 20 kW MW transmitter**

*20 kW MW transmitter at Delhi started operating in pure DRM. The transmitter carries two channels – Vividh Bharati Service and FM Rainbow Delhi*

**7th Dec 2015**

**3 programmes from 1000 kW MW DRM transmitter at Rajkot**

*An order was issued by the HQ to carry the following programmes from the 1000 kW MW DRM transmitter at Rajkot:*

- *From 0545 to 1000 hrs and 1400 to 0100 hrs – simulcast mode with 3 programs*
  - *1 in analogue and*
  - *2 in digital - Vividh Bharati service Mumbai & Urdu service*

**17 more DRM transmitters installed and commissioned by AIR**

# 2016



**Jan 2016**

**Pure DRM from Chennai 20 kW MW transmitter**

*20 kW MW transmitter at Chennai started operating in pure DRM. The transmitter carries two channels – Vividh Bharati Service and FM Rainbow Chennai*

**9 remaining DRM transmitters commissioned by AIR**

- 300 kW MW – 3 at Dibrugarh, Suratgarh and Jalandhar
- 200 kW MW – 3 at Ahmedabad, Itanagar and Siliguri
- 100 kW MW – 3 at Kolkata, Ranchi and Passighat



# 2017



**31<sup>st</sup> Jan 2017**

**DRM Roundtable in Delhi**

*First VIP DRM Roundtable was held in Delhi with the theme 'Digital Radio for All - Achieving PM's Dream of Digital India'. The event was inaugurated by Mr M Venkaiah Nadu, the then Cabinet Minister for Information and Broadcasting (now Hon'ble Vice President of India)*

**7<sup>th</sup> Mar 2017**

**25 MW DRM transmitters start operating in pure DRM for 1 hour daily**

*AIR HQ issued instructions for operation of 25 MW DRM transmitters in pure DRM for one hour everyday. Simulcast operation to continue for rest of the time.*

**26<sup>th</sup> May 2017**

**DRM Stakeholders' Group in India**

*DRM Indian Stakeholders' Group was constituted under the chairmanship of CMD BECIL*



**1<sup>st</sup> Sept 2017**

**1<sup>st</sup> meeting of the DRM Stakeholders' Group in India**

*1<sup>st</sup> Meeting of the DRM Indian Stakeholders' Group was held in NOIDA, near Delhi*

# 2018



**1<sup>st</sup> Feb 2018**

**TRAI Recommendations on 'Issues related to Digital Radio Broadcasting in India'**

*TRAI, the regulator, recommended that the unused white spaces in VHF Band II may be utilised for digital radio broadcasting in India*

**7<sup>th</sup> Feb 2018**

**2nd meeting of the DRM Stakeholders' Group in India**

*2nd Meeting of the DRM Indian Stakeholders' Group was held in NOIDA*



Telecom Regulatory Authority of India



**Recommendations**

**on**

**Issues related to Digital Radio Broadcasting in India**

1<sup>st</sup> February, 2018

Mahanagar Doorsanchar Bhawan

Jawahar Lal Nehru Marg

New Delhi-110002

Website: [www.trai.gov.in](http://www.trai.gov.in)

**26<sup>th</sup> to 28<sup>th</sup> Feb 2018**

**DRM Consortium and Gossell receiver in BES Expo 2018**

*DRM Consortium and Gossell receiver manufacturer had a joint booth in BES Expo 2018 in Delhi and showcased DRM receivers . Gossell receiver with DRM Am and FM functionality as well as adaptor demonstrated*

**11<sup>th</sup> April 2018**

**Emergency Warning Functionality Trial and seminar organised by AIR**

*AIR together with the DRM Consortium made a trial run of Emergency Warning Functionality using the 200 kW MW DRM AIR Transmitter in Delhi*

# 2018

Contd...



## 29<sup>th</sup> May 2018

**3<sup>rd</sup> meeting of the DRM Stakeholders' Group in India**

*3<sup>rd</sup> Meeting of the DRM Indian Stakeholders' Group was held in NOIDA*

## May 2018

**Number of cars with line-fit DRM receivers nearing 1 million**

*Almost 1 million cars on the road are with DRM line-fit receivers*

**New Content Servers (Fraunhofer IIS) on 5 DRM MW transmitters by AIR**

*Content Servers at 5 MW DRM transmitters (2 in Delhi and 1 each in Chennai, Bengaluru and Pune) were replaced providing digital servers in xHE-AAC and Journaline text*

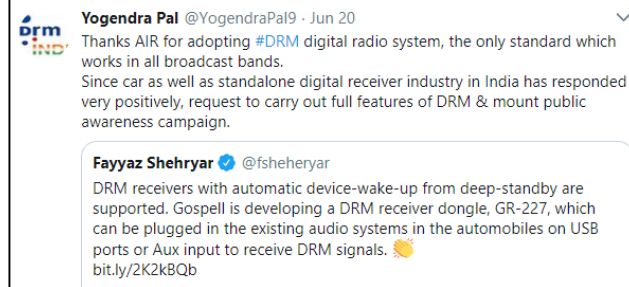
**Test transmissions on DRM from both the 100 kW SW transmitters in Delhi**

*AIR carried out test transmissions on DRM from both the newly installed 100 kW SW transmitters in Delhi*



**Tweets on DRM implementation by India Chapter of DRM**

*Tweets are being made, almost daily, on 'DRM digital radio in India' by the India Chapter. These can be followed at @YogendraPal9*



# DRM Car Receivers

2016- 2017



August 2017



# Hyundai 2018 Models with line-fit DRM (using NXP chipsets and Indian expertise)



Hyundai Tuscon



Hyundai Xcent



Hyundai Verna



Hyundai i20  
Active



Hyundai Grand  
i10



Hyundai Elite i20



Hyundai Elantra



Hyundai Creta

# DRM Receiver Solutions



**12<sup>th</sup> Sept 2014**

DRM launched the first DRM prototype receiver produced in India



**May, 2016**

Avion Electronics (India) launched its receiver AV-DR-1401. The receiver offers full DRM features including the Emergency Warning Feature



Avion DRM Receiver



**September, 2016**

The PantronX Titus II was successfully demonstrated to delegates at IBC



TITUS II



**6<sup>th</sup> September, 2017**

Gospell announced imminent release of DRM capable GR-227 Car Digital Radio Adaptor and Gospell 216





# Receivers



Avion AV DR1401

Full DRM (AM) feature set



**Now with DRM in AM & FM bands!**

**Titus II**

World's first Consumer ready SDR package!





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[http://www.drm.org/?page\\_id=2494](http://www.drm.org/?page_id=2494)

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[projectoffice@drm.org](mailto:projectoffice@drm.org)



[www.drm.org](http://www.drm.org)