# Digital Radio Mondiale Global Country Update

(November 2023)

# Countries broadcasting and planning the roll-out of the DRM standard

### INDIA

**GITAL** radio mondiale



- The rollout of DRM in the AM bands for regular domestic broadcasts by the Indian public broadcaster All India Radio (AIR) is ongoing. Currently 35 high power DRM medium wave and 3 DRM shortwave transmitters are installed throughout the country. Four transmitters (one each in four metro cities) are now carrying pure DRM transmissions round the clock. The remaining 31 transmitters are working in simulcast mode with one hour in pure DRM. www.prasarbharati.gov.in/drm-digital-radio-on-air
- Over 900 million people in India can receive DRM broadcasts of the 35 medium wave transmitters. Two MW transmitters are currently carrying pilot services in DRM and coming soon are four other transmitters.
- Almost 6 million new cars fitted with DRM receivers are on the roads in India by now. The graph below shows the statistics as of June last year. Major car brands using DRM for their infotainment systems are: Maruti Suzuki, Hyundai, Toyota, MG Motors, and Mercedes Benz.



On the request of the public broadcaster AIR, the DRM Consortium conducted a DRM for FM test in India in Delhi and Jaipur in March 2021. Full features of DRM in pure DRM (single DRM block with up to 4 services – 3 audio and 1 multimedia), also simulcast (analogue FM and up to 4 DRM blocks), multi-DRM (up to 6 DRM blocks, with 18 programmes) and DRM in white spaces (up to 5 DRM blocks in the white space of 600 kHz between 2 analogue FM stations) were successfully demonstrated during those tests.

 In parallel to the measurements carried out by the public broadcaster, the DRM Consortium also took its own measurements, which showed excellent results. Based on these measurements, the Consortium has prepared a full demonstration available at: https://s.drm.org/8wBg

# PAKISTAN

- Pakistan Broadcasting Corporation (PBC) has approved DRM as the radio standard for use in all frequency bands (AM and FM) already in January 2020.
- Approval was given by the Ministry in June 2023 for the acquisition of a 1000 KW DRM medium wave transmitter to be installed in the country.
- The Federal Minister for Information and Broadcasting, Marriyum Aurangzeb has reconfirmed on 9th July that the government has approved the DRM project so that future broadcasts can be heard in clear sound in the entire country and beyond.
- After successfully testing DRM for FM from the PBC HQs some years back, the broadcaster has acquired 20 FM (DRM ready) transmitters installed in various cities. Currently they broadcast in analogue with DRM being switched on the second phase of the project.

#### **INDONESIA**

- The policy for radio digitisation has been issued in August. Indonesia has announced at IBC 2023 the adoption of DRM for both medium wave (526.5 1606.5 kHz) and FM (DRM in VHF Band II (87.0 108 MHz) and DRM in VHF Band III (174 202 MHz).
- RRI have purchased and installed five DRM FM transmitters installed in strategic locations. They have also acquired the necessary Content Servers. The transmitters are capable of broadcasting emergency alerts by using DRMs Emergency Warning Functionality (EWF), integrated in the national disaster warning infrastructure. Transmissions started in 2020.
- This follows the successful DRM tests/demonstrations carried out by the public broadcaster, Radio Republik Indonesia (RRI), in both the AM and FM bands over the last few years and which are now ITU reference documents.
- RRI is also planning to install five DRM mediumwave and one shortwave transmitter in key locations (ring of fire) in the country. RRI proposes the procurement of transmitters for 52 disaster-prone locations in 2024 as a national priority.
- The Ministry of Communication and Informatics is drafting the comprehensive digital radio policy now.







## **CHINA**

- Three government ministries, NRTA, MIIT and SAMR officially published a joint document in September 2023, actively guiding the Chinese automotive industry to support DRM in AM band and encourage province transmission stations to broadcast domestic DRM services.
- The country has installed and uses seven DRM shortwave transmitters domestic coverage (aimed for the large populous region of eastern China primarily, but also for the rest of the country). They can also be used for overseas transmissions by China Radio International (CRI).

#### RUSSIA

> Due to the current political circumstances, the DRM activity in the FM band has been suspended there.

(DRM was endorsed for the AM bands some years ago. Successful demonstrations took place in Siberia for the AM bands previously and in St. Petersburg – for DRM in FM – in the period 2019 - 2021).

#### BRAZIL

- Brazil has carried out successful DRM high-power and low-power demonstrations in both AM and FM bands over the last few years.
- EBC, the public broadcaster wishes to transmit in both analogue and DRM (simulcast) towards the large Amazonian basin in the north of the country.

# **SOUTH AFRICA**

- The SA government has recommended officially both DRM and DAB+ as solutions for the radio digitisation of the country. The double-headed solution is called Digital Sound Broadcasting (DSB). DSB Services Regulations were issued by the South African Regulator (ICASA) in April 2021.
- This follows the DRM successful demonstrations in both AM and FM bands over several years, proving that the standard works well and without interferences. The DRM FM demonstration showed there was no interference at all to analogue FM broadcasts in a very crowded spectrum like that of Johannesburg. It also showed that in the full spectrum of Johannesburg up to extra 48 DRM Fm stations could also be fitted. These DRM demonstration reports are now ITU reference documents.









# GERMANY

> The country has demonstrated extensively the features and benefits of DRM in all frequency bands. Currently DRM is being used by the German Navy for distribution of data to ships navigating around the world.

DRM in shortwave is currently on air.Funklust", a campus broadcaster at Friedrich-Alexander-Universität Erlangen-Nürnberg, it has revamped its entire DRM shortwave infrastructure by broadcasting with brand new equipment since October 2021. Now it allows audio content and attractive data services, such as Journaline, TextMessages, and even Emergency Warning Functionality (EWF), to be put on air with ease. Reception reports received so far confirm that the programmes can be received not only in Germany but also in Russia, the USA, Norway, Finland, and New Zealand.

> Funklust has been broadcasting also in DRM for FM since 2013.

# **ROMANIA**

Radio Romania International (RRI) is one of the most active international broadcasters using DRM in shortwave with an extensive DRM schedule in several languages, being often listened to and commented on in countries as far apart as India, United States and Brazil.

# **KUWAIT**

> Radio Kuwait has regular DRM broadcasts in shortwave with target area the Middle East and Europe.

# **NEW ZEALAND**

> The country uses DRM in shortwave for rebroadcasting to the Pacific Islands. Radio New Zealand has just announced (October 2022) the acquisition of a new Ampegon shortwave transmitter: https://s.drm.org/mU2R













# Countries considering the adoption of DRM

#### **SOUTHERN AFRICA**

- The Southern African Development Community (SADC), representing sixteen African countries, in conjunction with the Communications Regulators' Association of Southern Africa (CRASA), representing their thirteen states, have also recommended DRM and DAB+ for their sixteen member countries.
- > The African Telecommunications Union (ATU) is considering making the same recommendation.

#### NORTH AND CENTRAL AFRICA

- > In North Africa, Algeria is still expected to make progress with the DRM roll-out.
- Nigeria Voice of Nigeria (VoN) has shortwave DRM capability and is known to broadcast towards Europe from Abuja with reception in Europe and even in North America.
- Central African countries like Chad, Mauritania, Congo etc. have also shown interest in adopting DRM for their domestic and international broadcasts and intend to upgrade their infrastructure to achieve this.

#### USA

- DRM was used during a successful test by the US Coast Guard for data transmissions in the Arctic region.
- DRM in shortwave was used by Radio Marti for broadcasts to Latin America from North Carolina.
- TransWorld (TWR) have regular shortwave transmissions from Tashkent towards India, Japan, China and other Asian countries.

#### AUSTRALIA

Stakeholders in Australia have tested successfully DRM in mediumwave (Wangaratta) and FM (Baranduda) between 2019-2022. The demonstrations were carried out using a variety of desktop and professional receivers as well as in cars and on Android devices. A report on the has been shared with the Regulator.





# Other countries with interest in DRM

# EUROPE

### HUNGARY

> Antenna Hungaria, the local network provider, has installed one DRM capable medium wave transmitter with a power of two megawatt.

#### DENMARK

The country has been testing successfully the use of DRM in the FM band in Greater Copenhagen (reaching even southern Sweden). A multi-channel demonstration is now ready following the extension of the license in 2022.

## CZECH REPUBLIC

DRM was on a medium wave channel a few months ago that used to carry a powerful AM signal. The broadcast was on 954kHz (power reported as 3kW) from the České Budějovice transmitter site, located in the South Bohemian region and re-using the old AM antenna with a modulator connected to the existing 30 kW AM transmitter.

# MIDDLE EAST

- Some countries in the region have shown interest in the standard with no formal decision yet and contacts with the Arab States Broadcasting Union (ASBU) are continuing.
- > Radio Kuwait have regular transmissions in shortwave towards Europe.













# **SRI LANKA**

The international service of the Sri Lankan Sri Lanka Broadcasting Corporation (SLBC) recently doubled its Tamil Service airtime to two hours, on 873 kHz AM (medium wave) from their Puttalam transmitter. Colombo International Radio also announced that shortly they are going to use DRM on 1548 kHz! This will be done by using the old transmitter of Deutsche Welle located in the north of Sri Lanka, at Trincomalee.

**ASIA** 

#### MALAYSIA

The country has been showing interest in DRM and in acquiring AM DRM equipment, as some stakeholders have found it the most suitable radio digital standard for future country-wide deployment.

### NEPAL

> Radio Nepal has just announced the start of a DRM test in the FM band in the capital.

# **BANGLADESH, VIETNAM, THAILAND**

These countries have shown interest in adopting DRM. However, there is no formal decision towards its roll-out, even though some have equipment either ready for DRM or ready to be upgraded to DRM broadcasting.











# **Additional information**

#### I. Countries using the DRM standard for shortwave broadcasts

Broadcasters around the world (such as the BBC World Service in the UK) using the DRM standard in shortwave are listed on the DRM website under the heading **'Broadcast Schedules'**: https://schedule.drm.org/

The DRM Consortium has developed an online tool to quickly find DRM shortwave broadcasters, their transmission times and target areas. This tool is accessible for both DRM members and non-members and is illustrated in the following picture.



To use the map and the broadcast information, simply click on the circles which cover world regions where transmissions occur and where broadcasts are received.

After clicking those circles, the details of shortwave broadcasts to that region will appear in a list below the map, highlighted in **green**.

There is no similar comprehensive list for mediumwave transmissions.

**NOTE:** The DRM Consortium is grateful for all the information received from broadcasters around the world which use our standard for their regular broadcasts, be they domestic or international. The Consortium can only mention and list those DRM transmissions if we are made aware of them by their broadcasters around the world.

If you have such relevant information, please let our Project Office know of these DRM transmissions by writing to projectoffice@drm.org



#### www.drm.org

#### 2. DRM field trials and demonstrations

Extensive DRM tests have been conducted throughout the world over many years.

The results confirm that the DRM standard (both in the AM and VHF/FM bands), enjoying the same features and benefits across all broadcast bands, performs according to the specifications and that it can be rolled out to meet a wide range of broadcasters' requirements, coverage needs and in all types of environments.

Please visit our DRM website where all these trials and demonstrations are listed: https://trials.drm.org

For keeping up to date with DRM developments go to www.drm.org, subscribe to our free monthly newsletter (newsletter.drm.org), follow us on social media and become a Consortium member.

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