



DRM – An Update

EBU Digital Radio Day, 16 February 2011

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DRM In a Nutshell (or Year)

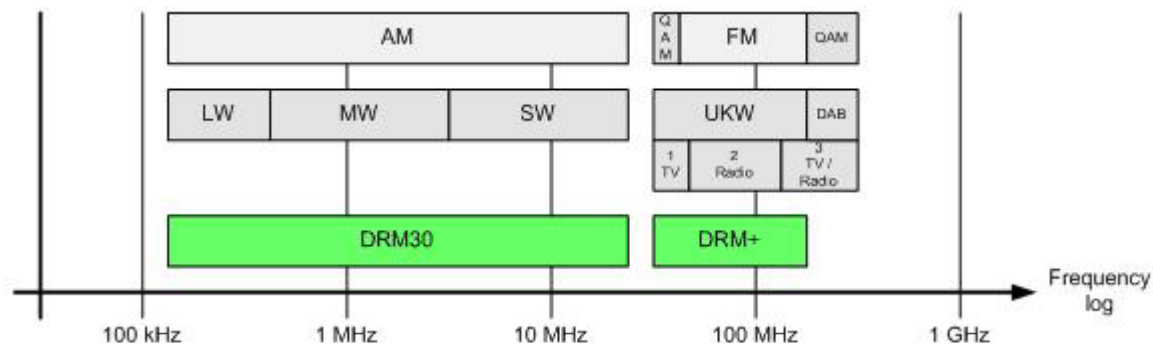
- Focus on one market – India
- Focus on one mode of the standard (E) – DRM+ (trials, standardisation)
- Focus on testing and expanding the limits of our standard - Diveemo
- Focus on one clear message – one standard (Website, BUG, newsletter, presence at events)
- Focus on receivers



What is DRM?

Digital Radio Mondiale (DRM) is a global open digital radio standard for SW, MW, LW – called DRM30 – and band I/II (FM) – called DRM+

- It can cover large geographic areas but it is also suitable for rural and local markets and on the move
- A low power local service option is also available
- It is a system that complements and works seamlessly with other digital standards
- It is driven by an international consortium



Focus on Asia and the Pacific





India



All India Radio started broadcasting in DRM in 2007 from a 250 kW DRM transmitter in Khampur Delhi

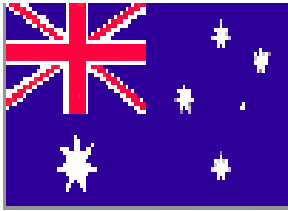
They broadcast at this moment 5 hours per day to Europe on 9950 kHz and 3 hours per day to India on 6100 kHz

All India Radio announced in 2010 a massive digitalization plan converting the existing transmitter infrastructure to DRM

Transmitters on MW and SW are converted to DRM and many new DRM transmitters are being installed with transmissions scheduled for 2011

Completion of conversion to DRM is planned by 2013 and switch-over from analogue to digital by 2015





Australia

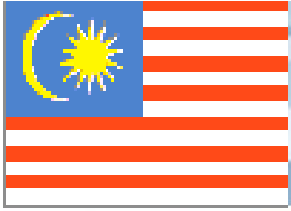


Broadcast Australia is installing 2 DRM ready shortwave transmitters of 100 kW, one in Shepparton and one in Tennant Creek

ABC Radio Australia broadcasts 3 hours daily in DRM from Brandon to Papua New Guinea and to the Pacific islands on 5995 kHz and 12080 kHz using a 5 kW shortwave DRM transmitter

Consortium contributed to public consultation on digitizing regional A.





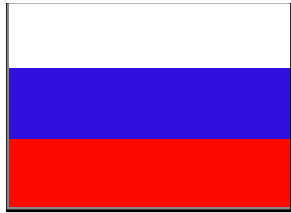
Malaysia



RTM (Radio TV Malaysia) has installed 3 DRM ready shortwave transmitters of 100 kW in Kajang, Malaysia

Starting DRM transmissions after tests took place on 7235 kHz and 11885 kHz



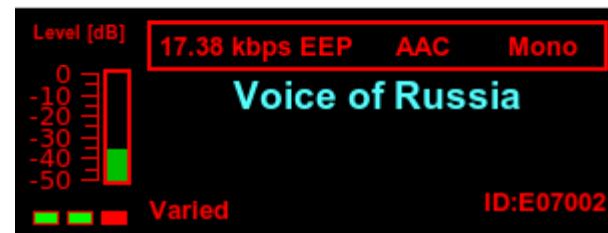


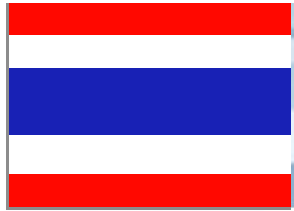
Russia



12 organizations set up a consortium to introduce digital radio in Russia

Voice of Russia broadcasts daily 4 hours from Komsomolsk Amur to Asia, 4 hours from Irkutsk to Asia, 9 hours from Taldom to Europe, 12 hours from Bolshakovo to Europe and 2 hours from Krasnodar to Europe





Thailand



BBC World Service operates a 250 kW DRM shortwave transmitter in Nakhon Sawan

Daily 4 hours of Hindi and English programming from BBC World Service and Deutsche Welle are broadcast to South East Asia on 5845 kHz (from October 2010)



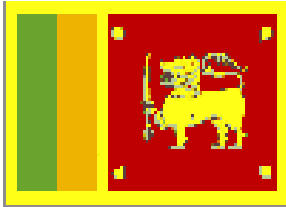
Level [dB] 16.92 kbps EEP AAC+ P-Stereo

BBC & DW

English
Current Affairs ID:E1C248

This is the BBC & Deutsche Welle channel on DRM Digital Radio

1	BBC & DW AAC+ P-Stereo (16.92 kbps) + EPG (0.54 kbps) + AFS
2	BBC & DW News Data: Journaline (0.54 kbps)



Sri Lanka



Deutsche Welle operates a 300 kW shortwave DRM transmitter in Trincomalee to broadcast BBC World Service and Deutsche Welle programs to different areas in Asia for 4 hours per day

They also operate a 400 kW medium-wave DRM transmitter broadcasting 1 hour per day in DRM to India
DRM+ Trial in December 2010

DW-WORLD.DE
DEUTSCHE WELLE



SRI LANKA FILM



Focus on New APPS. - DIVEEMO (NOT another mobile TV app!)



diveemo

DIGITAL radio mondiale **VIDEO**



Diveemo is a new application based on DRM. It enables small-scale video and audio services for cost efficient large area distribution of **information** and **education** programs



THOMSON

Receiver and BBC Broadcast Demo



Diveemo Demo Content by BBC World Service

- H.264 video, HE-AAC v2 audio coding
- 176 x 144 Pixel, 8 Frames per second
- Data rate net 48.54 kBit/s

➤ Distance learning system

Diveemo enables the highly effective use of distance learning

➤ Emergency Information system

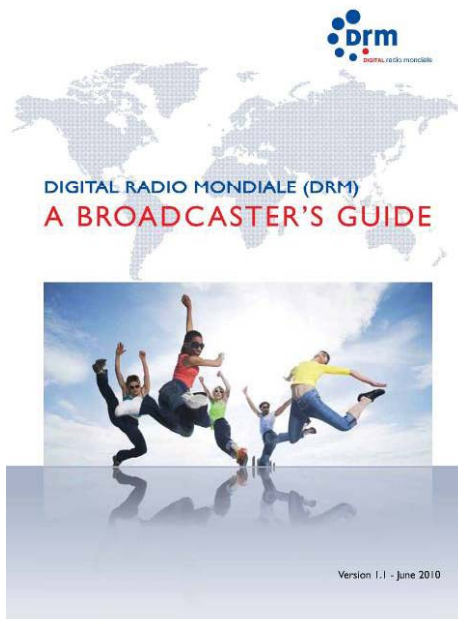
Diveemo can reach into such disaster areas from far away, guiding, informing and comforting the stricken people

➤ Cricket Information?

- Receivers – India
- DRM+ and ITU
- DRM+ Trial in the UK
- GA in Kuala Lumpur
- Extend the DRM Family
- Cooperation with EBU, ABU, ITU, ETSI, CEPT etc.



Convergence is here. CONVERGE !



Any Questions?

Thank you

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More info in the
Broadcaster's Guide

Visit us at: www.drm.org and subscribe to our monthly newsletter