

DRM System

Digital Radio Mondiale(DRM) is an open system that has been conceived to promote the digital conversion of the old AM bands that cover Long , Medium and Short Waves. Digital Radio Mondiale can deliver audio ranging from mono to pretty good quality stereo in bandwidths from 4.5 kHz to 20 kHz. Most broadcasts are currently on Short wave but the number of Medium Wave operations started to increase in 2005. Typically broadcasters are using 10 kHz channels on SW and 9 kHz on Medium Waves. Depending on the encoding methods a broadcaster using a 9/10 kHz channel bandwidth can deliver audio ranging from a mere 3 kHz mono to about 13 kHz stereo. DRM can also carry pictures , applications and text services and many broadcasters carry these from time to time. The BBC World Service is also testing an EPG system that is carried as an embedded multimedia stream. The start of 2006 has seen a rapid rise in broadcasts in and around 26 MHz that offer line-of-sight transmissions to local regions and could be a low cost alternative to relieving pressure on over crowded FM Bands.

A Digital Radio Mondiale multiplex is assembled from one to four audio or data channels in what is termed the Main Service Channel and two descriptive channels called the Fast Access Channel and the Service Description Channel. All these channels are encoded to make the data more immune to errors and the whole multiplex is then further encoded using quadrature amplitude modulation techniques. Finally Orthogonal Frequency Division Multiplexing is used to transmit the data packets via analogue carriers!