

Technical Considerations Of XM Satellite Radio

The whole content of the radio service that is both data and audio content is represented by only two carriers. Other four carriers carry duplicates of the same content to achieve redundancy through diversity of signals. Time delayed and error correction schemes are used for carrying data on each carrier. This is done to enhance availability. Thus the total effective radio spectrum used for content is a little over four mega hertz. The groups of two carriers broadcast hundred eight kilobits per second streams. Combined streams whose combination is done using a patented process form a variable number of channels using a variety of bit rates. Thus bandwidth is separated into segments of four kilo bit per second virtual streams which are combined to form audio and data channels of varying bit rates from four to sixty four kilobits per second in the current service. The audio content of the XM signals is pre processed using the audio processors which use the special coding technique.

They also include spectral band replication. Audio data is stored digitally using MPEG two audio technologies at three hundred and eighty four kilo bits and is further processed by the audio processors on the way to broadcast. Channels of XM namely XM Pop and fine tuning are broadcasted in surround audio quality. This technology is a partnership between XM and Neural Audio Corporation which provides content with six discrete channels of digital full fidelity audio powered by Neural Audio technology. Another channel namely XM live also broadcasts in this format for select concerts and studio performances. Manufacturing partners of XM have introduced home audio systems capable of playing XM HD Surround powered by Neural Audio. XM satellite radio's music is commercial free. This concept came into existence after many formal announcements and public meetings. Also the music can be recorded and can be enjoyed afterwards. This is possible because of the enhanced compatible devices. The music content recorded by a subscriber is only available when the subscriber has an active account with XM Satellite Radio.

But if the account is terminated the recorded content will becomes inaccessible. Also there is a condition that if a subscriber fails to listen to a total of 8 hours of programming a month the recorded content will not be accessible. Music that has been recorded can only be accessed on the portable devices and it can not be transferred to a home computer or separate digital music player. This technique of recording music is not new. Applications have been developed which record songs to MP3 and tag them with the artist and title information directly from the XM network. This technique was tried to spoil by discontinuing the required XM PCR radio. But the organization responded by quickly rolling out adaptive interfaces to allow almost any XM subscriber to use their tuner to build music libraries directly from XM broadcasts.

About the Author

Tymon Hytem has worked in the electronics field for the past 15 years. He enjoys helping people decide on electronic gadgets from telephones to [XM Radio](#) and choosing the perfect [XM Satellite Radio](#) system for their needs.

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