

Determination of Coverage Area of Nigeria Television Authority (NTA), Television Signal in Kebbi State, Nigeria

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Abstract:

The worldwide development of thousands of terrestrial broadcasting networks over the past 90 years depended crucially upon the prediction and measurement of radio field strength. This work determines the actual coverage area of NTA television signal in Kebbi State, Nigeria, by quantitatively measuring the signal level of the signal. The signal level of the transmitter of Nigeria Television Authority (NTA), Birnin-Kebbi channel 39 (615.25 MHz), and the corresponding distances were measured along some radial routes with the transmitting stations as the reference point. This measurement was taken using Digital Signal Level Meter and Global Positioning System (GPS). From the data obtained, Surfer 13 software application was used to draw contour map of the signal level around the transmitting station to determine the coverage areas of the station. The result obtained show that the present configuration of the transmitter of the television station does not give an optimal coverage of the state. Only 4.05% of the entire land mass of the state has television signal coverage. Consequently, greater percentage of Kebbi State is completely out of NTA television signal coverage. So, there is need to have repeater stations at some intervals to ensure reception of the television signal throughout the state.

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