

Experimentation Description

Description of Research

TCI is in the process of developing an antenna that could be used for DRM transmissions in the 26 MHz broadcast band (25.570 MHz to 26.100 MHz). The antenna is designed to radiate energy below the horizon so that it does not produce sky-wave interference to other stations in the same frequency band. The principal purpose of this antenna is to maximize coverage within the local areas that will be served by broadcasts in the 26 MHz band while minimizing interference to stations outside the area.

TCI wishes to use a low power (100W) transmitter with CW only emissions to prove out the radiation pattern of this new antenna design. The antenna will be used at a suitably elevated location in the hills of Alameda and/or Santa Clara counties and will radiate down into the local area. Measurements of RF signal levels coming from this antenna will be made throughout the bay area to determine if the antenna is radiating correctly. The antenna will not be erected less than 5 kilometers from an airport landing field.

The research may involve modifications to the initial design to optimize coverage and so will need to take place over a number of months. We anticipate the project will take six months or less to complete.

TCI anticipates that this research will aid in the development of digital radio broadcasting technologies. TCI is a member of Digital Radio Mondial, the consortium developing DRM technology for digital AM broadcasting in the HF bands.