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Application for Experimental Authorization
Voice/Data Repeater-Based Digital Two-Way Radio System
Associated With the Broadcast Operations of
WLS-TV, Chicago, IL
September, 2012

Introduction

This office has been authorized by WLS Television, Inc. ("WLS-TV"), the licensee full of service television station WLS-TV, Chicago, IL to prepare this application for an experimental authorization to operate a 2-way digital TDMA radio system for use in connection with WLS-TV's remote electronic news gathering activities.

WLS-TV is presently using the radios described herein in the analog mode in accordance with three separate FCC Part 74 Broadcast Auxiliary Service (BAS) Remote Pickup (RP) licenses. Currently, Part 74 of the FCC Rules does not permit the digital TDMA two-way radio operation. Accordingly, the instant application proposes to activate the radio's digital mode in order to obtain an experimental authorization to test the digital system in the high noise urban environment typical in the broadcast news service.

Nature of Experiment

Primarily, the WLS-TV experimental operation will test the digital spectrum efficient radios in high noise environments typical of public safety and broadcast news field environments to determine their viability for use in electronic news gathering.

The limited voice data payload associated with the spectrum efficient digital operation in a high noise environments typically lead to voice intelligibility issues. The digital radios are equipped with voice encoder/decoder systems ("vocoders") which were designed and optimized *outside* of high noise environments. The experimental authorization requested herein will allow WLS-TV to bring these radios into high noise environments which will allow WLS-TV to evaluate their performance and viability.

WLS-TV will specifically test its existing Motorola (*Mototrbo*) equipment and, if permissible, WLS-TV may also test other commercially available radios (and vocoder hardware) from other manufacturers with the system described herein (i.e. with the authorized frequencies, antennas, and locations). With respect to frequency coordination, the system described herein has been coordinated at the local level with the appropriate SBE frequency coordinator.

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