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B. W. St. Clair, Inc.

Engineering Statement
in support of a
Displacement Application for W30AJ
Channel 30, Syracuse, NY
John Mester Income Family Trust

BACKGROUND

The applicant's LPTV station, W30AJ, proposes to operate in the digital mode. However, WUTR-DT in Utica, NY is only 80 km away. This is well within the 265 km separation distance the FCC rules allow for displacement. This application requests a displacement to channel 42. However, it is necessary to protect the two adjacent channel TV stations, WPBS-DT41 in Watertown, NY and WNYS-TV43 in Syracuse, NY. The stringent mask for LPTV and translator stations does not have the required attenuation for this application. Thus, this situation requires the use of a Part 73 output mask to obtain a reasonable LP DTV station ERP.

To simulate the benefit of the Part 73 mask, it is necessary to make two FLR runs. One operating at the full 12.3 kW level to check for co-channel and taboo interference and a second run examining adjacent channel interference simulating the performance of the Part 73 mask by reducing the ERP 14 dB to 492 watts.

The 14 dB ratio was calculated as follows: The interfering LPTV DTV station can be 12 dB higher than the protected station according to the LPTV rules with a stringent mask. According to Table 5A in OET Bulletin 69, the interfering station can be 26 dB or 28 dB higher depending on which adjacent channel is protected using the Part 73 mask. Being conservative, 26 dB was chosen which is a 14 dB difference. Using this method, the proposed ERP for a flashcut application meets the interference criteria for FCC approval.

INTERFERENCE CONSIDERATIONS

Interference to other TV stations was studied using "Population Loss Studies" based on the "Longley-Rice Terrain Dependent Algorithm" in accordance with OET Bulletin 69 as described above.¹ Population loss for full service TV and Class A or analog stations is less than 0.5% and less than 2% for any LPTV or translator DTV station. Cell size for service analysis is 1.0 km/side and distance increments for Longley-Rice Analysis is 1.0 km

FULL SERVICE TV, DTV AND CLASS A STATIONS

BLEDT20050923AGH

WPBS-DT, CH. 41

Watertown, NY

BLCT19961202LO

WNYS-TV, CH. 43

Syracuse, NY

¹ The analysis was performed on a Sun "Blade" Computer using the exact replica of the FCC program. Population losses of less than 0.5% are not reported in detail. Only an indication of no interference is shown.

INTERFERENCE CONSIDERATIONS - cont'd.

LPTV AND LPDT STATIONS

None

SPACING FROM AM STATIONS

This LPTV station is spaced 1.57 km from WOLF (AM) and 1.58 km from WVOA (AM). However, this application is for a channel change and power increase only. The antenna change does not include any structural or transmission line change and is identical to the present antenna. Therefore, the interaction with the two AM radio stations will not change. Accordingly, it is requested that the CP not contain a condition requiring AM station measurements.

Prepared By:

A handwritten signature in blue ink, reading "Gordon H. Allison, Jr." in a cursive script.

Gordon H. Allison, Jr.
Engineering Consultant
10 March 2009