

*B. W. St. Clair*

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November 25, 2003

COMMENTS IN MB DOCKET 03-185  
Amendment of Parts 73 and 74 of the Commission's Rules  
for Digital Low Power Television, Television Translators  
and Television Booster Stations And to Amend the Rules for Class A.

**Comments in Favor of Limited Mandatory Offset**

I am regularly engaged in finding replacement channels for displaced LPTV and TV translator stations and doing interference studies for stations that wish to increase their coverage. I can testify from first hand experience to the frequency congestion in all but the most remote areas.

The 17dB penalty imposed by the lack of offset prevents the reuse of a channel without an excessive separation requirement. An LPTV or TV translator licensee has an obligation to use established and practical technology in the interest of spectrum efficiency. Accordingly I am proposing a limited mandatory offset requirement for analog stations.<sup>1</sup> An existing protected licensee, permittee or applicant will be referred to as the "priority entity" and an applicant for a new or modified LPTV or translator station will be "applicant".

Consider first the case where an "applicant" would cause interference to a non-offset "priority entity" and therefore needs the "priority entity" to change to an offset. The "applicant" should be able to make a written request to the "priority entity" advising that the applicant will file an application that will show predicted interference to the "priority entity" without the benefit of offset, but will not show interference if the two stations have different offsets. This notice would include the offset which the applicant will specify. The "protected entity" would then have the option of changing to one of the other two offsets at his expense or accepting the risk of receiving interference.

Conversely, if the "applicant" needs the "priority entity" to change to an offset to prevent interference to the "applicant", the "applicant" will advise the "priority entity" of his proposed offset and the need for the "priority entity" to change to one of the other offsets. Compliance with the request by the "priority entity" would be mandatory but at the expense of the "applicant".

**Discussion**

When translators were first authorized they were allowed only on channels 70 to 83 where the spectrum was wide open and there was no need for offset and no thought was given to the issue. The spectrum congestion which gives rise to the need for mandatory offset grew gradually after the authorization and growth of LPTV stations and

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<sup>1</sup>Class A stations are already required to specify and maintain an offset.

as the number of translators gradually increased. The build up of congestion has been gradual and there has been no triggering event which has previously led to the raising of the issue. With the presumed coming of digital LPTV stations and translators the problem will only become more intense, even though the offset concept is not applicable to digital stations. The time is certainly at hand to address the problem.

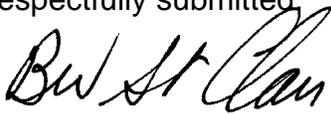
Most LPTV transmitters and TV translators are located in enclosures with a reasonably constant temperature. The practice, common in the early days of translators, of installing the transmitting equipment in enclosures without any temperature control, heating or cooling as might be appropriate, is not common now. Thus most such transmitters are not exposed to wide temperature variations and temperature induced frequency variations are much less of a problem. Actually most such transmitters can be set to a specific offset frequency by at most the replacement of a crystal in one of the frequency determining oscillators and trimming the frequency adjustment. Thus if a "priority entity" were required to establish a specific offset the cost would be minimal in most cases. It would be necessary to measure the frequency at more frequent intervals than no-offset stations do now, but this again is not a serious added expense.

The most difficult case is that of a later generation translator which is repeating the signal of one or more translators earlier in the chain, and thus is the victim of all of the frequency errors in preceding translators in the chain. However, most translator chains lead into relative remote areas where a need or demand for offset is relatively unlikely to occur. The possibility of this scenario arising is not zero, but there is a solution: if necessary such an impacted analog translator can be reconfigured to use a demodulator and modulator so that the output frequency is entirely determined by the local equipment and not dependent upon the exact frequency of the incoming signal.

### **Conclusion**

This proposal seeks to strike a compromise between the interests of incumbents and the needs of new entrants or those who would modify an existing station for whatever reason. The limited mandatory offset requirement as outlined above should be adopted within the framework of this Rulemaking.

Respectfully submitted,



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