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Translators Not Limited to Contour Overlap In “Lack of Actual Interference” Showing

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The FCC has provided FM translator operators helpful guidance about how to determine lack of actual interference to full-service stations. In rejecting a Petition for Reconsideration filed by San Bernardino Community College District and National Public Radio, Inc., the Commission clarified that contour overlap is *not* the only way to demonstrate lack of interference under Section 74.1204(d) of the Commission’s rules.

The factual back-story leading up to this decision is a bit convoluted, so bear with us. Ten years ago, Living Way Ministries, Inc. (Living Way) filed an application for a new translator station. Translators, as secondary services, may *not* cause interference to any primary stations. The facilities proposed by Living Way would have resulted in impermissible overlap with full-service KUSC-FM, but Living Way argued that the overlap area was unpopulated. Section 74.1204(d) permits translator applications which would be “otherwise precluded” as long as the applicant demonstrates that “no actual interference will occur due to intervening terrain, lack of population”, or other similar factors.

The central question, then, was how to define the area of likely “actual interference” and, secondarily, how to determine whether that area was not populated.

The Commission initially concluded that there appeared to be some population in the interference area as calculated by Living Way, so the Living Way application was rejected. On reconsideration, Living Way provided more detailed population information, but again was rebuffed by the Commission. Living Way tried again, tendering an even more refined definition of interference area (using protection standards that had been relaxed by the Commission during the pendency of the application), and sure enough, three was the charm. The FCC concluded that, while there remained an area of predicted interference (even under the relaxed standards and Living Way’s more refined analysis), there was no population within that area. In 2002 Living Way’s application was granted.

That decision brought out a considerable array of opponents, including NPR. They

argued that, to determine the existence of a potential area of interference in situations like this, the Commission must rely on contour overlap analysis. Contour overlap analysis is simple: you draw the predicted contours of the proposed translator and any nearby co- or adjacent-channel stations which could be affected, and if an interfering contour (as defined in the rules) of the translator would overlap the protected contour of the primary station, then the translator application would be toast. In other words, in the view of these opponents, the *only* way to establish “lack of actual interference” is through contour overlap analysis.

Not so, argued Living Way – and, ultimately, the Commission. Reliance on the “undesired signal/desired signal” (U/D) approach was entirely appropriate. Under the U/D approach, some otherwise impermissible contour overlap may be ignored because it would be so severely limited, primarily because of the differences between the facilities of the translator and the primary service station. The U/D analysis looks narrowly at the relative signal strengths of the two facilities (translator and primary service station). If, at a given location, the primary station’s signal – *i.e.*, the “desired” signal – is found to exceed the translator’s signal – *i.e.*, the “undesired” signal – by a prescribed amount (in the Living Way case, the critical U/D differential was +40 dB for second adjacent protection), then there’s actual interference. But in other areas, there would be no such interference.

Translators, of course, operate with very low power. As a result, their signals are usually overwhelmed by any nearby full-service operations. So even if a translator were to be plunked down in a primary service station’s protected contour (*i.e.*, the translator would be completely surrounded by the primary station’s protected contour – a flat-out violation of the contour protection standard), a U/D analysis might establish that any “actual interference” area was extremely small and not populated. For example, the U/D analysis of Living Way’s application established that “actual interference” would occur only within a 20-meter radius of Living Way’s proposed transmitter. (A more extreme case, cited by the Commission, involved a translator which would have caused interference only within a 2.6 meter radius of the transmitter.)

This makes a certain amount of sense, and it does enhance the flexibility available to the Commission (and translator applicants) in assessing the impact of proposed translators.

But the full-service opponents of the U/D approach also have a point. Even if “actual interference” might really be limited to a 20-meter radius around the translator’s antenna, the fact is that the translator’s operation is likely to impair the primary station’s service well beyond that limited area. And if reliance on U/D analysis might lead to multiple translators located throughout the primary service station’s otherwise protected contour, that contour could end up looking like the RF equivalent of Swiss cheese, with holes

dotting it all over the place. While any one translator might arguably not be especially problematic, the incremental effect of a boatload of translators would be cause for legitimate concern.

The bottom line here is that the FCC has clearly sided with use of the U/D analysis for determining when there is a “lack of actual interference” for purposes of Section 74.1204(d). This is something of a victory for the translator universe, which has recently been on the short end of a number of rulings which seemed to favor the LPFM service over translators. What this all may portend for future confrontations among full service, translator and LPFM representatives remains to be seen.