

## LEGAL NARRATIVE

The University of Massachusetts (the “University”), licensee of FM translator station W230AU, Pittsfield, Massachusetts (the “Pittsfield Translator”), respectfully requests that the FCC modify its authorization to specify Channel 291 in lieu of Channel 230. On November 20, 2008, Saga Communications of New England, LLC (“Saga”), licensee of Station WRSI(FM), Turners Falls, Massachusetts, filed an interference complaint alleging that the Pittsfield Translator was causing interference to the reception of WRSI. In order to bring closure to this proceeding, the University is filing the instant application to change channels. The University recognizes it is filing to move to a non-adjacent, non-IF channel and that the Pittsfield Translator has not been displaced under the FCC’s current policy.<sup>1</sup> However, as will be demonstrated herein, the Pittsfield Translator’s situation is unique and thus the University requests similar treatment as displaced translator stations.

The Pittsfield Translator rebroadcasts noncommercial educational (NCE) station WFCR(FM), Amherst, Massachusetts, which is also licensed to the University. WFCR is the only station licensed in Massachusetts that provides NPR and locally originated Massachusetts-centric noncommercial programming to the residents of Western Massachusetts. However, its signal is very weak in the Massachusetts county farthest to the west, due to its distance from WFCR’s transmitter and the local hilly terrain. To meet the need for Massachusetts-based public radio programming in that region of the state (Berkshire County), the University operates a number of translators there that rebroadcast WFCR’s programming. One of these is the Pittsfield Translator. It not only provides WFCR’s programming to the Pittsfield area, but is crucial to the University’s operation in Berkshire County because it feeds another of the University’s translators, W252BG, Lee, Massachusetts (the “Lee Translator”). As discussed in Exhibit 1, if the Pittsfield Translator is unable to move to an alternate channel, the Lee Translator cannot continue to rebroadcast WFCR because there is no other way for the University to provide a signal

---

<sup>1</sup> It is the University’s understanding that a translator is displaced if it causes actual interference to a full-power station licensed after the translator was licensed.

to W252BG over the air.<sup>2</sup> This would result in at least 57,000 persons – the combined 60 dBu population of the Pittsfield and Lee Translators – in western Massachusetts losing the national and local noncommercial programming provided by WFCR. That is 42% of the population of the County receiving NCE service from WFCR via these translators.

The University, soon after it received Saga's interference complaint, began an extensive and exhaustive search for an alternate channel. It does not want to go through the same ordeal again and thus extensively analyzed and tested all channels in the FM band, including adjacent and IF channels. This testing included listening tests on each channel that could be considered for use. Based on these tests, the University has determined that none of the channels adjacent to or with IF spacing to W230AU is a viable option. All but one of these channels (Channel 284) is not available because operation on the channel would violate Section 74.1204 of the FCC's Rules or potentially continue to interfere with WRSI. These results are discussed in more detail in Exhibit 1. Regarding Channel 284, while the University notes that it looks like a viable option on paper, the University's extensive listening tests reveal that it is not. The results of these listening tests are detailed in the attached affidavit of the University's chief engineer, Charles Dube.<sup>3</sup> They reveal that there are at least three full-power stations – WTMM-FM, WSPK(FM), and WZMR(FM) – that have listenable signals throughout Pittsfield on Channel 284 or its first adjacent channels. Mr. Dube performed listening tests at seventeen locations throughout Pittsfield, ten of which are within the Pittsfield Translator's protected contour. At all but one of these locations, Mr. Dube was able to receive a discernable signal of at least one of the full-power stations. At eleven of these locations – one of which was at the Pittsfield Translator's transmitter site – Mr. Dube was able to hear a good signal with the potential for regular listening. These tests were conducted with an inexpensive radio of only fair sensitivity and selectivity, suggesting that common "middle of the road" radios would receive interfering signals at even more

---

<sup>2</sup> As discussed in Exhibit 1, because the Lee Translator is a non-fill-in translator that operates in the non-reserved FM band, it must receive its input signal over the air.

<sup>3</sup> See Exhibit 2.

locations.<sup>4</sup> Thus, it is very likely that the operation of the Pittsfield Translator on Channel 284 will result in actual interference to one if not all of these stations and thus Channel 284 is not a viable option.

Furthermore, as further discussed in Exhibit 1, should interference complaints arise in the future with regard to operation on Channel 284, it will not be possible to make a second move to a channel adjacent to it due to overlapping contours with existing stations on Channels 282 and 286, and the fact that an IF channel move would return operation to the problematic Channel 230 or its first adjacent, Channel 231.

Based on the University's extensive listening tests, the best option for the Pittsfield Translator is Channel 291. With the exception of Station WPYX(FM), the proposed operation on Channel 291 is sufficiently distant from adjacent full-power stations to eliminate the likelihood of interference. *See* Exhibit 12 attached to the instant application. Regarding WPYX(FM), which operates on second-adjacent Channel 293, there is no population in the overlap area and thus the Pittsfield Translator's operation on Channel 291 complies with Section 74.1024(d) of the FCC's Rules. In addition, the University has received the licensee's (Capstar TX Limited Partnership) permission to operate on Channel 291.

The University recognizes that its situation is not a true "displacement" because WRSI was licensed before the Pittsfield Translator began operation. However, this is not a case where a translator went on the air and received complaints of interference days, weeks, or even months later. Also, this is not a case where the translator's interfering contour abuts a full power station's protected contour. Here, the Pittsfield Translator was operating for over 19 months before it received its first complaint of interference.<sup>5</sup> This is because the University was diligent and careful in picking a channel for its translator. As discussed in Exhibit 1, the University could not have reasonably expected that the Pittsfield Translator would interfere with the operation of WRSI because the Pittsfield

---

<sup>4</sup> The University has audio recordings of the Channel 284 listening tests and can provide them to the FCC upon request.

<sup>5</sup> The University commenced operation of the Pittsfield Translator with program test authority (PTA) on April 11, 2007. It was not until November 20, 2008 – over 19 months later – that the University received its first complaint of interference, which was from WRSI.

Translator's transmitter site is 58.3 kilometers from the WRSI transmitter site and 41.2 kilometers from the edge of the WRSI 60 dBu protected contour. In fact, the predicted WRSI signal strength at the Pittsfield Translator transmitter site is only 35.3 dBu. Based on the distance between the Pittsfield Translator and WRSI, Channel 230 seemed like a viable option and in fact was a viable option for almost two years. For these reasons, the University believes that its situation is similar to those faced by displaced translators and it should be treated similarly and permitted to move to a non-adjacent, non-IF channel so that its service in western Massachusetts may be preserved.

EXHIBIT 1  
(Page 1 of 4)

BASIS FOR DISPLACEMENT  
University of Massachusetts  
Pittsfield, MA

The attached application proposes to move W230AU from Channel 230 (93.9 MHz) to Channel 291 (106.1 MHz) while continuing to operate from its present transmitter site and antenna height with its presently licensed nondirectional effective radiated power of 10 watts. This frequency change has been made necessary by complaints of actual interference from W230AU to the direct off the air reception in the Pittsfield area of co-channel WRSI(FM) - Turners Falls, Massachusetts. These interference complaints, which didn't start until more than nineteen months after W230AU commenced operation, have occurred in spite of the fact that the licensee of W230AU took great pains to attempt to avoid this type of actual interference by selecting a channel in its initial construction permit application which was unlikely to result in such actual interference to another station.<sup>1</sup>

Section 74.1233 of the FCC Rules normally only permits minor change applications to specify a frequency change if it proposes to move to a channel within three channels of the presently authorized channel or a channel which is 53<sup>rd</sup> or 54<sup>th</sup> adjacent to the presently authorized channel. As documented below in more detail, however, only one of the channels which would comply with this restriction (Channel 284) could be proposed for use by W230AU using its presently authorized operating facilities while complying with the contour protection requirements outlined in Section 74.1204 of the FCC Rules. As further outlined below, however, operation by W230AU on Channel 284 will almost certainly result in actual interference to first adjacent channel WTMM-FM - Mechanicville, New York, which operates on Channel 283A and has a very listenable

---

<sup>1</sup>The W230AU transmitter site is located 58.3 kilometers (36.2 miles) from the WRSI transmitter site and 41.2 kilometers (25.6 miles) outside WRSI's 60 dBu protected contour. The predicted WRSI signal strength at the W230AU site using the standard FCC prediction technique is only 35.3 dBu, which is substantially below the level which is normally listenable. Furthermore, the substantial terrain shadowing over the path between the WRSI transmitter site and the Pittsfield area made it extremely unlikely that WRSI would have an adequate signal in the Pittsfield area to have any listeners to be subject to actual interference.

EXHIBIT 1  
(Page 2 of 4)

signal throughout the Pittsfield area. There is also a strong possibility that operation on Channel 284 by W230AU could result in actual interference to the direct off the air reception of WSPK(FM) - Poughkeepsie, New York, which operates on Channel 284 and WZMR(FM) - Altamont, New York, which operates on Channel 285, since both of these stations can be heard at locations in the Pittsfield area. As a result, since it appears that a move to Channel 284 by W230AU would simply be trading the present interference problem for another one, this application requests authority for W230AU to move to Channel 291, where listening tests have determined that such problems with actual interference to another station will be extremely unlikely.

**Channels 227 and 283**

The present W230AU transmitter site is located within (i) the 54 dBu protected contour of WHYN-FM - Springfield, Massachusetts, (Channel 226B), and (ii) the 60 dBu protected contour of Low Power FM station WRRS-LP - Pittsfield, Massachusetts, (Channel 282). As a result, it is obvious that it would not be possible to propose operation on either Channel 227 or Channel 283 for W230AU while complying with the contour protection requirements of Section 74.1204 of the FCC Rules.

**Channels 228, 232, and 233**

The predicted 40 dBu contour for the presently licensed W230AU operating facilities overlaps the 60 dBu protected contours of (i) WZCR(FM) - Hudson, New York, (Channel 228A), (ii) WBTV-FM - Bennington, Vermont (Channel 232A), and (iii) WYKV(FM) - Ravena, New York (Channel 233A). Thus, it would not be possible for W230AU to move to Channels 228, 232, or 233 with its presently licensed operating facilities while complying with the contour protection requirements of Section 74.1204 of the FCC Rules.

EXHIBIT 1  
(Page 3 of 4)

**Channels 229 and 231**

Both Channels 229 and 231 would be first adjacent to WRSI. As a result, operation on either of these channels would not eliminate the interference presently being experienced to the reception of WRSI's signal from W230AU in the Pittsfield area.<sup>2</sup>

**Channel 284**

While operation on Channel 284 by W230AU with the presently licensed operating facilities would comply with the contour protection requirements outlined in Section 74.1204 of the FCC Rules, as noted above, listening tests in the Pittsfield area by WFCR's chief engineer have determined that first adjacent channel station WTMM-FM - Mechanicville, New York, which operates on Channel 283A, has a very listenable signal throughout Pittsfield and the surrounding area. Stations WSPK(FM) - Poughkeepsie, New York, which operates on Channel 284B, and WZMR(FM) - Altamont, New York, which operates on Channel 285A, can also be heard with a good signal at locations in the Pittsfield area. As a result, Channel 284 is not suitable for use by W230AU since proposing to move from Channel 230 to Channel 284 would amount to "jumping from the frying pan into the fire" by trading one "real world" interference problem for another.<sup>3</sup>

Based on the above information, it is obvious that without permission to move W230AU to a non-adjacent (and non-IF) channel, there are no alternatives available short of the cessation of operation by W230AU to permit the alleged interference to WRSI in the Pittsfield area to be eliminated. Such a drastic solution would eliminate the

---

<sup>2</sup>The predicted 40 dBu contour for the presently licensed W230AU operating facilities also overlaps the 60 dBu protected contour FM Translator W231AK - Great Barrington, Massachusetts, which operates on Channel 231. This overlap would also preclude the relocation of W230AU to Channel 231 with its presently licensed operating facilities while complying with the contour protection requirements of Section 74.1204 of the FCC Rules.

<sup>3</sup>Additional studies found that there would be no available adjacent or IF channels to accommodate a second minor change by W230AU to move to yet another channel if such interference problems are actually encountered on Channel 284. Specifically, the use of adjacent Channels 281 through 283 is precluded by the protection requirements to WRRS-LP - Pittsfield, Massachusetts (Channel 282) and the use of adjacent Channels 285 through 287 is precluded by the protection requirements to WAMQ(FM) - Great Barrington, Massachusetts (Channel 286). The only other channels which could be proposed are IF Channels 230 and 231, which would be jumping right back into the "frying pan" of interference to WRSI.

EXHIBIT 1  
(Page 4 of 4)

noncommercial educational service provided by W230AU to 50,506 persons within its predicted 60 dBu contour.<sup>4</sup> Noncommercial educational FM service would also be lost to an additional 6403 persons located within the 60 dBu contour of W252BG - Lee, Massachusetts, which receives its input signal from W230AU.<sup>5</sup>

The above information clearly documents that it would be in the public interest to grant authority for W230AU to move to Channel 291 to continue providing noncommercial educational FM service to a substantial population while eliminating the interference problems which have been experienced to the reception of WRSI.

---

<sup>4</sup>It appears that a far greater population would actually lose service if W230AU was forced to cease operation, since listening tests have determined that the W230AU signal is listenable over the majority of Berkshire County, which, according to the 2000 U. S. Census, has a total population of 134,953.

<sup>5</sup>There do not appear to be any alternative options to provide the input signal for W252BG since WFCR cannot be reliably received directly off the air at the W252BG site and the use of alternative signal delivery is not permitted for nonreserved band non-fill in translators such as W252BG.

## Exhibit 2

### Declaration

I, Charles Dube, am the chief engineer of Radio Station WFCR(FM), Amherst, Massachusetts, and its translator station W230AU, Pittsfield, Massachusetts.

On August 7, 2009, I conducted listening tests in the Pittsfield area to assess the possibility of a translator station broadcasting on Channel 284 from the W230AU location causing interference to the reception of full-power stations broadcasting on Channels 283, 284 and 285.

The stations listened for were:

Channel 283A: WTMM-FM, Mechanicville, NY (104.5)

Channel 284B: WSPK, Poughkeepsie, NY (104.7)

Channel 285A: WZMR, Altamont, NY (104.9)

The primary radio used was a readily available, inexpensive consumer radio, the Radio Shack portable receiver Model 12-639A (mono). In some cases I also listened on my car radio, a JVC KD-HDW10.

The map attached to this declaration shows the locations at which the tests were conducted. I have characterized the signal quality as follows:

Poor = faint signal, mostly noise

Fair = noisy signal but discernable

Good = potential for regular listening, some multipath or noise

Excellent = perfect signal, no noise or multipath.

**Channel 283A:** The signal of Station WTMM-FM was received by the Radio Shack radio at the following locations on the attached map with the noted signal quality:

Location	Quality	Location	Quality
1	Excellent	11	Good
2	Poor	12	Good
4	Fair*	13	Good
6	Fair	14	Good
8	Good	15	Good
9	Good	16	Excellent
10	Good	17	Poor

*\* the signal was of good quality with the JVC car radio*

**Channel 284B:** The signal of Station WSPK was received by the Radio Shack radio at the following locations on the attached map with the noted signal quality:

Location	Quality	Location	Quality
3	Poor*	14	Poor*
10	Fair	15	Fair*
12	Good	16	Good
13	Good	17	Excellent

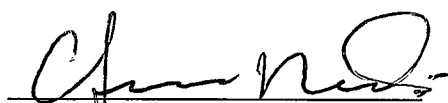
*\* the signal was of good quality with the JVC car radio*

**Channel 285A:** The signal of Station WZMR was received by the Radio Shack radio at the following locations on the attached map with the noted signal quality:

Location	Quality	Location	Quality
3	Fair	8	Good
7	Fair	11	Good

In my opinion, these listening tests show that the signal quality of two of the stations at least, WTMM-FM (Channel 283) and WSPK (Channel 284), is strong enough for them to have regular listeners at home, at work or in cars within the area served by a Pittsfield-based translator.

I declare that the foregoing is true and correct to the best of my knowledge and belief and is made in good faith.



Charles Dube, CBRE  
Chief Engineer

September 10, 2009



[FCC Home](#) | [Search](#) | [Updates](#) | [E-Filing](#) | [Initiatives](#) | [For Consumers](#) | [Find People](#)

**Audio and Video Divisions**

**FM and TV Service Contour Maps**

(202)-418-2700

[FCC > MB > Audio Division](#) - [Video Division](#)

[FM Query](#)

[TV Query](#)

[FCC site map](#)

## Service Area on a Tiger Census Map

[Close](#)

