

The STA Application requests the use of several frequencies at a location centered on

N 40° 38' 15', W 77° 52' 25" with a radius of 10 km

1. Altitude: 1000' AGL

2. ERP Calculation

The output power of the final stage of the signal source is 500 mW.

The antenna has a gain of -6dB at 100 MHz.

$$\text{ERP} = 0.5\text{W} \times \frac{1}{4} = 125\text{mW}$$

3. The device is pulse-modulated with a 2 us pulse. Thus, the necessary bandwidth:

$$\text{Bn} = 1/2\text{us} = 500 \text{ kHz}$$

4. The following frequencies are requested under this STA. None of the frequencies currently in-used within 20 km of the proposed area.

88.7 MHz, 93.1 MHz, 96.1 MHz, 100.5 MHz, 105.5 MHz, 107.3 MHz

5. A printout of the search from the FCC web site is attached to this letter.

Please consider this additional information as part of the filing for the STA. Contact the undersigned if you have any further questions.

Dr. Patrick W. Johnson
301-371-3584

The frequencies were selected after a search of the FCC website for licensed broadcasters within a 20 km radius of the desired location. The web site revealed the following results

Thu Nov 20 13:26:42 2003 Eastern time

Search Parameters	
Search radius:	20.00 km
Center lat / lon:	N 40 38 15.00 W 77 52 25.00
Lower Channel	200
Upper Channel	300

WKPS	214	FM	90.7	MHz	LIC	STATE COLLEGE, PA	US	BLED-19951107KA	-	65471	0.1	kW	26.m	18.01	km	11.19	mi	1.04°	
WKVR-FM	222	FM	92.3	MHz	LIC	HUNTINGDON, PA	US	BLED-19890324KA	-	32952	0.013	kW	-81.m	19.37	km	12.04	mi	217.93°	
WBUS	229	FM	93.7	MHz	LIC	BOALSBURG, PA	US	BLH-19980108KD	-	6025	0.33	kW	415.m	16.24	km	10.09	mi	38.18°	
WBUS	229	FA	93.7	MHz	USE	BOALSBURG, PA	US	---	88-496	6025	-	kW	-	m	16.24	km	10.09	mi	38.18°
WLTS	233	FA	94.5	MHz	USE	STATE COLLEGE, PA	US	---	86-413	38271	-	kW	-	m	17.15	km	10.66	mi	1.95°
WVNW	244	FM	96.7	MHz	LIC	BURNHAM, PA	US	BLH-19940801KB	-	74172	0.45	kW	259.m	16.17	km	10.04	mi	110.64°	
WQWK	246	FM	97.1	MHz	LIC	UNIVERSITY PARK, PA	US	BLH-19900417KB	-	64850	2.	kW	123.m	19.74	km	12.27	mi	343.21°	
WQWK	246	FA	97.1	MHz	USE	UNIVERSITY PARK, PA	US	---	87-588	64850	-	kW	-	m	19.95	km	12.40	mi	342.76°
-	258	FR	99.5	MHz	ADD	CENTRE HALL, PA	US	RM-DD-98A	-	-	-	kW	-	m	16.12	km	10.02	mi	15.05°
W270AG	270	FX	101.9	MHz	LIC	STATE COLLEGE, PA	US	BLFT-19961119TD	-	76831	0.002	kW	269.m	9.02	km	5.61	mi	350.29°	
NEW	273	FX	102.5	MHz	APP	HUNTINGDON, PA	US	BNPFT-20030317MDC	-	157398	0.055	kW	0.m	19.60	km	12.18	mi	211.02°	
NEW	273	FX	102.5	MHz	APP	HUNTINGDON, PA	US	BNPFT-20030829AQV	-	157398	0.055	kW	0	m	19.60	km	12.18	mi	211.02°
WBHV	276	FM	103.1	MHz	LIC	STATE COLLEGE, PA	US	BLH-19980911KD	-	48926	0.37	kW	398.m	16.27	km	10.11	mi	38.18°	
WBHV	276	FA	103.1	MHz	USE	STATE COLLEGE, PA	US	---	-	48926	-	kW	-	m	19.25	km	11.96	mi	8.17°
WLAK	278	FA	103.5	MHz	USE	HUNTINGDON, PA	US	86-136	-	42135	-	kW	-	m	18.96	km	11.78	mi	220.83°
NEW	283	FL	104.5	MHz	APP	STATE COLLEGE, PA	US	BNPL-20010615AFF	-	134482	0.1	kW	11.7	m	17.17	km	10.67	mi	1.01°
WWLY	292	FM	106.3	MHz	LIC	HUNTINGDON, PA	US	BLH-19920316KC	-	28132	6.	kW	47.m	9.60	km	12.18	mi	211.02°	
WWLY	292	FA	106.3	MHz	USE	HUNTINGDON, PA	US	86-136	-	28132	-	kW	-	m	18.15	km	11.28	mi	211.35°
-	292	FR	106.3	MHz	DEL	HUNTINGDON, PA	US	RM-DD-98	-	-	-	kW	-	m	19.60	km	12.18	mi	211.02°
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*** 19 FM Records within 20.00 km distance of 40° 38' 15.00" N, 77° 52' 25.00" W ***

