



EXHIBIT #E1
ENGINEERING STATEMENT

Concerning the Application of
Duquesne University
To Build an FM Translator Station to Serve
Somerset, PA

BNPFT-20030314AJM

August 2003

This engineering statement supports the application of the Duquesne University, Pittsburgh, Pennsylvania, to build a new FM translator station on channel 281 to serve Somerset, PA. Channel 281 has been listed by the FCC as a "singleton" assigned to the applicant and available for application filing. The coordinates for the proposed site have been changed from the original application filed by Duquesne University for this channel.

Under the instant proposal, the off-air audio signal of primary station WDUQ, channel 213, Pittsburgh, will be delivered to a Crown FM30R translator unit. This unit will deliver .02826 kW to the input of a Shively single-bay 6812 antenna. The antenna has a power gain of 0.46 resulting in an effective radiated power of 0.013 kW, polarized circularly.

A total of 12 evenly spaced radials were used to determine the antenna height above average terrain. The highest radial of the 12 was used to determine the maximum effective radiated power. The USGS 30 arc-second terrain elevation database was employed to determine the elevations along the radials that were averaged using the required four-point interpolation method. The resulting averaged radial antenna heights were employed using the Commission's own TVFMINT algorithm to project the distances to signal contours. A tabular listing of the distance to the F(50-50), 60 dBu, contour and the F(50-10), 34 dBu Canadian interference contour can be found on page #3 of this exhibit. A coverage map can be found on page #4.

Exhibit #12 is an allocation study showing that no overlap interference is caused station licenses, construction permits and applications. Page #1 of this exhibit is a tabular study showing the proposed translator's relationship to all stations, construction permits and applications having a frequency and distance relationship. Page #2 of this study is a narrative explaining the abbreviations and conventions used in the channel printout. Page #3 - #5 compose the map and FMOVER studies showing the proposed translator's contour-to-contour relationship with, AP281, Ligonier, PA.

Exhibit #16 is an RF hazard statement showing that workers and the general public are protected from radio frequency emissions.

The proposed station is located 278.34 kilometers from the US border with Canada. The 34 dBu F(50-10) signal contour of the proposed translator does not travel more than 60 kilometers in each radial direction. The proposed facility (using an existing tower) is located at a distance of 3.0013 kilometers from directional AM station WVSC, Somerset, PA, DA2 at 292.4 degrees True North. The proposed facility is okay with respect to FCC monitoring stations, Table Mountain and the West Virginia Quiet Zone.

The applicant requests "unattended operation". The translator can be turned off in cases of an emergency by the staff at the applicant's headquarters in Pittsburgh.

Page #5 of this **Engineering Exhibit** is a statement of the qualifications of the preparer.

Doug Vernier

Doug Vernier, Telecommunications Consultants
 N. Lat. = 40 00 54 W. Lng. = 79 03 45
 HAAT and Distance to Contour - FCC Method - 30 Arc Sec.

Duquesne University - Somerset, PA

Azi .	AV EL	HAAT	ERP kW	dBk	Field	60-F5	34-F1
000	630.6	109.4	0.0130	-18.86	1.000	6.52	30.70
030	612.7	127.3	0.0130	-18.86	1.000	6.99	33.17 *
060	653.9	86.1	0.0130	-18.86	1.000	5.77	26.97
090	719.2	20.8	0.0130	-18.86	1.000	3.36	15.18
120	721.9	18.1	0.0130	-18.86	1.000	3.36	15.18
150	715.9	24.1	0.0130	-18.86	1.000	3.36	15.18
180	717.2	22.8	0.0130	-18.86	1.000	3.36	15.18
210	617.0	123.0	0.0130	-18.86	1.000	6.89	32.61
240	640.5	99.5	0.0130	-18.86	1.000	6.22	29.16
270	647.8	92.2	0.0130	-18.86	1.000	5.97	27.98
300	682.2	57.8	0.0130	-18.86	1.000	4.75	22.22
330	652.8	87.2	0.0130	-18.86	1.000	5.81	27.15

 Additional Radials (Not Considered in Average):

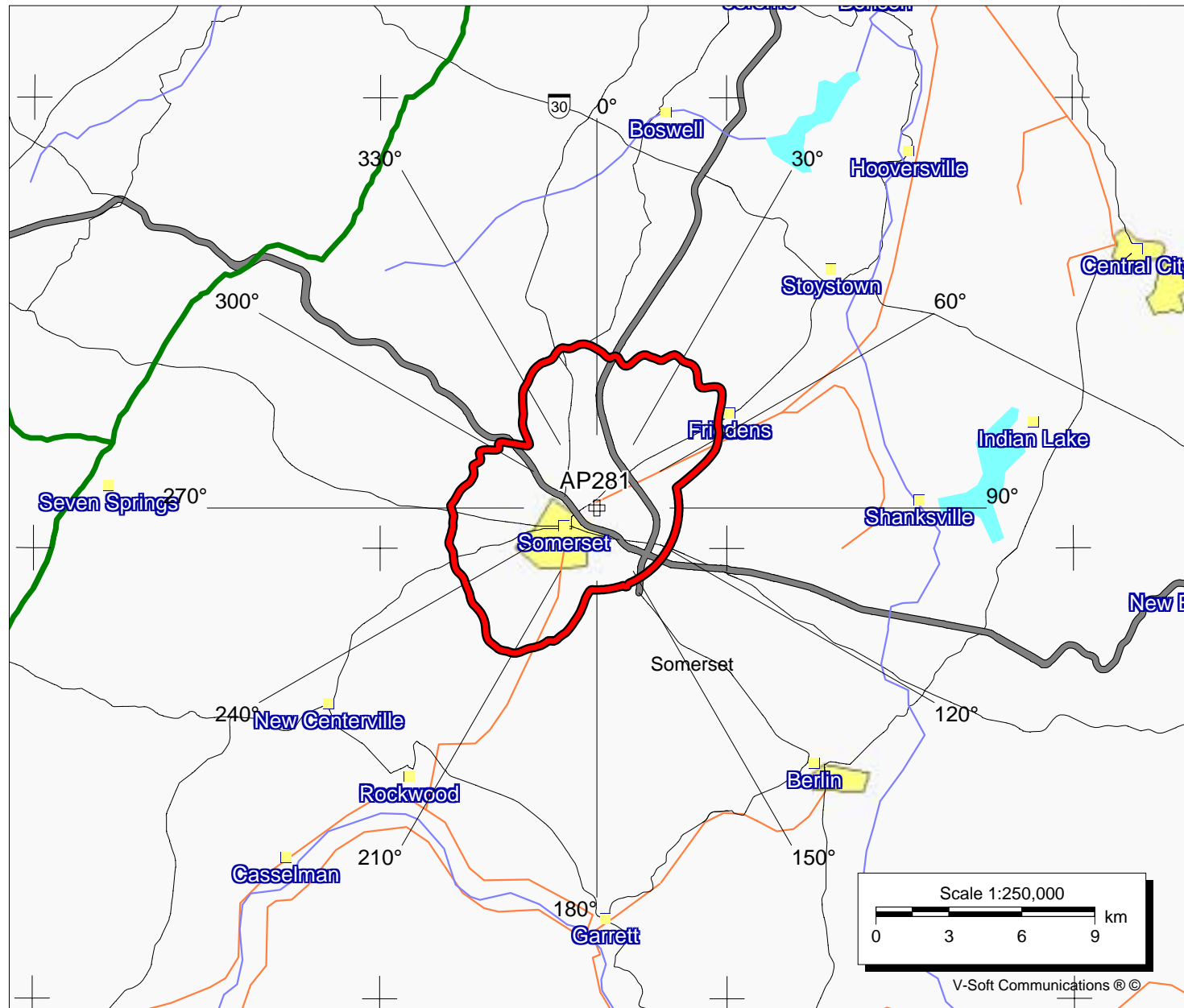
Ave El = 667.64 M HAAT= 72.36 M AMSL= 740

* = Highest HAAT Radial

60 dBu Service Contour

AP281

Latitude: 40-00-54 N
Longitude: 079-03-45 W
ERP: 0.013 kW
Channel: 281
Frequency: 104.1 MHz
AMSL Height: 740.0 m
Elevation: 668 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC



Declaration:

I, Douglas L. Vernier, declare that I have received training as an engineer from the University of Michigan School of Engineering. That, I have received degrees from the University in the field of Broadcast Telecommunications. That, I have been active in broadcast consulting for over 30 years;

That, I have held a Federal Communications Commission First Class Radiotelephone License continually since 1964. In 1985, this license was reissued by the Commission as a lifetime General Radiotelephone license no. PG-16-16464;

That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana. (Re-certified 10/2000.)

That, my qualifications are a matter of record with the Federal Communications Commission;

That, I have been retained by Duquesne University of Pittsburgh, Pennsylvania to prepare the engineering showings appended hereto:

That, I have prepared these broadcast engineering showings, the technical information contained in same and the facts stated within are true of my knowledge;

That, under penalty of perjury, I declare that the foregoing is correct.



Douglas L. Vernier

Executed on August 9, 2003