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**SONSHINE FAMILY TELEVISION CORPORATION**

**LICENSEE OF WBPH-DT**

**DTV CHANNEL 9**

**BETHLEHEM, PENNSYLVANIA**

**FAC ID# 60850**

**FCC FILE # FCC FILE # BLCDT-20060609AAH  
BLCDT-20100907AAF (Pending)**

**APPLICATION FOR A NEW MINOR CP TO INCREASE ERP AND TO  
CHANGE DIRECTIONAL ANTENNA PATTERN**

**DIRECTIONAL ANTENNA EXHIBIT 46**

**April 25, 2011**

**SONSHINE FAMILY TELEVISION CORPORATION**

**LICENSEE OF WBPH-DT**

**DTV CHANNEL 9**

**BETHLEHEM, PENNSYLVANIA**

**FAC ID# 60850**

**FCC FILE # BPCDT-20100105AAH**

**ANTENNA DATA ENGINEERING EXHIBIT 46**

This application is for a new minor CP for WBPH-DT (BPCDT-20100105AAH) to change ERP, and to change directional antenna pattern.

The proposed new pattern data is included herein and includes tabulations of the azimuth and elevation patterns along with azimuth and elevation plots.

**SONSHINE FAMILY TV  
WBPH-DT**

**EXHIBIT 46 - TABLE 1**

PROPOSED DIRECTIONAL PATTERN

**10 Degree**

Angle	Field	ERP (kW)	ERP (dBk)
0	1.000	120.00	20.792
10	1.000	120.00	20.792
20	1.000	120.00	20.792
30	1.000	120.00	20.792
40	1.000	120.00	20.792
50	1.000	120.00	20.792
60	1.000	120.00	20.792
70	1.000	120.00	20.792
80	1.000	120.00	20.792
90	1.000	120.00	20.792
100	1.000	120.00	20.792
110	1.000	120.00	20.792
120	1.000	120.00	20.792
130	1.000	120.00	20.792
140	1.000	120.00	20.792
150	1.000	120.00	20.792
160	1.000	120.00	20.792
170	1.000	120.00	20.792
180	1.000	120.00	20.792
190	1.000	120.00	20.792
200	1.000	120.00	20.792
210	1.000	120.00	20.792
220	1.000	120.00	20.792
230	0.891	95.27	19.789
240	0.841	84.87	19.288
250	0.866	89.99	19.542
260	0.866	89.99	19.542
270	0.876	92.09	19.642
280	1.000	120.00	20.792
290	1.000	120.00	20.792
300	1.000	120.00	20.792
310	1.000	120.00	20.792
320	1.000	120.00	20.792
330	1.000	120.00	20.792
340	1.000	120.00	20.792
350	1.000	120.00	20.792

**Cardinal**

Angle	Field	ERP (kW)	ERP (dBk)
0	1.000	120.00	20.792
45	1.000	120.00	20.792
90	1.000	120.00	20.792
135	1.000	120.00	20.792
180	1.000	120.00	20.792
225	1.000	120.00	20.792
270	0.876	92.09	19.642
315	1.000	120.00	20.792

**Maxima**

Angle	Field	ERP (kW)	ERP (dBk)
0	1.000	120.00	20.792
90	1.000	120.00	20.792
180	1.000	120.00	20.792
280	1.000	120.00	20.792

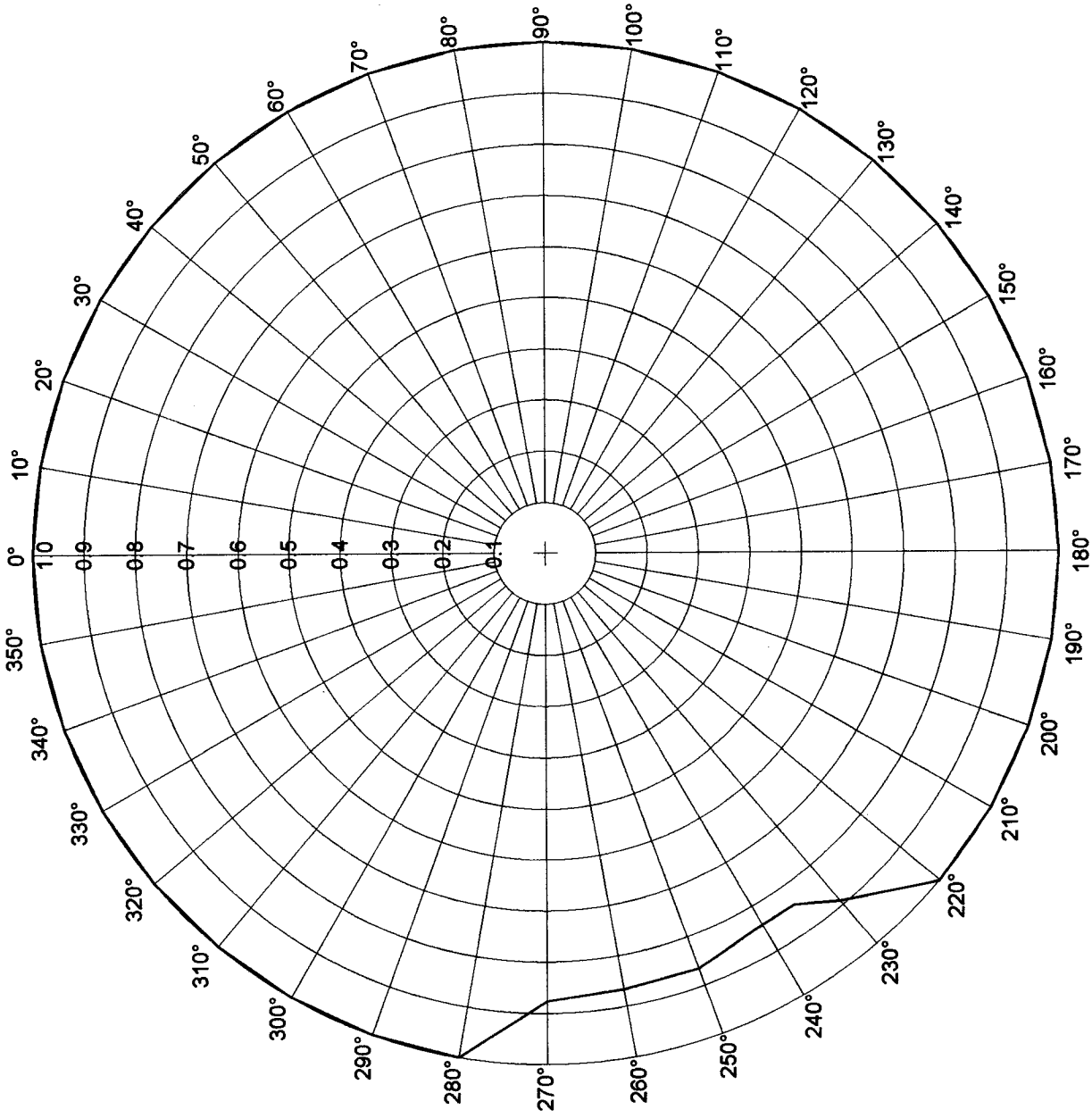
**Minima**

Angle	Field	ERP (kW)	ERP (dBk)
235	0.841	84.87	19.288
240	0.841	84.87	19.288

**WBPH-DT - BETHLEHEM PA**  
**Relative Field Tabulation**  
**Elevation Pattern**  
**Proposed Directional Antenna**

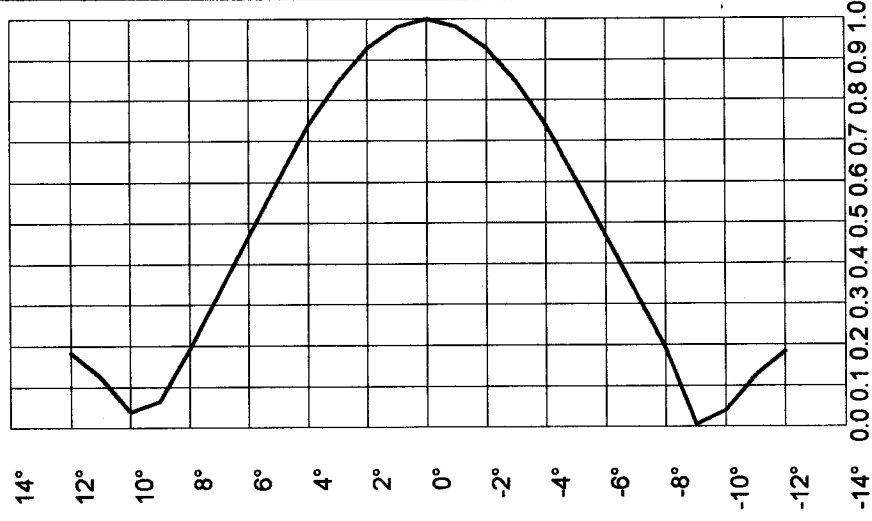
<b>Angle</b>	<b>Relative Field</b>	<b>Angle</b>	<b>Relative Field</b>	<b>Angle</b>	<b>Relative Field</b>
-90	0.001	-53	0.080	-24	0.149
-89	0.002	-52	0.098	-23	0.138
-88	0.007	-51	0.112	-22	0.113
-87	0.012	-50	0.122	-21	0.076
-86	0.018	-49	0.127	-20	0.028
-85	0.026	-50	0.125	-19	0.026
-84	0.034	-49	0.118	-18	0.083
-83	0.042	-48	0.105	-17	0.137
-82	0.052	-47	0.086	-16	0.182
-81	0.061	-46	0.063	-15	0.215
-80	0.071	-45	0.035	-14	0.228
-79	0.082	-50	0.006	-13	0.220
-78	0.092	-49	0.024	-12	0.186
-77	0.103	-48	0.054	-11	0.126
-76	0.113	-47	0.080	-10	0.041
-75	0.123	-46	0.102	-9	0.066
-74	0.133	-45	0.118	-8	0.192
-73	0.141	-44	0.125	-7	0.329
-72	0.149	-43	0.125	-6	0.472
-71	0.156	-42	0.115	-5	0.611
-70	0.161	-41	0.097	-4	0.739
-69	0.164	-40	0.070	-3	0.847
-68	0.165	-39	0.037	-2	0.930
-67	0.164	-38	0.001	-1	0.982
-66	0.161	-37	0.038	0	1.000
-65	0.155	-36	0.075	1	0.982
-64	0.146	-35	0.108	2	0.930
-63	0.135	-34	0.133	3	0.848
-62	0.120	-33	0.147	4	0.739
-61	0.103	-32	0.149	5	0.611
-60	0.084	-31	0.138	6	0.472
-59	0.062	-30	0.113	7	0.330
-58	0.039	-29	0.076	8	0.192
-57	0.014	-28	0.028	9	0.066
-56	0.011	-27	0.026	10	0.041
-55	0.035	-26	0.083	11	0.126
-54	0.058	-25	0.137		

HORIZONTAL PLANE PATTERN



VERTICAL PLANE PATTERN

Azimuth: 0.0°



Relative Intensity

Pattern file: WBPH\_120\_near\_omni.pat

Relative Intensity