



ENGINEERING STATEMENT

OF

BENJAMIN L. PIDEK, P.E.

IN SUPPORT OF

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

FOR

HIGHLAND PARK BROADCASTING, L.P.

W33BY

DETROIT, MI

Background

Highland Park Broadcasting, L.P. (HPB), the licensee of the analog Class A station W33BY (located at Detroit, MI), has been authorized to operate on Channel 33 with following parameters:

File #: BLTTA-2020301ABU
Coordinates: 42° 22' 40" N (NAD27)
83° 14' 32" W
ERP: 15 kW (Omni)
RCAMSL: 289m

HPB was not able to come to terms for a renewal of its tower lease space for the W33BY transmitting antenna which was located on a registered tower (ASR#1000494). At the moment, the only tower space available to HPB is located at the W33BY studio approximately 13 km to the East of the tower location listed on its license; however, the tower at the studio cannot support the omni-directional antenna used at the licensed site and, therefore, the power of a facility (from the

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studio tower) will need to be significantly reduced from that of the licensed facility so that the W33BY authorized coverage area is not exceeded. HPB is concerned about the significant reduction in its service area and considers this option to be a temporary “fix” as it works to build out its digital flashcut facility over the course of 2013.

Antenna System, Tower, and Operating Parameters

HPB proposes to use a Superior Broadcast Products UPWL-2 directional antenna (azimuth and elevation pattern attached hereto) which is side-mounted on the W33BY studio tower in Highland Park, MI, with a radiation center of 33.9m AGL (HAAT of 38m). The tower is unregistered as its overall height (with appurtenances) is less than 200 ft. AGL. The changes proposed by HPB in its STA will not change the overall height of the structure so notification to the FAA is not required. Furthermore, the tower passes the FCC TOWAIR slope test program.

The change in the W33BY facility will result in a reduction in ERP from the authorized 15 kW to 7.2 kW; however, as shown in Figure 1, attached hereto, the coverage area of the proposed STA facility will stay inside the coverage area of the authorized facility even with the move of the facility to the East. A comparison of the W33BY licensed parameters vs. the proposed STA facility parameters is listed in the table below:

Parameters	Licensed Facility	Proposed STA Facility
Coordinates:	42-22-40 N	42-24-29 N
(NAD27)	83-14-32 W	83-05-30 W
ERP (kW):	15 (Omni)	7.2 (DA)
RCAMSL (m):	289	227.9

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Environmental/RFR

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation (RFR). Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; however, since the structure is existing, such conditions should not be an issue requiring further consideration as there will be no increase in height or change in width of the tower structure.

The location of the proposed facility is a multi-user site and it is assumed that the site is currently “in compliance” with FCC guidelines for human exposure to RFR (as defined in OET-65). The existing broadcast facilities are installed on a tower that is situated on a building rooftop 9 m above ground level. There is no access to the rooftop of the building without the use of a free-standing ladder, and, therefore, the rooftop is not a “public” area. The additional worst case RFR contributed to the rooftop area by this proposal is calculated to be 0.018205 mW/cm² which is significantly less than the MPE for occupational areas (1.96 mW/cm² at Ch. 33) and, in fact, is less than 5% of the MPE for public areas (0.39 mW/cm² at Ch. 33).

The additional worst case ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.009382 mW/cm², which is also less than 5% of the MPE for public areas (0.39 mW/cm² at Ch. 33). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain “in compliance” with FCC guidelines.

HPB agrees to comply with the Commission’s requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure. Although the tower base is not enclosed by a locked fence, as mentioned above, the tower sits on a rooftop of a 3 story building and the only access to the rooftop is with

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the use of a free-standing ladder. Furthermore, portions of the area around the building are fenced in.

Certification

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

A handwritten signature in black ink, appearing to read "Ben Pidek", is written over a horizontal line.

Benjamin L. Pidek, P.E.
December 10, 2012

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Mid-State Consultants

**74 dBu Coverage of Licensed W33BY-CA Facility (Black) vs.
74 dBu Coverage of W33BY STA Facility (Red) with SBP UPWL-2 Antenna**

W33BY-CA (LIC)

BLTTA20020301ABU
Latitude: 42-22-40 N
Longitude: 083-14-32 W
ERP: 15.00 kW
Channel: 33+
Frequency: 587.5 MHz
AMSL Height: 289.0 m
Horiz. Pattern: Omni

W33BY-CA (STA)

Latitude: 42-24-29 N
Longitude: 083-05-30 W
ERP: 7.20 kW
Channel: 33+
Frequency: 587.5 MHz
AMSL Height: 227.9 m
Horiz. Pattern: Directional

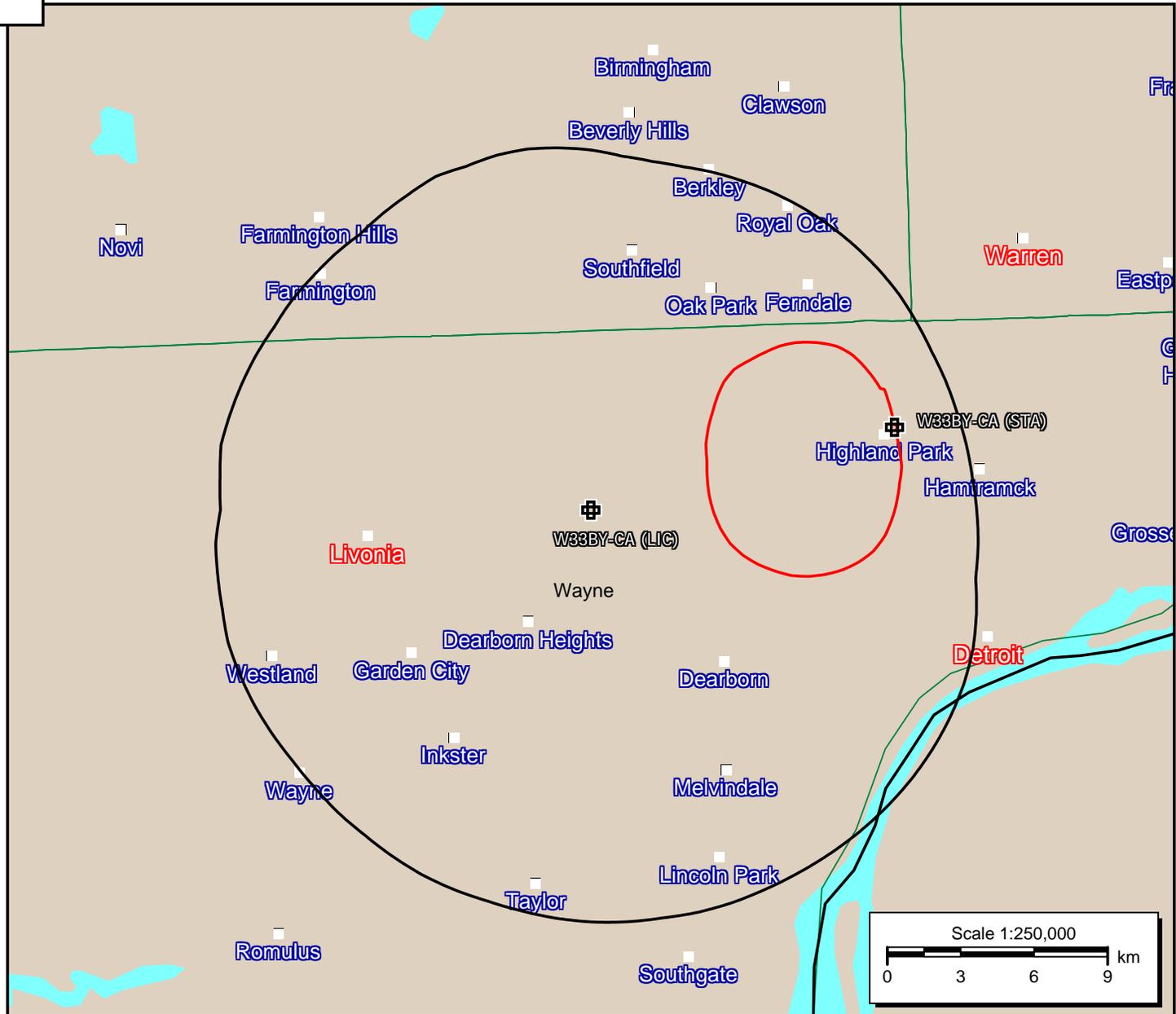
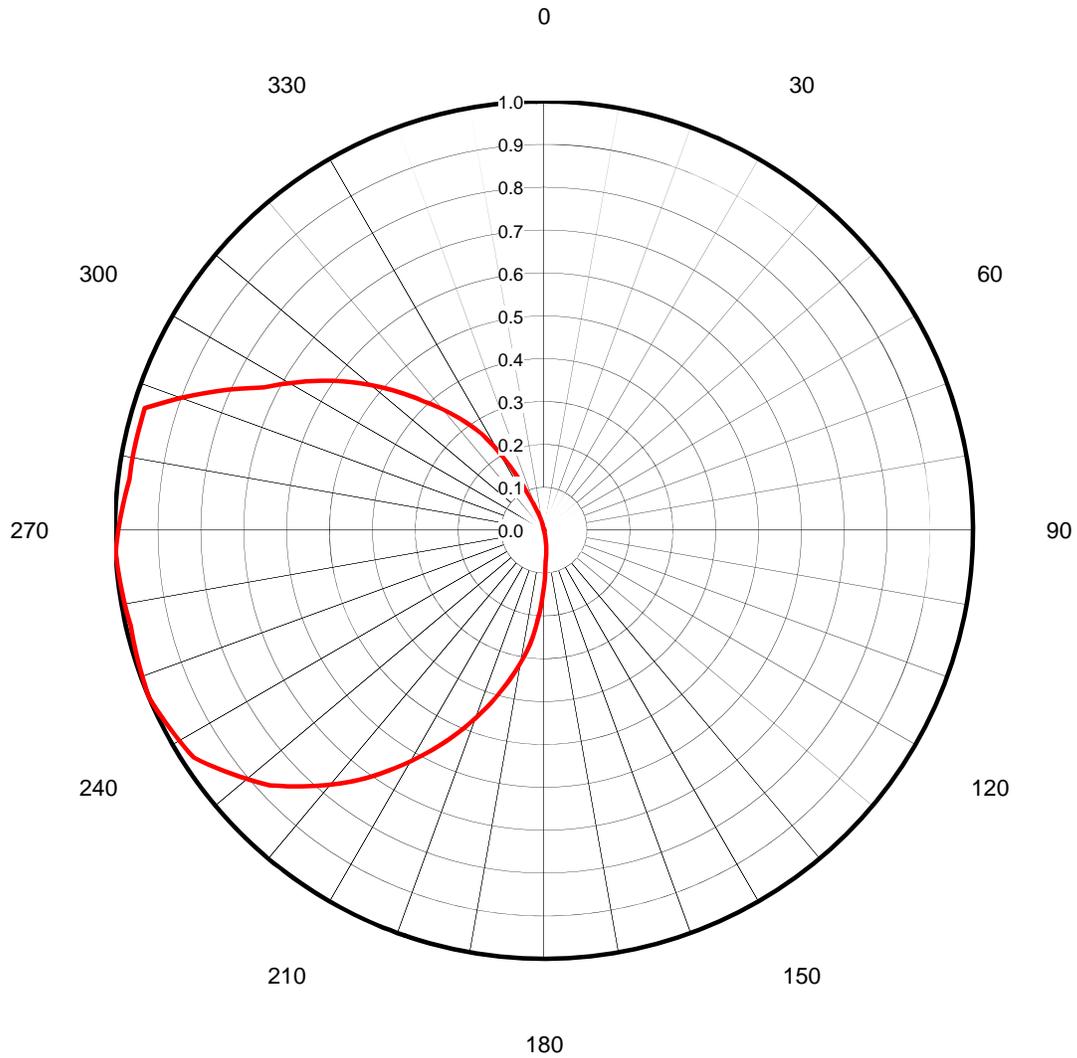


Figure 1
12-02-12

W33BY STA Azimuth Pattern



Antenna Manufacturer: Superior Broadcast Products
Model #: UPWL-2

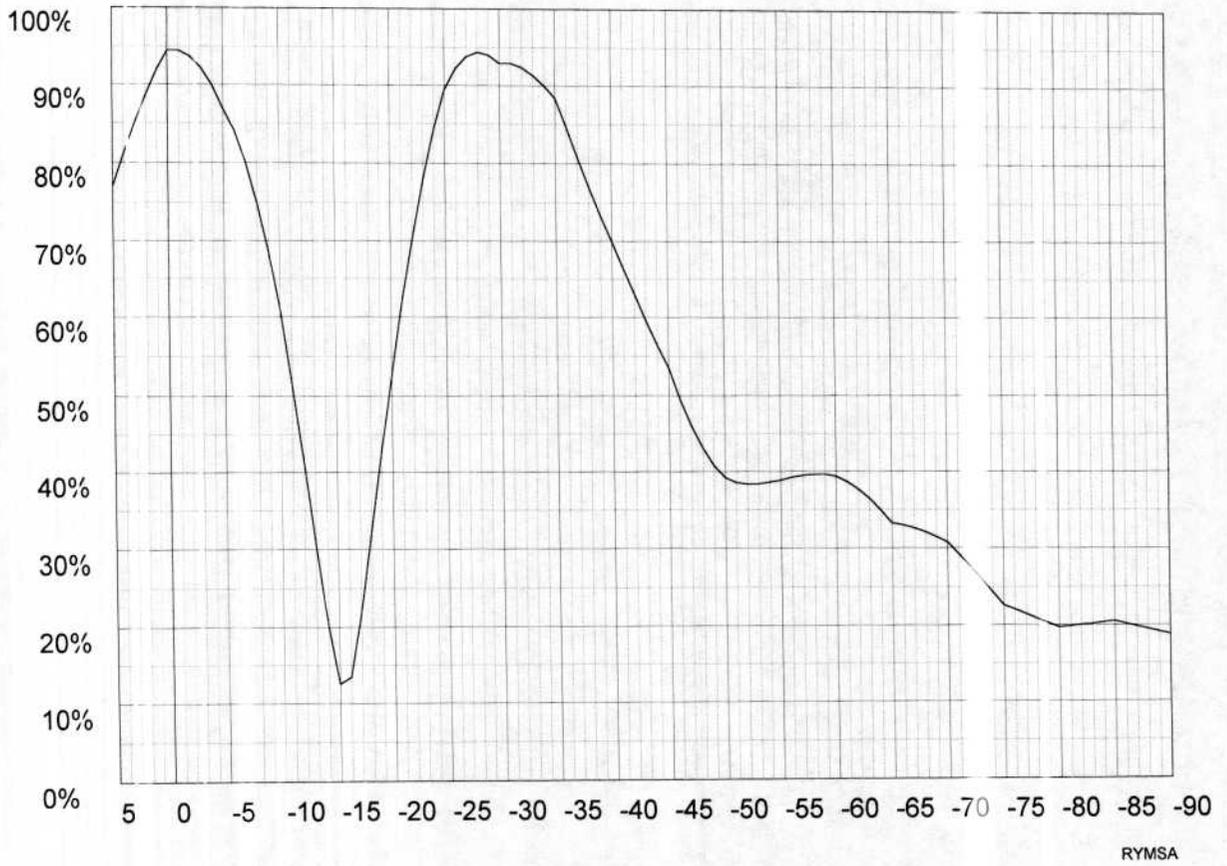
Rotation: 257

Azimuth	RF	Azimuth	RF	Azimuth	RF	Azimuth	RF
0	0.989	90	0.001	180	0.001	270	0.001
10	1.000	100	0.001	190	0.001	280	0.073
20	0.974	110	0.001	200	0.001	290	0.269
30	0.973	120	0.001	210	0.001	300	0.420
40	0.733	130	0.001	220	0.001	310	0.576
50	0.576	140	0.001	230	0.001	320	0.733
60	0.411	150	0.001	240	0.001	330	0.873
70	0.269	160	0.001	250	0.001	340	0.974
80	0.073	170	0.001	260	0.001	350	1.000

UPWL-2

Frequency: 587 MHz
Azimuth: 0°

E/Emax



RYMSA

VRP LIST

Antenna System : Indeterminated

Unitary element: 15240tw.f2

Frequency: 587 MHz

Azimuth: 0 °

Max. Field Dir.:
0 °

Maximum Gain: 9.60 dBd

Elevation(°)	Gain (dBi)	Norm.Gain(dBi)	Pwr. Gain	Gain (dBd)
-90.	-2.266	-14.017	0.593	-4.416
-89.	-2.114	-13.865	0.615	-4.264
-88.	-1.962	-13.713	0.637	-4.112
-87.	-1.81	-13.561	0.659	-3.96
-86.	-1.657	-13.408	0.683	-3.807
-85.	-1.504	-13.255	0.707	-3.654
-84.	-1.58	-13.331	0.695	-3.73
-83.	-1.654	-13.405	0.683	-3.804
-82.	-1.725	-13.476	0.672	-3.875
-81.	-1.794	-13.545	0.662	-3.944
-80.	-1.861	-13.612	0.651	-4.011
-79.	-1.607	-13.358	0.691	-3.757
-78.	-1.357	-13.108	0.732	-3.507
-77.	-1.114	-12.865	0.774	-3.264
-76.	-0.882	-12.633	0.816	-3.032
-75.	-0.661	-12.412	0.859	-2.811
-74.	-0.025	-11.777	0.994	-2.175
-73.	0.555	-11.196	1.136	-1.595
-72.	1.085	-10.666	1.284	-1.065
-71.	1.566	-10.185	1.434	-0.584
-70.	2.001	-9.75	1.585	-0.149
-69.	2.199	-9.553	1.659	0.049
-68.	2.367	-9.384	1.725	0.217
-67.	2.505	-9.247	1.78	0.355
-66.	2.608	-9.143	1.823	0.458
-65.	2.676	-9.075	1.852	0.526
-64.	3.105	-8.646	2.044	0.955
-63.	3.462	-8.289	2.219	1.312
-62.	3.752	-7.999	2.373	1.602
-61.	3.977	-7.774	2.499	1.827
-60.	4.138	-7.614	2.593	1.988
-59.	4.19	-7.561	2.624	2.04
-58.	4.20	-7.552	2.63	2.05
-57.	4.17	-7.581	2.612	2.02
-56.	4.109	-7.642	2.576	1.959
-55.	4.026	-7.726	2.527	1.876
-54.	3.966	-7.785	2.493	1.816
-53.	3.919	-7.832	2.466	1.769
-52.	3.908	-7.843	2.459	1.758
-51.	3.959	-7.792	2.489	1.809
-50.	4.099	-7.652	2.57	1.949

VRP LIST (Cont. page 2)

Antenna System : Indeterminated

Elevation(°)	Gain (dBi)	Norm.Gain(dBi)	Pwr. Gain	Gain (dBd)
-49.	4.456	-7.295	2.79	2.306
-48.	4.934	-6.817	3.115	2.784
-47.	5.507	-6.244	3.554	3.357
-46.	6.146	-5.606	4.117	3.996
-45.	6.818	-4.933	4.806	4.668
-44.	7.276	-4.475	5.34	5.126
-43.	7.752	-3.999	5.96	5.602
-42.	8.23	-3.521	6.652	6.08
-41.	8.694	-3.058	7.402	6.544
-40.	9.133	-2.618	8.191	6.983
-39.	9.543	-2.208	9.002	7.393
-38.	9.963	-1.788	9.915	7.813
-37.	10.381	-1.371	10.916	8.231
-36.	10.785	-0.966	11.982	8.635
-35.	11.168	-0.583	13.085	9.018
-34.	11.327	-0.424	13.574	9.177
-33.	11.458	-0.293	13.989	9.308
-32.	11.552	-0.199	14.297	9.402
-31.	11.603	-0.148	14.465	9.453
-30.	11.603	-0.148	14.465	9.453
-29.	11.706	-0.045	14.811	9.556
-28.	11.737	-0.014	14.918	9.587
-27.	11.684	-0.067	14.736	9.534
-26.	11.534	-0.217	14.236	9.384
-25.	11.273	-0.478	13.407	9.123
-24.	10.744	-1.007	11.869	8.594
-23.	10.058	-1.693	10.135	7.908
-22.	9.185	-2.567	8.288	7.035
-21.	8.077	-3.674	6.422	5.927
-20.	6.666	-5.086	4.641	4.516
-19.	4.848	-6.903	3.054	2.698
-18.	2.427	-9.325	1.749	0.277
-17.	-0.914	-12.665	0.81	-3.064
-16.	-5.186	-16.937	0.303	-7.336
-15.	-5.786	-17.537	0.264	-7.936
-14.	-1.607	-13.358	0.691	-3.757
-13.	1.948	-9.803	1.566	-0.202
-12.	4.531	-7.22	2.839	2.381
-11.	6.466	-5.285	4.432	4.316
-10.	7.958	-3.794	6.248	5.808
-9.	8.955	-2.796	7.862	6.805
-8.	9.727	-2.025	9.39	7.577
-7.	10.31	-1.441	10.74	8.16
-6.	10.733	-1.019	11.838	8.583
-5.	11.016	-0.736	12.635	8.866
-4.	11.32	-0.431	13.552	9.17
-3.	11.54	-0.211	14.255	9.39
-2.	11.681	-0.07	14.726	9.531
-1.	11.749	-0.002	14.96	9.599
0.	11.751	0.00	14.966	9.601
1.	11.503	-0.248	14.135	9.353

VRP LIST (Cont. page 3)

Antenna System : Indeterminated

Elevation(°)	Gain (dBi)	Norm.Gain(dBi)	Pwr. Gain	Gain (dBd)
2.	11.195	-0.556	13.166	9.045
3.	10.832	-0.919	12.113	8.682
4.	10.425	-1.327	11.027	8.275
5.	9.982	-1.769	9.958	7.832