

Engineering Statement and Interference Analysis

This technical statement supports this amendment application to modify BDISDTL-20101014ACN for KRMV-LD, Channel 45, Walnut, CA, Facility ID 129618, licensed to Venture Technologies Group, LLC, the Applicant herein (“VTG”).

Amendment

The proposed facility was studied using the Techware’s tv_process_2010 software on a Sun Blade 1500 using the post transition database and the 2000 US Census. In this amendment, VTG requests that the Commission processes BDISDTL-20101014ACN using the followings:

- Full Power DTV Emission Mask¹
- Cell Size for Service Analysis of 0.5 km per side
- Distance Increments for Longley-Rice Analysis of 0.2 km

Displacement

KRMV-LP and was granted a construction permit on digital channel 40 pursuant to BDISDTL- 20080310AEA (“KRMV-LD”). However, further engineering studies revealed that the authorized facility of KRMV-LD is within 143.9 km of the licensed facility of KNSD-TV on channel 40 in San Diego, CA, Facility ID 35277. KRMV-LD is therefore displaced and hereby requests to move to digital channel 45 in Walnut, California.

To demonstrate that that the KRMV-LD authorized facility on channel 40 receives predicted interference from a full power DTV station as requested by the FCC letter dated March 1, 2011, the KRMV-LD CP facility was studied using the Techware’s tv_process_2010 software on a Sun Blade 1500 using the a current data base and the 2000 US Census. The facility was studied with standard parameters, including Cell Size for Service Analysis is 1.0 km per side and Distance Increments for Longley-Rice Analysis is 1.0 km.

Attachment A is the study for the channel. It has been abridged to only include interference to the authorized KRMV-LD facility on channel 40. To study interference to KRMV-LD on channel 40, the tv_process_2010 program 19 separate station facilities on channels 39, 40 and 41. Of these 19 facilities, only the following full power DTV stations were included:

KVEA	39	Corona, CA
KVPT	40	Fresno, CA
KNSD	40	San Diego, CA
KBLR	40	Paradise, NV
KLCS	41	Los Angeles, CA

All other facilities were either low power TV or Class A TV facilities. Of these five full power facilities, only KVEA, KNSD, and KLCS were relevant in the study to cause interference to KRMV-LD 40.

¹ *Heading J (Use of Full Power DTV Emission Mask), Paragraph 68 of the Second Report and Order In the Matter of Amendment of Parts 73 and 74 of the Commission’s Rules to Establish Rules for Digital Low Power Television, Television Translator, and Television Booster Stations and to Amend Rules for Digital Class A Television Stations, MB Docket No. 03-185. Released and adopted on July 15, 2011. Effective on August 26, 2011.*

The tv_process_2010 program determined that the population within the Noise Limited 51 dBu contour of KRMV-LD 40 is 313,003 persons and within that area that is not affected by terrain loss the population is 298,329 persons.

The tv_process_2010 program ran eight separate scenarios for interference to KRMV-LD 40. The various scenarios included authorized licenses and construction permits for the KVEA, KNSD, and KLCS. No scenarios were run for any pending applications or these full power stations.

In every scenario, there was significant interference to KRMV-LD from the KVEA, KNSD, and KLCS facilities. The interference ranged from a low of 15,244 persons to a high of 41,645 persons. This interference from these three full power stations to the KRMV-LD 40 facility represents between a low of 4.9% and a high of 13.3% of the KRMV-LD population within the Noise Limited Contour and between a low of 5.1% and a high of 14.0% of the KRMV-LD 40 population within that area that is not affected by terrain loss.

In conclusion, KRMV-LD 40 is clearly receiving interference from these three referenced full power DTV stations and is therefore immediately eligible for a grant of its displacement application.

Digital TV Station Protection

The proposed facility causes less than 0.5% interference to surrounding digital assignments and allotments and facilities (i.e., “*de minimis*”). It is believed that the proposed facility is in compliance with the spirit and intent of the FCC’s interference standards.

Class A, Low Power TV and TV Translator Station Protection

The proposed facility causes less than 0.5% interference to surrounding low power assignments and allotments (i.e., “*de minimis*”). It is believed that the proposed operation is in compliance with the spirit and intent of the FCC’s interference standards.

Attachment A
Engineering showing demonstrating interference from a full power DTV station

Percent allowed new interference: 0.500
Percent allowed new interference to non Class A LPTV: 2.000
TW Census data selected 2000
Data Base Selected
/space/software/cdbs/pt_tvdb.sff
TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 03-15-2011 Time: 12:03:21

Record Selected for Analysis

KRMV-LP BDISDTL -20080310AEA MORENO VALLEY CA US
Channel 40 ERP 0.04 kW HAAT 687 m RCAMSL 00969 m SIMPLE MASK
Latitude 033-57-41 Longitude 0117-16-47
Status CP Zone Border M Site number: 01
Dir Antenna Make CDB Model 00000000023501 Beam tilt N Ref Azimuth 300.0
Last update 00000000 Cutoff date 20090630 Docket
Comments
Applicant VENTURE TECHNOLOGIES GROUP, LLC

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station
Service Class = LD
Maximum height/power limits not checked

Site number	1		
Azimuth	ERP	HAAT	51.0 dBu F(50,90)
(Deg)	(kW)	(m)	(km)
0.0	0.000	594.3	2.3
45.0	0.000	439.4	2.4
90.0	0.000	310.4	1.7
135.0	0.000	467.8	1.8
180.0	0.000	480.7	2.6
225.0	0.000	512.9	2.1
270.0	0.000	687.4	5.8
315.0	0.014	657.5	25.6

Database HAAT does not agree with computed HAAT
Database HAAT: 687 Computed HAAT: 519

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

NO LANDMOBILE SPACING VIOLATIONS FOUND

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is within the Mexican coordination distance
Distance to border = 159.3km

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
40	KRMV-LP	MORENO VALLEY CA	BDISDTL 20080310AEA

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
25	KPDC-LP	INDIO CA	78.8	LIC	BLTTL	-20030610ADC
25	K25GK	JOSHUA TREE CA	122.7	LIC	BLTT	-20000605AOK
25	KNET-CA	LOS ANGELES CA	77.2	LIC	BLTTA	-20060925AGZ
25	KNET-CA	LOS ANGELES CA	77.2	CP	BPTTA	-20070202ABA
25	KBLM-LP	RIVERSIDE AND PERRIS CA	0.1	LIC	BLTTL	-20081209ABP
25	KWJD-LP	VAN NUYS CA	111.5	LIC	BLTTL	-20010504ACD
25	K25AD	VICTORVILLE, ETC. CA	72.2	LIC	BLTT	-19820105IE
26	K26FA	VISTA CA	95.3	LIC	BLTTL	-19990809JJ
32	K32EM	MORONGO VALLEY CA	68.7	LIC	BLTTL	-19970721JS
33	KRVD-LP	BANNING CA	43.8	LIC	BLTTL	-20070103ACI
33	KDFX-CA	INDIO/PALM SPRINGS CA	78.7	LIC	BLTTA	-20030313ALZ
33	K33DK	LUCERNE VALLEY CA	66.8	LIC	BLTT	-19910927IB
36	K36JH	BARSTOW CA	72.3	APP	BSTA	-20070207ABY
36	K36JH	BARSTOW CA	72.3	LIC	BLTTL	-20090401AXW
36	K36GO	MORONGO VALLEY CA	68.7	LIC	BLTT	-20060331AEU
38	KSCD-LP	BIG BEAR LAKE CA	33.7	LIC	BLTTL	-20080630ADI
38	KPAL-LP	PALMDALE CA	107.9	STA	BSTA	-20060104ACS

38	KPAL-LP	PALMDALE CA	107.9	STA	BSTA	-20050922AFW
38	KPAL-LP	PALMDALE CA	107.8	LIC	BLTTL	-19900723II
39	KABE-LD	BAKERSFIELD CA	204.7	STA	BSTA	-20041105BDJ
39	KABE-LD	BAKERSFIELD CA	204.7	LIC	BLDTL	-20100922ABW
39	KVEA	CORONA CA	77.2	LIC	BLCDT	-20030507AAW
39	KVEA	CORONA CA	77.2	CP	BPCDT	-20080620ANU
39	K39DW	DAGGETT, ETC. CA	108.5	LIC	BLTT	-19950929IK
39	KDFX-CA	INDIO/PALM SPRINGS CA	78.7	APP	BDISDTA	-20110310AAN
39	K39HT-D	RIDGECREST CA	172.7	LIC	BLDTT	-20080401AVF
39	KZSD-LP	SAN DIEGO CA	144.3	APP	BSTA	-20101029ACV
39	KZSD-LP	SAN DIEGO CA	144.3	CP	BDISDTL	-20080801BAR
39	K39GY	VICTORVILLE CA	72.1	CP	BDFCDTT	-20060223AAM
39	K39GY	VICTORVILLE CA	72.1	LIC	BLTT	-20030822AFM
40	NEW	BARSTOW CA	56.6	APP	BDCCDTL	-20060922ACI
40	NEW	BARSTOW CA	56.6	APP	BSFDTL	-20060630CDQ
40	KPCD-LP	BIG BEAR LAKE CA	37.4	CP	BPTTL	-20080122AQF
40	KPCD-LP	BIG BEAR LAKE CA	37.4	LIC	BLTTL	-20070525AIV
40	K40LM-D	EL CENTRO CA	206.2	CP	BNPDTL	-20090825ACA
40	KVPT	FRESNO CA	358.7	LIC	BLEDT	-20040716ACA
40	KVHD-LD	GLENDALE CA	78.1	LIC	BLDTL	-20110207AEJ
40	KSCZ-LP	GREENFIELD CA	406.1	APP	BDISTTL	-20051028ACT
40	KVER-CA	INDIO CA	78.8	APP	BDISDTA	-20100922ABX
40	K40HX	MORONGO VALLEY CA	68.7	LIC	BLTT	-20060119ACC
40	KNSD	SAN DIEGO CA	144.2	LIC	BLCDT	-20040805AAL
40	KNSD	SAN DIEGO CA	144.2	CP MOD	BMPCDT	-20041029AHV
40	KWSM-LP	SANTA MARIA CA	286.5	LIC	BLTTL	-20030414AAS
40	KFRE-CA	TULARE CA	294.7	LIC	BLTTL	-19941108IA
40	KBLR	PARADISE NV	307.8	CP	BPCDT	-20080703AAG
40	KBLR	PARADISE NV	307.7	LIC	BLCDT	-20060705ABB
41	KDBK-LP	CALIENTE CA	204.7	CP	BDFCDTL	-20090611ACV
41	KDBK-LP	CALIENTE CA	204.7	LIC	BLTTL	-20090306AAE
41	K41CY	DAGGETT CA	108.5	LIC	BLTT	-19900817IE
41	NEW	INDIO/PALM SPRINGS CA	78.7	APP	BDCCDTL	-20070410AAT
41	KLCS	LOS ANGELES CA	77.7	LIC	BLEDT	-20030507AAS
41	KLCS	LOS ANGELES CA	77.7	CP MOD	BMPEDT	-20080620AIZ
41	K41CB	LUCERNE VALLEY CA	66.8	LIC	BLTT	-19880428IC
41	K41GO	RIDGECREST CA	187.9	APP	BSTA	-20100301ACH
41	K41GO	RIDGECREST CA	172.7	LIC	BLTT	-20040212ADO
41	KZSD-LP	SAN DIEGO CA	109.7	LIC	BLTTL	-20030507AAF
43	K43EE	LUCERNE VALLEY CA	66.8	LIC	BLTT	-19960216JF
43	KDUO-LP	PALM DESERT CA	78.8	LIC	BLTTL	-20071210ABX
43	K43AG	RIDGECREST CA	108.5	LIC	BLTTL	-20081222ABE
43	K43AG	RIDGECREST CA	90.2	CP	BPTTL	-20110208ABW
43	KSKT-CA	SAN MARCOS CA	109.7	LIC	BLTT	-19941201JC
47	K47HZ	BANNING CA	37.4	CP	BNPTTL	-20000831BVH
47	KIJR-LP	LUCERNE VALLEY CA	78.8	LIC	BLTTL	-20050916ACW
47	K47IB	TWENTYNINE PALMS,ETC CA	122.7	LIC	BLTT	-20050801BMB
48	K48IP	DAGGETT CA	108.5	LIC	BLTT	-20041213ABH
48	KHTV-LP	INLAND EMPIRE CA	77.2	LIC	BLTTL	-20010507AAM
48	K48AD	LUCERNE VALLEY CA	66.8	LIC	BLTT	-2100
48	K48EM	MORONGO VALLEY CA	68.7	LIC	BLTT	-19950310IE
48	KUAN-LP	POWAY, ETC. CA	109.7	LIC	BLTT	-19810504IH

Analysis of Interference to Affected Station 70

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
40	KRMV-LP	MORENO VALLEY CA	BDISDTL	-20080310AEA

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
39	KVEA	CORONA CA	77.2	LIC	BLCDDT	-20030507AAW
39	KVEA	CORONA CA	77.2	CP	BPCDDT	-20080620ANU
39	KDFX-CA	INDIO/PALM SPRINGS CA	78.7	APP	BDISDTA	-20110310AAN
39	K39GY	VICTORVILLE CA	72.1	CP	BDFCDDT	-20060223AAM
40	NEW	BARSTOW CA	56.6	APP	BDCCDDT	-20060922ACI
40	NEW	BARSTOW CA	56.6	APP	BSFDDT	-20060630CDQ
40	KPCD-LP	BIG BEAR LAKE CA	37.4	CP	BPTT	-20080122AQF
40	KVPT	FRESNO CA	358.7	LIC	BLEDT	-20040716ACA
40	KVHD-LD	GLENDALE CA	78.1	LIC	BLDDT	-20110207AEJ
40	KVER-CA	INDIO CA	78.8	APP	BDISDTA	-20100922ABX
40	K40HX	MORONGO VALLEY CA	68.7	LIC	BLTT	-20060119ACC
40	KNSD	SAN DIEGO CA	144.2	LIC	BLCDDT	-20040805AAL
40	KNSD	SAN DIEGO CA	144.2	CP MOD	BMPCDDT	-20041029AHV
40	KWSM-LP	SANTA MARIA CA	286.5	LIC	BLTT	-20030414AAS
40	KBLR	PARADISE NV	307.8	CP	BPCDDT	-20080703AAG
40	KBLR	PARADISE NV	307.7	LIC	BLCDDT	-20060705ABB
41	NEW	INDIO/PALM SPRINGS CA	78.7	APP	BDCCDDT	-20070410AAT
41	KLCS	LOS ANGELES CA	77.7	LIC	BLEDT	-20030507AAS
41	KLCS	LOS ANGELES CA	77.7	CP MOD	BMPEDT	-20080620AIZ

Total scenarios = 8

Result key: 65
Scenario 1 Affected station 70
Before Analysis

Results for: 40A CA MORENO VALLEY BDISDTL 20080310AEA CP

HAAT 687.0 m, ATV ERP 0.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	313033	334.2
not affected by terrain losses	298329	305.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	15244	13.8
lost to ATV IX only	15244	13.8
lost to all IX	15244	13.8

Potential Interfering Stations Included in above Scenario 1

39A CA CORONA	BLCDDT	20030507AAW	LIC
40A CA SAN DIEGO	BLCDDT	20040805AAL	LIC

41A CA LOS ANGELES BLEDT 20030507AAS LIC

Result key: 66
Scenario 2 Affected station 70
Before Analysis

Results for: 40A CA MORENO VALLEY BDISDTL 20080310AEA CP

HAAT 687.0 m, ATV ERP 0.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	313033	334.2
not affected by terrain losses	298329	305.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	38232	27.6
lost to ATV IX only	38232	27.6
lost to all IX	38232	27.6

Potential Interfering Stations Included in above Scenario 2

39A CA CORONA BLCDT 20030507AAW LIC
40A CA SAN DIEGO BLCDT 20040805AAL LIC
41A CA LOS ANGELES BMPEDT 20080620AIZ CP

Result key: 67
Scenario 3 Affected station 70
Before Analysis

Results for: 40A CA MORENO VALLEY BDISDTL 20080310AEA CP

HAAT 687.0 m, ATV ERP 0.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	313033	334.2
not affected by terrain losses	298329	305.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	15244	13.8
lost to ATV IX only	15244	13.8
lost to all IX	15244	13.8

Potential Interfering Stations Included in above Scenario 3

39A CA CORONA BLCDT 20030507AAW LIC
40A CA SAN DIEGO BMPEDT 20041029AHV CP
41A CA LOS ANGELES BLEDT 20030507AAS LIC

Result key: 68
Scenario 4 Affected station 70
Before Analysis

Results for: 40A CA MORENO VALLEY BDISDTL 20080310AEA CP

HAAT 687.0 m, ATV ERP 0.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	313033	334.2
not affected by terrain losses	298329	305.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	38232	27.6
lost to ATV IX only	38232	27.6

lost to all IX 38232 27.6

Potential Interfering Stations Included in above Scenario 4

39A CA CORONA	BLCDT	20030507AAW	LIC
40A CA SAN DIEGO	BMPCDT	20041029AHV	CP
41A CA LOS ANGELES	BMPEDT	20080620AIZ	CP

Result key: 69
Scenario 5 Affected station 70
Before Analysis

Results for: 40A CA MORENO VALLEY BDISDTL 20080310AEA CP

HAAT 687.0 m, ATV ERP 0.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	313033	334.2
not affected by terrain losses	298329	305.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	41645	36.5
lost to ATV IX only	41645	36.5
lost to all IX	41645	36.5

Potential Interfering Stations Included in above Scenario 5

39A CA CORONA	BPCDT	20080620ANU	CP
40A CA SAN DIEGO	BLCDT	20040805AAL	LIC
41A CA LOS ANGELES	BLEDT	20030507AAS	LIC

Result key: 70
Scenario 6 Affected station 70
Before Analysis

Results for: 40A CA MORENO VALLEY BDISDTL 20080310AEA CP

HAAT 687.0 m, ATV ERP 0.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	313033	334.2
not affected by terrain losses	298329	305.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	41645	36.5
lost to ATV IX only	41645	36.5
lost to all IX	41645	36.5

Potential Interfering Stations Included in above Scenario 6

39A CA CORONA	BPCDT	20080620ANU	CP
40A CA SAN DIEGO	BLCDT	20040805AAL	LIC
41A CA LOS ANGELES	BMPEDT	20080620AIZ	CP

Result key: 71
Scenario 7 Affected station 70
Before Analysis

Results for: 40A CA MORENO VALLEY BDISDTL 20080310AEA CP

HAAT 687.0 m, ATV ERP 0.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	313033	334.2
not affected by terrain losses	298329	305.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	41645	36.5
lost to ATV IX only	41645	36.5
lost to all IX	41645	36.5

Potential Interfering Stations Included in above Scenario 7

39A CA CORONA	BPCDT	20080620ANU	CP
40A CA SAN DIEGO	BMPCDT	20041029AHV	CP
41A CA LOS ANGELES	BLEDT	20030507AAS	LIC

Result key: 72
 Scenario 8 Affected station 70
 Before Analysis

Results for: 40A CA MORENO VALLEY BDISDTL 20080310AEA CP
 HAAT 687.0 m, ATV ERP 0.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	313033	334.2
not affected by terrain losses	298329	305.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	41645	36.5
lost to ATV IX only	41645	36.5
lost to all IX	41645	36.5

Potential Interfering Stations Included in above Scenario 8

39A CA CORONA	BPCDT	20080620ANU	CP
40A CA SAN DIEGO	BMPCDT	20041029AHV	CP
41A CA LOS ANGELES	BMPEDT	20080620AIZ	CP

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