

TECHNICAL EXHIBIT  
DISPLACEMENT APPLICATION (DIGITAL)  
FOR STATION K65BV (FACILITY ID 34878)  
LIHUE, HAWAII  
CH 32 0.6 KW (MAX-DA)

Technical Narrative

This Technical Exhibit supports a digital displacement application for low power television (LPTV) station K65BV at Lihue, Hawaii. Station K65BV is licensed to operate on channel 65 (analog) with a directional antenna maximum visual effective radiated power (ERP) of 0.142 kilowatt (kW) and antenna radiation center height (RCAMSL) of 861 meters above mean sea level (AMSL).<sup>1</sup> The antenna structure is not registered as it is less than 200 feet and there are no airports within 8 kilometers. The site coordinates are: 21-58-41 N, 159-29-55 W (NAD-27).

Station K65BV is displaced as it operates on an out-of-core channel (65). Thus, it is proposing to relocate to an in-core channel and operate digitally.

Proposed Facilities

This application proposes digital operation on channel (32), at its current transmitter site. A Scala (SCA), model SL-8, directional antenna will be used. The proposed LD ERP is 0.6 kW and the antenna RCAMSL will be 859 meters.

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<sup>1</sup> See BDFCDTL-20060321AFA

Figure 1 is a map showing the licensed 74 dBu (analog) and proposed 51 dBu (digital) coverage contours. As can be seen on the map, there is common area where both contours overlap.

#### Allocation Considerations

A study has been conducted to assure that the proposal will not create prohibited interference with other licensed, authorized or pending analog or digital TV, LPTV/translator and Class A TV stations, after the transition to digital next month. Using the procedures outlined in the FCC's OET-69 Bulletin, a standard 1 kilometer cell size and 1 kilometer terrain distance increment, and 2000 U.S. Census, the proposal complies with the current FCC policy (i.e., less than 0.5% new interference caused to other pertinent assignments). Figure 2 is the output of the OET-69 interference study.

The applicant recognizes the proposal is secondary to other authorized full-service analog and DTV operations. The applicant understands that it must correct and/or eliminate prohibited interference that may result from its proposed operation.

#### Radiofrequency Electromagnetic Field Exposure

The proposed K65BV digital facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the antenna will be located 7 meters above ground level. The proposed maximum ERP is 0.6 kW. The applicant will make RFR measurements after installation to ensure that the proposal complies with the FCC's recommended limits.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by

spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the station is at reduced power or shut down.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.



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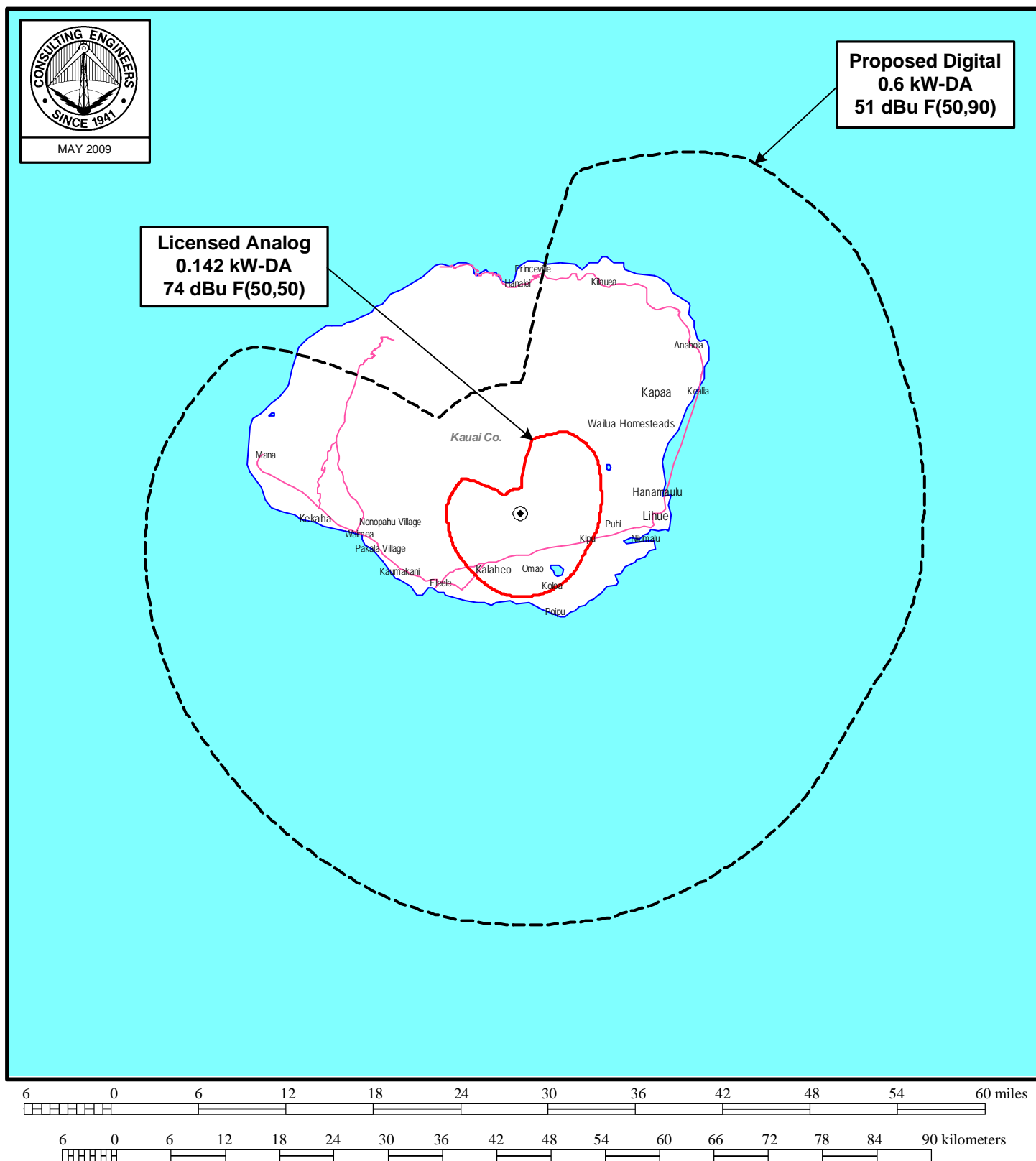
May 21, 2009

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K65BV RF Transmission System Specifications

Description	System
Transmitter Power Output: 0.05 kW (50 Watts)	-13.0 dBk
Transmission Line Loss (85% eff.) (1/2" foam) 40 feet:	0.7 dB
SCA SL-8 (14.1 Power Gain):	11.5 dB
Effective Radiated Power (0.6 kW):	-2.2 dBk

### Figure 1



## PREDICTED COVERAGE CONTOURS

STATION K65BV

LIHUE, HAWAII

CH 32 0.6 kW (MAX-DA)

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du Treil, Lundin & Rackley, Inc Sarasota, Florida

Census data selected: 2000  
Post DTV Transition Database Selected

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 05-21-2009 Time: 09:09:13  
Record Selected for Analysis

K65BV USERRECORD-01 LIHUE HI US  
Channel 32 ERP 0.6 kW HAAT 540. m RCAMSL 00861 m STRINGENT MASK  
Latitude 021-58-41 Longitude 0159-29-55  
Status APP Zone 2 Border  
Last update Cutoff date Docket

Cell Size for Service Analysis 1.0 km/side  
Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station  
Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	51.0 dBu F(50,90) (km)
0.0	0.600	33.0	15.2
45.0	0.600	680.7	48.3
90.0	0.600	754.2	49.5
135.0	0.600	743.2	49.3
180.0	0.600	776.0	49.9
225.0	0.600	721.2	49.0
270.0	0.600	548.3	46.1
315.0	0.600	64.5	21.7

Contour Overlap to Proposed Station  
Contour Overlap Evaluation to Proposed Station Complete

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 beyond the Mexican coordination distance  
Proposed station is OK toward AM broadcast stations

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Start of Interference Analysis

Channel	Call	City/State	ARN
32	K65BV	LIHUE HI	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
31	KWHE	HONOLULU HI	184.5	LIC	BLCDT	-20060628AAN
33	KBFD	HONOLULU HI	184.5	CP MOD	BMPCDT	-20070112AGB

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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application Ref. No.
31	KWHE	HONOLULU HI	BLCDT -20060628AAN

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
32	K65BV	LIHUE HI	184.5	APP	USERRECORD-01

Proposed station is beyond the site to  
nearest cell evaluation distance

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
33	KBFD	HONOLULU HI	BMPCDT -20070112AGB

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
32	K65BV	LIHUE HI	184.5	APP	USERRECORD-01

Proposed station is beyond the site to  
nearest cell evaluation distance

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
32	K65BV	LIHUE HI	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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Total scenarios = 1

Result key: 1

Scenario 1 Affected station 3 K65BV

Before Analysis

Results for: 32A HI LIHUE      USERRECORD01      APP  
HAAT 540.0 m, ATV ERP 0.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	55426	6203.2
not affected by terrain losses	52014	5681.2
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

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