prepared for

#### **Guenter Marksteiner**

WHDT-LP Miami-Fort Lauderdale, Florida Facility ID 9614 Ch. 44 15 kW

#### **Nature of Application**

Guenter Marksteiner ("Marksteiner") is the permittee of digital low power television station WHDT-LP Channel 44, Miami-Fort Lauderdale, Florida, Facility ID 9614 (file number BMPTTL-20011213ABI). This operating facility is authorized to use an effective radiated power ("ERP") of 1.56 kW with a Shively custom panel antenna (Model 2040-2/4 Special) at an elevation of 274.3 m AGL. Until recently, Marksteiner had held an authorization (under FCC File number BMPTTL-JG0601EX) to use a similar directional antenna pattern (Andrew ALP4M1-HSH-44) with an ERP of 15 kW at an antenna elevation of 314.9 m AGL. Marksteiner would have been prepared to commence operations at 15 kW, but for unanticipated difficulties in obtaining the filters necessary to ensure compliance with the Commission's DTV emissions mask. Marksteiner determined that the transmitter to be used complies with the Commission's DTV emissions mask when operated at a lesser power. Therefore, Marksteiner obtained authorization to operate WHDT-LP at a reduced ERP of 1.56 kW in order to proceed to operation so an Application for License could be filed prior to the expiration of the Construction Permit. With the instant application Marksteiner seeks to increase the ERP to the previously authorized 15 kW.

#### **Use of Existing Antenna System**

*Marksteiner* was originally authorized to use an Andrew medium power directional antenna with a peanut pattern (ALP4M1-HSH-44). Deliverability issues have caused *Marksteiner* to use a Shively panel array (2040-2/4 Special) which is now the authorized directional pattern (at 1.56 kW). However, there are directions where, with a maximum ERP of 15 kW, the Shively panel array will radiate more power than the formerly authorized 15 kW Andrew peanut pattern. The instant exhibit to the application to increase the ERP to 15 kW therefore revisits the allocations

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and interference considerations to demonstrate that any predicted interference does not exceed the Commission's limits.

### Interference Analysis, Alternative Application of OET-69, and Associated Requests for Waiver of §§74.705, 74.706 & 74.707

A detailed analysis of the potential for interference with an ERP of 15 kW (digital operation) with the existing Shively directional antenna array for WHDT-LP on Channel 44 has been performed. As discussed in detail below, the instantly proposed facility falls short of minimum distance separation requirements toward certain full service NTSC facilities and falls short of meeting contour overlap protection criteria toward certain full service NTSC, Class A, and LPTV facilities. However, application of OET-69's interference analysis methods show that any predicted interference is less than the FCC's 0.5% rounding tolerance.

#### NTSC Facility Overlap and Separation Requirements (§74.705)

There are several NTSC facilities which are so close as to require scrutiny, either because they may be closer than permitted by §74.705 of the FCC Rules or because they may be so close that there will be some overlap of pertinent protected and interfering contours. Further, while LPTV rules explicitly omit protection requirements for certain taboo relationships, FCC rules for digital Class A facilities do provide for certain protection requirements. For completeness, these taboo related stations are addressed as well in the absence of specific digital LPTV rules regarding full service NTSC stations:

Relationship	Call	Ch.	File No.	City, State
Co-Ch	WTOG(TV)(Lic)	44	BLCT-19990415KI	St. Petersburg, FL
N-1	WHFT-TV(Lic)	45	BLCT-19951208KF	Miami, FL
N+2	WXEL-TV(Lic)	42	BLET-19820625KF	West Palm Beach, FL
N-7	WSCV(TV)(Lic)	51	BLCT-19891130KJ	Fort Lauderdale, FL
N-7	WSCV(TV)(CP)	51	BPCT-19991102AAI	Fort Lauderdale, FL
N-7	WSCV(TV)(App)	51	BMPCT-20010301ABZ	Fort Lauderdale, FL
N+15	WFLX(TV)(Lic)	29	BLCT-19860514KH	Fort Lauderdale, FL
N+15	WFLX(TV)(App)	29	BPCT-19990910AAA	Fort Lauderdale, FL

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These NTSC stations were considered in OET-69 studies of the potential interference which might result from the instant application. As discussed in the following section regarding OET-69 analysis, no new interference is predicted to occur to any of these NTSC stations.

#### DTV Facility Overlap (§74.706)

There are two DTV facilities to consider. One, WTVK-DT(CP, Ch. 45, Naples, Florida) is so far removed that no overlap of pertinent contours occurs (182.2 km). The other is a nearby allotment of DTV Channel 44 to WPPB-DT, 4.2 km distant. WPPB-DT has been issued a construction permit for Channel 44 which would normally preclude the operation of WHDT-LP on Channel 44. A rulemaking is currently pending before the Commission (MM Docket 00-138, RM-9896) to move WPPB-DT to Channel 40.

#### Class A, Class A Eligible, and LPTV Facility Overlap (§§74.707 & 74.708)

There are several Class A and LPTV facilities which are so close as to require detailed analysis because they may be so close that there will be some overlap of pertinent protected and interfering contours. Further, while LPTV rules explicitly omit protection requirements for certain taboo relationships, the Commission's rules for digital Class A facilities do provide for certain protection requirements. For completeness, these taboo related stations are addressed as well in the absence of specific digital LPTV rules regarding protection of analog Class A and LPTV stations:

Relationship	Call	Ch.	File No.	City, State
Co-Ch	W44AY(Lic) (LP)	44	BLTT-19931220IK	Fort Pierce, FL
N+1	WINQ-LP(CP) (CA)	43	BPTTL-19990611JA	Palm Beach, FL
N+1	WINQ-LP(App) (CA)	43	BMPTTA-20011123AAA	Palm Beach, FL
N+1	W32AB(App) (LP)	43	BPTTL-20011029AAQ	Matecumbe, FL
N+3	WJAN-CA(Lic) (CA)	41	BLTTL-19971010JK	Miami, FL
N+3	WJAN-CA(App) (CA)	41	BPTTA-20010116AGG	Miami, FL
N-4	WFUN-LP(Lic) (CA)	48	BLTTA-20001208AEF	Miami, FL

These Class A and LPTV facilities were considered in OET-69 studies of the potential interference which might result from the instant application. As discussed in the following section

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regarding OET-69 analysis, no new interference is predicted to occur to any of these Class A, Class A eligible and LPTV stations.

#### **OET-69 Interference Analysis**

§§74.705 and 74.707 provide for the use of OET Bulletin No. 69 to request a waiver of the interference protection rules to demonstrate that the proposed facility would not be likely to cause interference. The OET-69 <sup>1</sup> studies performed for the proposed WHDT-LP examine the net change in interference as experienced by NTSC, DTV, and LPTV stations that would result from the proposal.

The facilities listed above are shown in **Table I** with summary information regarding the findings of the studies. Thre results show that there will be no increase in interference any to NTSC, DTV, Class A or LPTV facility. Further, certain taboo relationships, addressed by the Commission's rules for digital Class A facilities, but explicitly excluded by analog LPTV rules are also considered for completeness in the absence of specific digital LPTV rules regarding protection of NTSC, Class A, and LPTV stations. Thus, this proposal is believed to be in compliance with Commission policy regarding LPTV interference protection criteria toward NTSC facilities, DTV facilities, Class A stations, and LPTV facilities. Accordingly, based on the results of this study, it is believed that there will be no impact to NTSC, DTV, Class A, or LPTV facilities as a result of the instant proposal. Nonetheless, a waiver of the Commission's LPTV protection interference protection rules (§§74.705, 74.707, and 74.708) if required, is respectfully requested on behalf of *Guenter Marksteiner*.

<sup>&</sup>lt;sup>1</sup> The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A cell size of 2 km was used. The service area for each NTSC facility under study is that area predicted to receive signal levels of at least 64 dBμ using the Longley-Rice methodology, and within the NTSC F(50,50) 64 dBμ service contour distance as determined per §73.684. The service area for each Class A and LPTV facility under study is that area predicted to receive signal levels of at least 74 dBμ using the Longley-Rice methodology, and within the Class A or LPTV F(50,50) 74 dBμ service contour distance as determined per §74.707. For Class A and LPTV facility evaluation a cell size of 1 km was employed. Comparisons of various results of this computer program to the Commission's implementation of OET-69 show good correlation.

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#### **Other Allocations Considerations**

As discussed in detail the May, 1998 application to operate WHDT-LP on Channel 44 as a digital LPTV facility, Channel 44 can be operated as digital LPTV station but not as an NTSC station due to the difference in potential interference issues associated with Digital versus NTSC facilities.

# $\frac{\text{Table I}}{\text{OET-69 INTERFERENCE ANALYSIS RESULTS SUMMARY}}$

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WHDT-LP Miami-Fort Lauderdale, Florida Facility ID 9614 Ch. 44 15 kW

Stations Considered	City, State Channel	Distance (km)	Baseline <u>Population</u>	Service <u>Population</u>	Unique In from WHD <u>Population</u>	OT-LP(DT) Percentage
			(1)	(2)	(3)	(4)
NTSC Full Ser WTOG(TV) (Lic)	vice Stations St. Petersburg, FL 44	290.2	3,123,779	3,082,068	0	0
WHFT-TV (Lic)	Miami, FL 45	4.2	3,710,164	3,710,164	0	0
WXEL-TV (Lic)	West Palm Beach, 42	FL 67.2	2,451,799	2,451,799	0	0
WSCV(TV) (Lic)	Fort Lauderdale, F	L 0.5	3,626,790	3,618,268	0	0
WSCV(TV) (CP)	Fort Lauderdale, F	L 1.6	3,757,374	3,757,242	0	0
WSCV(TV) (App)	Fort Lauderdale, F	L 2.2	3,779,326	3,779,156	0	0
WFLX(TV) (Lic)	West Palm Beach, 29	FL 67.2	3,869,360	3,783,970	0	0
WFLX(TV) (CP)	West Palm Beach, 29	FL 67.2	3,847105	3,774,780	0	0
Class A and LI	PTV Stations					
W44AY (Lic) (TX)	Fort Pierce, FL 44	175.3	92,970	92,970	0	0
WINQ-LP (CP) (CA)	Palm Beach, FL 43	68.4	90,022	65	0	0
WINQ-LP (App) (CA)	Palm Beach, FL 43	116.9	237,573	11,780	0	0
W32AB (App) (TX)	Matecumbe, FL 43	54.4	1,074,418	1,060,784	0	0

### Table I OET-69 INTERFERENCE ANALYSIS RESULTS SUMMARY

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Stations	City, State	Distance	Baseline	Service	Unique In from WHL	
Considered	Channel	<u>(km)</u>	Population (1)	Population (2)	Population (3)	Percentage (4)
WJAN-CA (Lic) (CA)	Miami, FL 41	30.6	1,690,832	1,684,007	0	0
WJAN-CA (App) (CA)	Miami, FL 41	30.6	2,132,445	2,083,794	0	0
WFUN-LP (Lic) (CA)	Miami, FL 48	0.4	1,959,093	1,377,458	0	0

#### Notes:

- Greater of NTSC or DTV Service Population, from FCC Table for DTV facilities, 64 dBμ (Grade B) population for NTSC full service stations, 74 dBμ protected service contour population for Class A and LPTV facilities
   Interference-free service population per OET-69 before consideration of proposal
- (3) Net change in population receiving interference resulting from proposal
- Numbers in parentheses indicate a *decrease* in interference.
- (4) Proposal's impact in terms of percentage, equals (3)/(1) times 100 percent: not to exceed zero when rounded to the nearest whole percent

The determination of stations for consideration and the determination of baseline population and interference percentages were made as described in the Commission's August 10, 1998 Public Notice "Additional Application Processing Guidelines for Digital Television"