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Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service	)))))	FCC 96-207 MM Docket 87-268

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REPLY COMMENTS TO FIFTH FURTHER NOTICE OF RULEMAKING BY THE LOW POWER TELEVISION COALITION

The following is a reply comment to Fifth Further Notice of Proposed Rulemaking MM Docket 87-268 (FCC 96-207), paragraph 53 concerning LPTV issues and sections concerning which sections of the Rules should be changed. These comments primarily focus toward the impact of the 'FNPRM on LPTV stations. Low Power Coalition consists of licensees and operators Robert W. Fisher of Third Coast Broadcasting and Randolph M. Wagner of stations, WRAP LP in Boston, WARP-LP in Tampa, Florida, W32AS in Cleveland, Ohio, and W42BI in Atlanta, Georgia.

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I. The Commission Should Treat LPTV's Fairly in this Proceeding.

When LPTV was initially formed, it was clear in the record that LPTV stations were not required to be secondary to any services other than the pre-existing Land Mobile shared channels ("T- Band") or any existing or new NTSC channels (See Third Coast Broadcasting Comments to Fifth Further Notice of Rulemaking). In this proceeding, the LPTV stations have been proposed by the Commission to be secondary to the new DTV paired channels and additional channels have been proposed to be eliminated from the TV spectra and auctioned to landmobile or other users. Although the Commission has not yet published a table of allotments to permit LPTV stations to evaluate the impact, the impact of this proceeding on LPTV is likely to be widespread and devastating unless the Commission acts to minimize the economic effects of this digital transition.

The record of public service of LPTV stations is well established, as are diversity issues and minority ownership and management. LPTV owners have established their businesses based on the confidence of their FCC granted licenses, the rules

which have, up to now, controlled the parameters of their stations, and the confidence that they would be treated fairly and equitably under the rules and regulations of the FCC. Most of the LPTV stations are owned by small businesses, where the loss of a station in their business would be economically devastating.

The Commission should act to create regulations and policies which will minimize the economic impact on LPTV stations, as follows:

II. The "32 Km" Rule Waiver Basis should be Expanded.

The Commission currently accepts UHF LPTV waiver requests based on criteria of adding intermodulation products and showing that no interference will be caused to affected full power stations, based on the charts and tables of A Study of the Characteristics of Typical Television Receivers Relative to the UHF Taboos (Willmar K. Roberts, FCC 1974). In this study, it is presumed that at the base of the interfering full power station, the signal strength is nearly infinite. In determining the theoretical interference products at this location the "infinite" power of the full power station "overpowers the equation" and requires the signal strength of the LPTV station to be extremely low. However, if the signal level were predicted at this point from a full power station which was fully spaced from the base of the above mentioned tower, the signal strength would be quite strong (102 dBu from a 5 Mw station at 2000 feet HAAT). We propose that the Commission change the waiver policy to accept a showing that the LPTV complies with the criteria of the Roberts study or the signal levels which would occur from a fully spaced full power station. This proposal requests that the

showing could indicate that the LPTV station complies with the Roberts study in some areas and complies with the signal levels of the fully spaced TV station in other areas, and in all locations, complies with one standard or the other.

With this change, no signal levels would be created beyond that which is permitted by fully spaced TV stations and LPTV stations would have an additional tool to use in ameliorating displacement impact. This is important because for every 32 Km rule requirement an additional 8 channels are blocked from use, and in many cases this is unnecessary or could be designed around.

III. The Commission should Establish Rules to Maximize LPTV Spectral Efficiency.

The primary impact of DTV on LPTVs in this proceeding will be co-channel and adjacent channel displacement. One of the factors which would limit the availability of channels and the amount of coverage which could be provided by a displaced station is the continued use of low stability or non-offset frequency oscillators. The use of low stability oscillators unnecessarily "blocks out" huge geographic areas from use by LPTV stations. The Commission should eliminate the use of low stability oscillators for any new grants, modifications, or new license applications. Further, in the event that an LPTV station is displaced or proposed to be displaced, and that displaced station can make a showing that it would be able to find a channel or improve its coverage by requiring another LPTV or full power station to change its offset, then the other station should be required to change offset. With most offset oscillators, the change from one offset to another is a matter of changing a manually operated digital switch and can be done at minimal cost. Currently, most stations operate with high stability

oscillators, but in the event a station is required to replace its oscillator it could be done at a minimal cost of approximately $800.00. This could help to reduce the impact to LPTVs by providing additional channel availability and spectral efficiency in the transition.

Due to the characteristics and power levels of LPTV transmitters, very sophisticated adjacent channel filters can be constructed which can permit adjacent LPTV channels to operate without interference to each other, providing they are co-located and have matched antenna patterns, or antenna patterns which maintain a close ratio between the antennas. In the event that two or more LPTV stations can negotiate an agreement to co-locate and operate with matched patterns or with patterns mutually acceptable to all parties and show that no interference will occur to other parties, the Commission should permit this operation. This will also make available more channels for displaced stations.

IV. The Commission should Permit Co-Location of DTV Stations in Tower Farms.

In this proceeding, in order to maximize spectral efficiency, the Commission should encourage co-location of full power DTV stations on adjacent channels in centralized "tower farms". In most urbanized areas there exist primary and secondary antenna locations. The primary antenna locations typically provide the best coverage to the market, and the secondary locations are located at some spacing from the primary site, based on restrictions imposed on the specific NTSC channel at the secondary site. For example, a channel may have a requirement to be spaced 32 Km away from another station which is located at the primary

appears that during the DTV transition years, LPTV could use the upcoming off-the-shelf technology to provide a service which would be compatible with MDS/MMDS/ITFS set-top convertor technology. As the implementation cost of the Grand Alliance technology becomes reasonable for an LPTV station, the station could switch to the full GA DTV standard. In the event that it can be shown that a specific digital modulation scheme does not cause interference on NTSC taboo channels, the LPTV digital channels should should not be unnecessarily restricted from "taboo" combinations (ie -14,-15, +7, etc.).

VI. The Commission should Make Engineering Tables and Digital Data Available to the LPTV Industry.

At this point it is impossible to determine the potential impact of the proposed DTV service on the LPTV industry, not only due to the fact that the proposed Table of Allotment has not been published, but also due to the lack of any formal definition of coverage prediction methods. Although the ACATS has indicated what the interference ratios will be with the DTV signal, no methodology has been confirmed for the prediction of coverage. Although some presumptions can be made with time variability vs. distance to generate F:50/90 and F:50/97 (if used) charts, these presumptions may not exactly match the data that the Commission is using.

We request that the Commission make available a chart similar to those in 47 C.F.R. § 73.699 and corresponding digital tables which can be used by the LPTV industry to determine interference impacts and alternatives. Because these are not presently available and the proposed Table of Allotments has not been

"tower farm". This spacing requirement would apply only to the specific NTSC channel at that location and would have no bearing on any paired DTV channel.

Although it is proposed that DTV channels could operate without interference on channels adjacent to NTSC or DTV channels, if a DTV channel is proposed to be spaced some distance away from the primary concentration of stations, that would block the use of the upper and lower adjacent channels for DTV, full power TV and LPTV. If full power "taboo spaced" and "adjacent channel spaced" TV stations are permitted to move their paired DTV stations to the tower farms, it is likely that additional channels will be freed, and in many cases coverage for these stations will be improved on the DTV station.

V. The Commission should Permit Immediate use of Digital Modulation on LPTV.

In agreement with the comments of Microsoft Corporation (See Comments of Microsoft Corporation to Fifth Further NPRM) concerning unhindered marketplace development of digital technology and the Comments of Byron W. St. Clair (to the Fifth Further NPRM) concerning digital modulation, we propose that LPTV stations be permitted to immediately begin broadcasting digital signals. The Commission should permit this operation with any digital standard with the only restriction being a showing that the proposed digital signal does not create more interference than the previous NTSC modulation. Although we recognize the need for a nationwide standard for all full power DTV stations, the use of a non-standard modulation scheme has been used for many years in subscription television and this proposal requests the use of digital modulation schemes to be accepted as STV. In light of the Declaratory Ruling and Order in DA 95-1854, it

published, it is not possible to fully comment on what sections of the rules should be modified. We further ask that comment on rule changes be opened once again after the Table of Allotments is published and after the necessary engineering tables and graphs are available. This request is to open both sections 73 and 74 to comment. The LPTV industry is concerned with section 73, as well as section 74, due to the selective inclusion of section 73 in LPTV rules and that changes in section 73 will economically impact LPTV stations.

VII. The Commission should Establish Policies to Respect the Investment of LPTV Stations.

During the transition period, as LPTV stations are displaced, the Commission should establish rules which create a series of remedies to the LPTV stations.

The TV station which receives the DTV channel allotment that displaces the LPTV should be required to negotiate with the LPTV station, as follows:

In the event that an alternative channel can be found by either party which would provide comparable coverage for the DTV station and would not displace the LPTV, the DTV station would apply to the Commission to change the Table of Allotments accordingly.

In the event that no alternative channel is possible for the DTV station, the owner of the paired NTSC station will negotiate with the LPTV station to change

the LPTV to an alternate channel at no cost to the LPTV station.

In the event that no alternative LPTV displacement channel can be found which would provide comparable coverage, and the LPTV would be required to go off the air when the DTV station signs on the air, the owner of the paired NTSC channel should be required to purchase the LPTV station at fair market value.

With the estimation that a DTV station would cost tens of millions of dollars to construct, that the requirement of shutting an LPTV station off the air would be devastating to a small business, that the LPTV service was not initially established to be secondary to a new service of digital TV, and that most full power TV stations regard LPTV stations as weaker competitors, we feel that these remedies are the only solution to ensure negotiations in good faith and protect the viability of LPTV during the transition to DTV.

In the event that the displacement is caused by spectrum auction, the same remedies as above should apply from the winning bidders, rather than the NTSC stations.

VIII. Through Rule Changes and Displacement Policies the Commission can Ensure the Viability of LPTV.

With the proposed impact minimization, the proposed utilization of open market technology and the remedies for LPTV displacement, the Commission can not only prevent an industry-wide disaster, but can help facilitate the transition of LPTV

into continuing service that continues to serve the public, even during the transition period, with leading edge technology, in ways unheard of a decade ago.

Respectfully Submitted,

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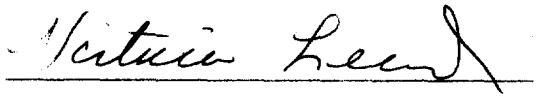
Dated August 12, 1996



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