Before the
Federal Communications Commission
Washington, DC 20554

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

COMMENTS

The firm of du Treil, Lundin & Rackley, Inc. (dLR) respectfully submits these Comments in the above captioned proceeding relating to the conversion of analog TV Translators, Low Powered Television Stations (LPTV) and Class A stations (herein "LPTV Stations") to their final digital operation. dLR has provided consulting engineering services to the broadcasting industry for over 60 years including assisting broadcasters in preparing thousands of applications for television and digital television operation.

The comments submitted herein specifically address the proposed technical Rules related to the service. dLR defers to other comments regarding the non-technical issues

In summary, dLR proposes the following:

- Increased maximum LPTV effective radiated powers
  - 30 kW – UHF
  - 1.5 kW – High-VHF
  - 1.35 kW – Low-VHF
- Use of full-service emission mask and interference ratios
- Concurrent mandatory LPTV digital conversion deadline and any DTV re-pack implementation

Section H – Transmission Power Levels

dLR believes that the maximum effective radiated powers (ERP) permitted for digital LPTV, TV Translators and Class A stations are too low to provide sufficient service, in all frequency bands. The recommended maximum effective radiated power levels are tabulated below:

Frequency Band	Present Maximum Analog ERP	Present Maximum Digital ERP
UHF Channels 14 to 51	150 kW	15 kW
High-VHF Channels 7 to 13	3.0 kW	0.3 kW
Low-VHF Channels 2 to 6	3.0 kW	0.3 kW

Table 1. Present LPTV Maximum Permitted Effective Radiated Powers.

It is proposed to increase the maximum effective radiated power for these types of stations to the same ratio that is permitted for its full-service television stations (analog to digital comparison) and referenced to the analog LPTV station maximum effective radiated powers.

The suggested values are calculated from the following formula:

LP-DTV-ERP = LP-NTSC-ERP x (FS-DTV-ERP/FS-NTSC-ERP)
Low-VHF LP-DTV-ERP = 3 x (45/100) = 1.35 kW
High-VHF LP-DTV-ERP = 3 x (160/316) = 1.50 kW
UHF LP-DTV-ERP = 150 x (1000/5000) = 30 kW

Frequency Band of Operation	Maximum Permitted Effective Radiated Powers for Full-Service Stations	Maximum Permitted Effective Radiated Powers for **Analog** LPTV Stations	Proposed Maximum Permitted Effective Radiated Powers for **Digital** LPTV Stations
Low-VHF	100 kW - Analog 45 kW – Digital	3 kW	1.35 kW
High-VHF	316 kW - Analog 160 kW – Digital	3 kW	1.50 kW
UHF	5000 kW - Analog 1000 kW – Digital	150 kW	30.0 kW

Table 2. LPTV Station Power Comparison and Proposed ERP's.

Section I – Full-Service DTV Emission Mask

It is proposed that LPTV stations should have the option to employ the same emissions mask as that permitted by full-powered stations and be afforded the associated permitted adjacent-channel interference ratios. This use of the full-service mask is necessary for spectrum efficiency to accommodate low-powered television stations that may become displaced due to spectrum re-packing.

It is also our understanding from the manufacturers of such LPTV emission mask filters that such devices are readily available and cost approximately the same of that of the current stringent LPTV emission mask filter. We believe it should be the decision of the LPTV applicant as to what emission mask it wishes to employ (simple, stringent or full-service).

Section G – Minor Change Definition

The Commission proposes to limit minor-modifications to existing LPTV stations to no more than 30 miles between proposed transmitter sites. dLR is asking for clarification, if in addition to the proposed 30 mile limit, would the protected contours of the existing and proposed facilities also have overlap?

Section H – Transmitting Antenna Vertical Radiation Patterns

dLR supports the Commissions proposed default antenna vertical radiation pattern. The Commission is asked to clarify the values used at angles greater than 10 degrees below the horizontal plane.

dLR supports providing an option to the applicant to submit a vertical antenna pattern. However, it is recommended that the Commission impose a limit on the angle resolution of the pattern definitions. The proposed maximum number of vertical pattern fields permitted to be defined by the applicant is:

- 0.1° resolution from 0° to 5° below the horizontal plane
- 1.0° resolution from 5° to 90° below the horizontal plane

As these are generally the resolutions that the transmitting antenna manufacturer provides within their specifications, dLR believes that additional angle resolution is unnecessary and would become burdensome to the Commission.

Section A – Analog Shutoff Date

While the Commission is contemplating a date certain for LPTV mandatory conversion to digital operation (Analog Shutoff Date), it should be noted that the majority of such stations [73 percent] have yet to commence digital operation. Of the approximately 7000 licensed LPTV/TV Translator stations (not including Class A stations), 5140 are licensed analog stations and only 1860 are licensed digital stations. From our past experience in assisting LPTV licensees on these matters, it would take more then two years from the present for most of the remaining three-quarters of the stations to: (1) obtain FCC authority to convert these to digital operation (if not already done)[1], (2) obtain any necessary funding, and (3) purchase and install the likely needed new transmission equipment (such as transmitters and antennas).

The Commission should consider a mandatory LPTV conversion deadline concurrent with any DTV re-pack implementation. With any DTV channel spectrum re-pack, many of these LPTV stations will be displaced, thus requiring a second facility modification (involving at least the filing of an FCC application for construction permit and possibly new transmission equipment).

[1] As noted within the Commission's NPRM in this proceeding, 44% of the licensed analog stations have not even yet filed an application for construction permit for digital operation. See paragraph 5 in MB Docket No. 03-185, Further Notice of Proposed Rulemaking and Memorandum Opinion and Order.

A simultaneous LPTV digital conversion and any spectrum re-pack will reduce the burden to the:

(1) Public by having only to perform one “final” re-scan on their DTV receiver(s)
(2) Commission by reducing the number of applications for construction permit submitted by displaced LPTV licensees caused by any spectrum repacking
(3) LPTV licensees by having to modify its transmission facility only one time.

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