

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the matter of:

Amendment of Parts 73 and 74 of the)	MB Docket No. 03-185
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)	

**REPLY COMMENTS OF R. KENT PARSONS
STATE OF UTAH TELEVISION TRANSLATOR COORDINATOR**

Page 30 par. 71 &
Page 32 par. 79 of the NPRM

In my personal comments of Nov. 24, 2003, I stated: " I do not believe there is a need for certification of a TV translator". I am now convinced the exciter front-end portion of a translator should be type certified to alleviate concerns of interference, station identification and quality of reception to the rural populace. It is very important that rural digital television viewers will have equity with urban digital television reception. The full 19.34 meg-bit signal should be available and not just a selected SD program.

Very recent field tests have disclosed the importance of maintaining a good signal-to-noise ratio (S/N), when receiving and transmitting 8VSB signals at translator sites. While it is important to provide the best possible 8VSB signals to the home viewers, it is also extremely important to provide these improved input signals to additional translators in a system. This becomes more critical when "Daisy Chain" translators are involved. We have also demonstrated that it becomes even more important when the translators are located at congested telecommunications sites where many other services are also co-located.

**TRANSCODER/REGENERATORS
FOR TV TRANSLATORS**

The reduction of S/N can be attributed to one or more of the following: multi-path of the received signal, inter-modulation of other existing services, the transmission of adjacent analog or digital channels; and excessive input signal levels to off-air antenna pre-amplifiers. Linear distortion can also be a contributor and needs to be considered. Levels set too high or too low, for either wanted or un-wanted digital or analog signals, can also reduce the S/N.

A method of determining the translator output S/N is a necessity, if optimum service to the viewing audience is fully successful. This is greatly enhanced by using a

regenerator/transcoder/up-converter as an exciter for a translator. The addition and proper alignment of either bi-polar or Moss-Fet power amplifiers, along with a selected output mask filter, completes the needed reliable digital reception for rural viewing.

The following type certification specifications are needed to insure that the full high quality 8VSB signals will be delivered to rural communities and also to provide input signals for additional translator stations operating alone or in a "Daisy Chain". Rural equity can be achieved and become comparable to urban 8VSB television, if the new regenerator/transcoders are used as exciters for translators. They can provide the following signal corrections and also provide a window read out for the field technician to analyze signal performance to the power amplifiers.

- 1...Displays S/N of regenerator/transcoder output
- 2...Corrects regenerator/transcoder output to better than 30 dB S/N
- 3...The regenerator/ transcoder is capable of maintaining a minimum out-of-band splatter of 40 dB, from edges of the allowable 6 MHz.
- 4...Maintains and holds constant output power levels from + 45 dBmV to + 60 dBmV and is accurately controlled from the digital information on front panel.
- 5...Can operate on adjacent receive or transmit channels
- 6...Has the ability to modify and then display the new translator station call letters in the bit stream, if the primary station does not identify the translator.
- 7...Has the ability to pre-correct for linear distortion
- 8...Produces base-band SD video and audio for modulating an existing NTSC analog translator
- 9...Displays the receive input signal level in the digital window
- 10..Produces an audible "beep" for any system errors
- 11..Has external 44 MHz 75 Ohm loop on back of chassis

In the case of economic hardship, an application requesting the use of a heterodyne processor, to be used for the exciter instead of a regenerator/transcoder for the translator, should be considered on a waiver basis and only to a remote rural area. The applicant should also acknowledge there would be some degradation of the S/N to the viewers from this translator.

On page 3 of the Community Broadcasters Association (CBA) comments, it is

stated: “Flash-cut from analog to digital operation on a single channel may well be suicidal to a station, because it will instantly cut off a substantial portion of the station’s potential audience”. **I fully agree with this statement.**

While a **flash-cut** may be possible for a single station to accomplish, it is unreal and nearly impossible for **large translator systems** to even attempt, as hundreds of translators are simultaneously involved. Also the limited numbers of field technicians and the lack of appropriate test equipment, compound this issue causing possible termination of several hundred-television translator stations across the country.

Motorola has commented, “that the Commission cease authorizing new digital and analog LPTV, TV translator, TV booster operations in the upper 700 MHz band”. This is an opinion of a manufacture and does not address the local television needs of the rural translator communities of this nation. Rural viewers should have, at least, the opportunity to participate in the transition to digital television along with our urban friends; it is unlikely these channels will be needed in these sparsely populated communities for other services in the near future. These channels are crucial for the survival of translators and can be the needed “relief valve” until additional spectrum becomes available. At that time our agile translators will have other channel options for relocation and will be able to continue to participate in the digital transition.

In my initial comments (exhibits 1 & 2), the Governor of the State of Utah has addressed this very issue. Not only has he considered the urban needs of this state, but also the needed services of our rural communities. Translator reception to rural areas is not just a secondary service, but becomes primary when there are no other means of providing local television reception. Local emergency information, weather warnings, Amber alert, local politics and reception of the major net works are needed. A state owned educational translator system, serving over 95% of Utah, needs to progress into the digital world. All of this programming including Public Broadcasting (PBS) is critical to these viewers and needs to continually advance.

Also some comments have been made in reference to television translators, “as a secondary service.” The FCC initially coined this term in the mid 1950’s to protect primary television stations from possible interference the new translators might create to the primary station’s protected service contours. It appears this definition has slowly changed to mean interference to almost any broadcast service without regard of the original intent. It is demeaning to the truly rural populace of this country to be **unintentionally branded** “as second class citizens.” The definition of secondary service should be clearly defined to reflect the true service for the underserved television viewers of this nation.

Final comments:

In behalf of our existing analog television translator applicants, I thank the FCC for their cooperation and authorization to conduct experimental tests to retransmit the 8VSB signals using digital translators.

The VSB theory had been developed, the ATSC had conducted laboratory tests and the FCC had adopted 8VSB as our new digital television standard. However, many questions still remained concerning digital television translator repeaters. Field tests, using digital translators, were critical if rural America was to continue to receive local subscription-free-television. As a result of the past three years of this testing and experimental work with DTV signals, **I find there is a considerable difference in handling the new digital transmission in comparison to our antiquated analog operations; analog translator systems need time to make the transition to digital transmission.**

I believe there is a great need for every translator technician to begin to familiarize themselves with digital operation of translator stations, as this is the greatest advancement of television since black and white to color. Finally, rural viewers will have the opportunity to view High-Definition-Non-Subscription Television in their homes from their local broadcast stations.

It is now our choice!

Higher power decreases usable spectrum **during the transition** to digital television.
Lower power increases usable spectrum **during the transition** to digital television.

Respectfully,

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