

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

In the Matter of)	
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)	
Amendment of Parts 73 and 74 of the)	
Commission's Rules to Establish Rules for)	
Digital Low Power Television, Television)	MB Docket No. 03-185
Translator, and Television Booster Stations)	
and to Amend Rules for Digital Class A)	
Television Stations)	
)	
To: The Commission)	
)	

COMMENTS OF KAET(TV)

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SUMMARY

The digital environment provides opportunities for low power service providers to be more attuned and cater to uniquely local interests in a manner they have not been able to in the analog world. Digital technology is capable of permitting translators to air limited local, community oriented programming in addition to serving their traditional role of distributing the programming of a full power station to rural areas of the country where the full power station's signal cannot reach. In areas served by translators, the public is frequently underserved by full power stations. The Commission should take this opportunity to afford translator operators the regulatory flexibility in use of their translators that will permit them to better serve local interests—whether by providing emergency information or uniquely local programming to their communities—while still passing through the primary signal of a full power station.

At the same time, and as the Commission has noted, the limited spectrum availability will make it more difficult for analog translator incumbents to secure additional channels for the digital conversion. To effectuate the Commission's objective of minimizing "disruption of existing service to the consumers served by analog LPTV and translator stations," operators of analog translators need to have access to a second channel for the conversion when there is available spectrum. Without a second channel, translators will wait to do an on-channel conversion to digital until the very end of the transition because the translators will otherwise lose a large portion of their audiences that do not yet have digital tuners. The Commission's proposal in this proceeding for authorizing second channels would both hasten the conversion and minimize disruption.

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Background

The Notice of Proposed Rulemaking in the above captioned matter¹ raises a number of important issues that will shape the future of low power service, including the continuity and availability of digital service to the public in rural areas, and the ability of low power service operators to provide digital service that contributes to localism in areas underserved by full power stations. KAET(TV)² is a noncommercial educational station licensed in Phoenix, Arizona, to the Arizona State University Board of Regents for Arizona State University, which is also the licensee of six analog translators³ that are used to reach

¹ *In re Amendment of Parts 73 and 74 of the Commission's Rules to Establish Rules for Digital Low Power Television, Television, Television Translator, and Television Booster Stations and to Amend Rules for Digital Class A Television Stations*, Notice of Proposed Rulemaking, MB Docket No. 03-185, FCC 03-198 (rel. Aug. 29, 2003) ("Notice").

² KAET(TV) (Ch. 8, Phoenix)/KAET(DT) (Ch. 29).

³ The translators licensed to Arizona State University are K03FB (Ch. 3, Snowflake), K14KK (Ch. 14, Flagstaff), K42AC (Ch. 42, Cottonwood), K47GQ (Ch. 47, Parks), K55DB (Ch. 55, Prescott & Chino Valley), and K67AB (Ch. 67, Globe & Miami).

approximately 750,000 households in Arizona. KAET programming is carried to additional households through the use of roughly fifteen community owned translators. KAET's programming, through its primary full power station and translators, reaches approximately 80 percent of the residents of Arizona.

KAET files these comments to encourage the Commission to provide translators with the maximum flexibility to enable translators to best serve rural communities that are either outside a full service station's community of license or otherwise unable to receive its signal. The Commission should also give incumbent providers of analog low power services the opportunity to obtain a second channel, where spectrum is available, to facilitate the transition to digital.

I. DIGITAL TRANSLATORS SHOULD BE PERMITTED INCREASED FLEXIBILITY IN THEIR PROGRAMMING.

The Commission asks a number of questions in the Notice that will affect the amount of flexibility low power service operators will have in the digital world to operate their facilities and contribute to localism. Because KAET's programming is transmitted on six translators, it is most interested in the flexibility the Commission's rules will provide digital translator operators.

Digital broadcasting gives low power service providers the technical capability to do things they could not do broadcasting in analog because of the "payload" capacity of digital channels. This capacity permits full power stations to transmit one or more programs simultaneously. A translator has the same technical ability, and should have this same flexibility under the Commission's rules. Given the proper authority from the Commission, a translator could both serve its traditional role of providing the primary signal of a full power station to areas the full power station does not reach and provide dedicated local programming and

emergency information through the remainder of its digital capacity. Several of the issues raised in the Notice affect the ability of the public, in the areas of the country underserved by full power stations, to receive additional local content through translators.

A. Translator Operators Should Be Permitted to Use Their Judgment as to The Most Effective Use of The Additional Digital Streams Available to Them to Best Serve Their Communities.

In the Notice, the Commission asks “whether a digital translator operator should be permitted some flexibility to alter the content or video format of a DTV broadcast signal prior to retransmission, provided it has been given the consent of its primary DTV station.”⁴ KAET submits that affording this flexibility to translators will best serve the public interest and meet the needs of the local communities served by translators. As discussed below, translators may use this flexibility in a variety of ways, including message insertion into the primary DTV broadcast signal, converting High Definition programming to Standard Definition, substituting multi-cast programming, providing Ancillary & Supplemental (“A&S”) services, and/or not passing through all A&S services from the primary DTV station. In considering the importance of this flexibility to translator operators, the Commission should be aware of how such flexibility may be used.

Educational Programming: KAET currently broadcasts educational material to 300 school districts throughout the state of Arizona. Many of the school children who use KAET’s broadcasts as part of their curricula in grades K through 12 receive KAET’s programming through translators. School districts in different parts of the state have made specific requests for certain educational programming. KAET would like the regulatory

⁴ Notice, ¶ 16.

flexibility to offer the educational programming requested through use of its digital capacity not being used to retransmit the primary KAET signal.

Adult Education: KAET would also like to provide tailored educational programming and other materials for adult learning to specific locations through its translators. KAET has put together a group to conduct outreach and find out from the various local communities served by KAET(TV) and its translators what adult learning programs would best serve them. While the outreach is ongoing, the types of programs under consideration include literacy and bilingual education. KAET expects that the demand for the specific form of educational programming and material may not be uniform in all parts of the state.

Homeland Security Training: KAET is working with Arizona's Office of Homeland Security to set up training programs. The programs are still in development, but it is expected that different, targeted training programs may be useful in different parts of the state.

Promote Special Events: KAET would like to help promote local community events throughout the state. KAET is constantly considering how it can better serve its communities, and targeted coverage of local special events is one such way.

For KAET, and other similarly situated stations, to provide these types of local services designed to meet community educational needs and demands, translator operators need to have much of the flexibility the Commission is considering in this proceeding.

1. *Translator programming and Ancillary & Supplemental services.* To perform the local, community oriented and educational services described above, translators need regulatory relief. Currently, a translator can only originate 30 seconds-per-hour of emergency information. A translator should be permitted to originate programming and A&S services on its excess digital capacity. Even with this flexibility to program, translators will still fill their

traditional role of retransmitting the primary broadcast signal of a full power station. The regulatory relief, however, will permit translators to contribute local programming to underserved local communities.⁵

2. *Translators should be permitted to multi-cast.* In the Notice, the Commission asked whether translators should be permitted to multi-cast programming in addition to the primary signal of a full power station.⁶ When the full power station is broadcasting its digital signal in Standard Definition, translators will have excess capacity to multi-cast. Translators should have the freedom to use this excess capacity either to multi-cast the programming of another full power station, as suggested in the Notice, or to air original, local programming as described above.

3. *Translators should have the flexibility to alter the primary DTV broadcast signal when necessary to enable the translator to serve local interests.* In the Notice, the Commission asks to what extent translators should be granted the flexibility to alter the full power station's signal.⁷ As described above, a translator can play an important role in serving a local community's needs through the excess capacity of its digital stations. When the full power station is broadcasting in High Definition, however, translators may not have adequate additional capacity. Translators should therefore be permitted, with the full power station's consent, to down convert the High Definition signal into a Standard Definition digital signal if the local programming or other local services provided would better serve the community.

⁵ This flexibility should include authority for public television stations to provide time to underwriters on alternate streams. Public television stations are suffering financially, and the ability to offer targeted underwriting spots will help support the translators that provide public television programming to underserved areas.

⁶ Notice, ¶ 16.

⁷ *Id.*

4. *Translator A&S services.* Similarly, when the full power station is broadcasting in Standard Definition but also sending A&S services in its excess capacity, translators should be permitted to determine, in conjunction with the full power station, whether to carry those services. A translator's decision not to pass through the A&S services of the full power station may be made either because those services are deemed not appropriate for the local community, or for the purpose of freeing up capacity for the translator to offer services more attuned to its community.

B. Local Message Insertion.

In addition to the ability to use digital capacity to multi-cast either a second full power station's programming, original local programming, or A&S services, translators need to have, at minimum, the same authority to insert emergency messages into the primary broadcast stream of the full power DTV station as they have in analog. It is critically important for local communities to be made aware of local weather and other emergencies as well as school closings and other local bulletins. With the proper regulatory flexibility, KAET could allow local governments situated in areas served by translators to disseminate to the public emergency action information directly through the translator. The local government would be capable of inserting an emergency message that would be broadcast on the translator over the primary broadcast stream. Translators that have the capability to perform this service in digital should have the regulatory flexibility to keep their communities informed.

C. Distinction Between Translators and Low Power Television Stations.

The Notice asks how the Rules should distinguish, definitionally, between translators and low power television stations ("LPTVs"). As outlined above, KAET proposes that the Commission provide increased flexibility to translators in recognition of the additional capabilities and potential contribution to localism of translators in the digital world. The

Commission should permit a translator to insert local messages into a full power station's primary broadcast stream and provide local programming and A&S services on the translator's separate streams. While this increased flexibility may make translators look more like LPTVs, translators will still primarily serve as the most efficient means of transmitting the primary broadcast programming of full power stations to communities the full power stations' signals cannot reach.

If translators are indeed granted the increased flexibility proposed, and if LPTVs continue to be regulated as they are now, there is arguably no need to have a definitional distinction between the two types of service. In the Notice, however, the Commission proposes additional programming and operational requirements for LPTVs. While KAET takes no position on these proposals, if the Commission implements them it should maintain a definitional distinction between LPTVs and translators that recognizes a translator's primary role of rebroadcasting a full power station's broadcast signal. Translators should have more programming flexibility with respect to their additional digital capacity than they have now, but they should not be straddled with the same programming requirements the Commission proposes for LPTVs, which would be inconsistent with translators' primary purpose.

II. NEW DIGITAL LPTVs AND TRANSLATOR STATIONS SHOULD BE AUTHORIZED USING THE SAME PROCESS WITH PRIORITY GIVEN TO INCUMBENT PROVIDERS.

While the conversion to digital offers tremendous opportunities for full service and low power service providers to better meet the needs and demands of the viewers in their service areas, the limited spectrum availability will make it more challenging for low power service providers to secure additional channels. The Commission appropriately proposed in its Notice a system for authorizing second channels to incumbent low power service providers that will make the transition to digital most efficient.

The Commission proposes authorizing new low power service stations in a manner similar to its full power DTV maximization applications.⁸ Public notice of a digital-only filing window would first be given for incumbents of translator, LPTVs, and Class A stations to file applications that may be mutually exclusive.⁹ After processing these applications, the Commission would commence a separate rolling, unrestricted one-day filing window that would be on a first-come-first-served basis.¹⁰

The Commission's proposed authorization system best serves its objective of speeding the transition to digital while minimizing disruption in service to the viewing public by giving incumbent analog providers the first opportunity to secure a digital channel. Incumbent providers need a second channel authorization, where spectrum space is available, to transition effectively and timely to digital. And given the limited spectrum availability, an authorization system that favors incumbents is sound policy.

If incumbent low power service providers were forced to make on-channel, hard conversions, they would wait until the end of the transition to make the conversion, delaying the dissemination of digital television in many areas of the country. Incumbents would delay the switch because many viewers only have analog tuners and would not be able to receive a low power provider's digital signal. If the providers were to transition early, it would lead to a disruption in service to many viewers, which is also contrary to the Commission's digital transition goals. The only way for low power service providers to transition effectively is

⁸ Notice, ¶ 95; *see also Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, Report and Order and Notice of Proposed Rulemaking, MM 00-39 (2001), ¶¶ 43-49.

⁹ Notice, ¶ 98.

¹⁰ *Id.*

through the use of a second channel on which to broadcast a digital signal during the transition. The Commission's proposal would make this possible.

The need for access to a second channel is even greater for low power service providers operating on channels 52 and higher, which may not be able to convert on-channel. Providers operating on channels 60-69 will be forced off at the end of the transition¹¹ and, depending on the outcome of this proceeding, providers operating on channels 52-59 may be forced off as well.¹² Even if the Commission were to permit channels 52-59 to remain available for low power digital service, providers may be displaced by public safety and other new wireless services. These low power providers, in particular, need the opportunity to obtain a second channel for their digital conversion.¹³

III. COMMENTS ON VARIOUS TECHNICAL ASPECTS OF DIGITAL LOW POWER BROADCASTING.

KAET here comments on several technical issues related to the transition on which the Commission sought comments:

1. The Notice discusses heterodyne frequency conversion and a regenerative mode for translators to use.¹⁴ The best and most cost effective system for translators to use depends on the terrain over which the translator is operating. The regenerative mode is best to keep the signal clear when there are multiple hops, but is also more expensive to purchase and

¹¹ See *In re Reallocation of Television Channels 60-69, The 746-806 MHz Band*, Report and Order, ET 97-157 (1997), ¶ 13.

¹² Notice, ¶29.

¹³ The Commission's proposed system for authorizing new low power digital channels is also sound policy because incumbents have already demonstrated a commitment to serving the public, an ability to operate low power service stations, and have made significant financial investment.

¹⁴ Notice, ¶ 14.

operate. Flexibility is key here. Translator operators should have the flexibility to determine which system is best for them. The Commission should authorize the use of either method.

2. The Commission should permit translators to be capable of receiving both digital and analog signals. If the full power station's digital signal is not operational, the translator would then still be capable of receiving the station's analog signal, converting it to digital, and transmitting it to digital tuners. This will help foster continuity of service.

3. In the Notice, the Commission seeks comment on a number of interference protection and channel adjacency issues.¹⁵ Many of these issues cannot be resolved without a more complete understanding of how emerging technologies will shape digital transmissions. For instance, devices can be installed on cellular transmitters that filter the signal to keep the signal within its allotted channel. The Commission should explore the extent to which such technologies applied to digital television broadcasts will permit closer channel adjacencies, minimize interference, and improve the interference mask performance through advanced electronic technologies and software.

¹⁵ *Id.*, ¶¶ 31-81.

