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THOMAS J. HUTTON
202-828-1892

December 17, 1997

VIA HAND DELIVERY

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Re: MM Docket No. 87-268

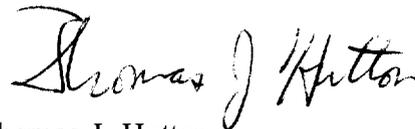
Dear Ms. Salas:

Submitted on behalf of JDG Television, Inc. are an original and ten copies of the "Comments of JDG Television, Inc. In Response to December 2, 1997 Public Notice."

Should you have any questions please contact the undersigned.

Very truly yours,

HOLLAND & KNIGHT LLP



Thomas J. Hutton

tjh;ewd

Enclosure

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In re

Advanced Television Systems) MM Docket No. 87-268
and Their Impact Upon the)
Existing Television Broadcast)
Service)

To: The Commission

**COMMENTS OF JDG TELEVISION, INC.
IN RESPONSE TO DECEMBER 2, 1997 PUBLIC NOTICE**

JDG Television, Inc. ("JDG"), the licensee of television stations KPOM-TV, Fort Smith, Arkansas and KFAA-TV, Rogers, Arkansas, hereby comments in support of the proposals of the Association for Maximum Service Television, Inc. ("AMST") and the Association of Local Television Stations, Inc. ("ALTV") filed on November 20, 1997 and November 25, 1997, respectively.¹ In support, the following is shown:

In the Sixth Report and Order in this proceeding, the Commission stated that its overarching allotment goal for the digital television ("DTV") service was full accommodation of all existing television broadcasters with new DTV channels that will allow them to replicate their existing NTSC service areas. JDG and numerous other parties filed for reconsideration of the DTV Table of Allotments adopted in the Sixth

¹ By Public Notice released on December 2, 1997, the Commission requested comments on the AMST and ALTV filings (respectively, the "AMST Report" and the "ALTV Proposal") to be filed no later than December 17, 1997. These Comments are therefore timely.

Report and Order, largely based on the failure of the DTV Table of Allotments to satisfy the Commission's stated allotment goal in certain respects.

A. KPOM-DT Should Be Allotted DTV Channel 27.

In the case of KPOM, the impact of the DTV Table of Allotments is particularly severe. KPOM operates on NTSC Channel 24 with an effective radiated power ("ERP") of 2510 kW (maximum) using a directional antenna. KPOM-DT was allotted DTV Channel 17 with an ERP of 73.4 kilowatts. In addition, the DTV Table assumes a directional antenna pattern for KPOM-DT that has a maximum-to-minimum field ratio of 16.1 dB (compared to the 11.7 dB ratio of KPOM's existing NTSC antenna). This means that the minimum value would have to be no greater than 1.8 kW, assuming such a highly directional antenna could be built. JDG's consulting engineer advises that an antenna with such characteristics would not be practical to build. Assuming that such an antenna could not be used, KPOM-DT would be required to use an antenna pattern identical to its existing NTSC pattern and reduce the **maximum** ERP from 73.4 kW to 26.6 kW in order to meet the pattern minima requirements. Furthermore, antenna manufacturers advise JDG that the use of intentionally highly directional antennas (such as KPOM's existing NTSC antenna) in the DTV environment may introduce signal distortions of unknown significance. If KPOM-DT must use an antenna with less directionality to overcome such problems, KPOM-DT's maximum power level would be reduced even further.

In addition to the low power level proposed for KPOM-DT in the DTV Table of Allotments, KPOM-DT also would face substantial interference from an adjacent-channel DTV allotment in the same market. KFSM-TV, Fort Smith, Arkansas, was allotted DTV Channel 18 at a much higher ERP (1000 kW) from a reference point only 30 kilometers (18 miles) from the reference point for KPOM-DT. JDG showed in its Petition for Reconsideration that KPOM-DT would suffer significant interference in a large part of its proposed service area due to this adjacent-channel, high-power allocation to a nearby station. JDG showed that this interference would occur in highly-populated portions of its service area, including KPOM's city of license.

The AMST Report confirms the shortcomings of KPOM-DT's allotment of DTV Channel 17. Whereas the Sixth Report and Order had predicted 97.7% service area replication of KPOM's NTSC service area by KPOM-DT, the AMST Report shows that the replication would only be 77.2%.² In particular, the AMST Report shows that adjacent-channel DTV allotments that are too close together would result in severely decreased DTV service areas. This problem became clear over the past few months through laboratory testing.³ AMST listed KPOM-DT and KFSM-DT in Exhibit 1C to the AMST Report as stations facing particularly serious interference problems from nearby adjacent-channel DTV operations under the DTV Table of Allotments.

The AMST Report recommends that KPOM-DT be allotted DTV Channel 27 with 93.1 kW maximum ERP instead of DTV Channel 17 with 73.4 kW maximum ERP.

² AMST Report at Exhibit 1B, page 2.

³ AMST Report at 3.

JDG supports this recommendation. Absent such a change, KPOM-DT will face an overwhelming signal disparity and loss of service area compared to other stations in its market. Importantly, much of the loss of service would occur in the highly-populated portions of KPOM's service area, including its city of license, meaning that the impact on KPOM's DTV operation would be even greater than the 25% service area loss indicates. Not only would this have a devastating competitive impact on KPOM, it also would frustrate the intent of Congress to achieve a rapid transition to DTV in a manner that best serves the interests of the existing television audience.

Attached hereto as Exhibit 1 is the Engineering Statement of John F.X. Browne, showing that the proposed allotment of DTV Channel 27 to KPOM-DT would not cause more interference to other DTV stations and allotments than the proposed allotment of Channel 17. In addition, the Engineering Statement shows that JDG has analyzed the possibility of co-locating the KPOM-DT antenna (using the Channel 17 allotment) with the KFSM-DT antenna in an attempt to reduce the adjacent-channel interference. JDG analyzed this possibility after a meeting with the Commission's staff in which JDG was asked to examine possible engineering solutions, including co-location, to overcome the Channel 17 interference problem. Even assuming a common antenna site could be found, the Engineering Statement concludes that co-location would increase interference to other stations significantly, without entirely eliminating the adjacent-channel interference. JDG has not found any engineering solution other than a channel substitution that will cure the Channel 17 interference problem.

Maintaining the existing allotment of DTV Channel 17 to KPOM-DT would cause substantial harm to the station and the viewing public, without any offsetting public interest benefits. In particular, the proposed change to DTV Channel 27 will not harm or delay the Commission's plans to reallocate Channels 60-69 for public safety and other land mobile uses. KPOM's situation is one of a relatively limited group of allotments that must be corrected. AMST's analysis, which is confirmed by JDG's own findings, demonstrates that DTV Channel 27 is the best available option for KPOM-DT.

B. UHF-UHF Stations Should Be Allowed More Power.

The area of greatest overall concern to parties that sought reconsideration of the Sixth Report and Order is the limited power level of current UHF stations that were allotted UHF channels for DTV service ("UHF-UHF Stations"). Both KPOM and KFAA are UHF-UHF Stations. In the Sixth Report and Order, the Commission adopted a nominal minimum ERP level of 50 kilowatts for all stations. Like most UHF licensees, JDG believes this level is too low. However, in the case of JDG's stations, the DTV Table of Allotments would prevent either one of them from operating in the DTV environment even with this limited amount of power.

For the reasons shown above, KPOM-DT's allotment on Channel 17 likely would require the station to operate with a directional pattern with a maximum ERP of 26.6 kW and a minimum ERP of 1.8 kW. Similarly, JDG demonstrated in its Petition for Reconsideration of the Sixth Report and Order that KFAA, which presently operates

with an omnidirectional pattern on NTSC Channel 51, would be required to reduce KFAA-DT's ERP to 42 kW, omnidirectional, to comply with the directional power requirements in the DTV Table of Allotments.

JDG supports those petitions for reconsideration requesting greater power for UHF-UHF Stations to overcome the power disparity for those stations. Allowing UHF-UHF Stations to operate with greater power will serve the public interest by maximizing DTV service.

ALTV proposes that UHF-UHF Stations be allowed to increase power to 1000 kW, provided that tilt-beam antennas and/or other mechanisms be used to ensure that (i) the field strengths at the outer edges of the stations' original protected contour do not increase above the levels allowed by the DTV Table of Allotments, and (ii) there will be no incremental visible interference. JDG would support the ALTV Proposal if it presented a technically feasible solution to the power disparity problem for UHF-UHF Stations. However, JDG has seen no evidence to indicate that beam-tilting could be used effectively for the magnitude of power increase proposed in the ALTV Report. JDG believes that beam-tilting could be used for more modest power increases, but beam-tilting alone would not overcome the power disparity problem for UHF-UHF Stations. JDG urges the Commission to examine beam-tilting in conjunction with other approaches to address the power disparity problem.

C. Conclusion

The Commission should adopt the proposals presented in the AMST Report. The AMST Report provides solutions to distinct interference and coverage problems presented by the DTV Table of Allotments, including the interference and coverage problems that KPOM faces. Unless KPOM-DT's allotment is changed from DTV Channel 17 to DTV Channel 27, KPOM-DT will not be able to provide service in an area that constitutes nearly 25% of KPOM's NTSC coverage area and a greater percentage of KPOM's NTSC population area. After examining all available options, both AMST and JDG have concluded that allotting DTV Channel 27 to KPOM-DT is the only viable solution to this problem. This channel substitution will not harm the public interest, because it will not increase the interference experienced by other DTV stations and it will not impede the Commission's plans to convert Channels 60-69 to public safety and other land mobile uses.

Likewise, JDG supports the efforts to provide greater power to UHF-UHF Stations. For the reasons shown above, neither the allotment to KPOM-DT nor the allotment to KFAA-DT appears to afford either station the opportunity to operate even with the minimal 50 kW ERP that the Sixth Report and Order appeared to offer to UHF-UHF Stations. The proposal presented in the ALTV Proposal, if modified to a more realistic level, could provide some potential relief from the power disparity problem for UHF-UHF Stations. However, beam-tilting alone does not appear to

resolve the problem. The Commission should examine beam-tilting inconjunction with power increases to solve the power disparity problem.

Respectfully submitted,

JDG TELEVISION, INC.

By: Thomas J. Hutton
Marvin Rosenberg
Thomas J. Hutton

Its Attorneys

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December 17, 1997

WAS1-314004

EXHIBIT 1

B

ENGINEERING STATEMENT

of

John F.X. Browne

regarding

JDG Television, Inc.

KPOM-TV

Ft. Smith, Arkansas

Background

JDG Television, Inc. is the licensee of KPOM-TV, Ft. Smith, AR. JDG presently operates on television channel 24 and was allotted channel 17 for its DTV service in the Commission's Sixth Report and Order in the DTV proceedings.

JDG timely filed a petition for reconsideration regarding this allotment because of extremely reduced coverage (due to an assumed highly directional antenna), the inability to "maximize" the allotment due to interference limitations, the non-competitive low power of the allotment, and last, but perhaps most important, significant loss of coverage in its principal community due to interference from an adjacent channel 1,000 kW facility allotted to a competitor (on channel 18).

A study was conducted for JDG to determine whether a different allotment (channel) could be identified to substitute for its present DTV allotment; none could be identified which did not create new interference as defined in the Commission's Rules and Regulations.

Following an informal discussion with the Commission staff, it was decided to review that search process to determine whether a substitute channel could be identified which caused no more interference than that already "built-in" to the present allotment. Such a channel has been identified.

Interference from Existing Allotment

The present KPOM-DT allotment specifies use of channel 17 with a maximum ERP of 73.4 kW (using a directional antenna having a more than 16 dB maximum-to-minimum ERP pattern). While the allotment would cause interference^{1/} to other stations and allotments as tabulated below, it would receive interference from an adjacent channel 18 DTV allotment affecting an estimated 16,253 viewers. (It appears that the Commission did not consider this interference because the adjacent channel allotments were in the same principal city.) This interference is primarily due to the great disparity between the signal strengths of the two adjacent channel signals in Ft. Smith as described below.

The KPOM site is located approximately 44 km north of its principal city of Ft. Smith. KFSM, which has been allotted adjacent channel 18 for its DTV operation, is sited approximately 15 km from Ft. Smith (approximately 30 km closer than KPOM); KFSM has been allotted 1,000 kw vis a vis the 73 kw allotted to KPOM. This will result in serious adjacent channel interference to KPOM-DT from KFSM-DT as noted below. KPOM could not increase its power to decrease the adjacent channel interference because of potential increases in interference to other stations.

KPOM-DT Interference to Others (Allotment)

<u>Facility</u>	<u>Ch</u>	<u>Bearing</u>	<u>Distance (km)</u>	<u>Intf Area (sq km)</u>
KHOG-DT	15	008	34	18
KFSM-DT	18	222	30	35
KHBS-DT	21	215	86	6
KDOR-DT	14	302	172	195

KPOM-DT Interference Received (Allotment)

<u>Facility</u>	<u>CH</u>	<u>Bearing</u>	<u>Distance (km)</u>	<u>Intf Area (sq km)</u>
KFSM-DT	18	222	30	526 (16,253 persons)
KDOR	17	302	172	192 (2,986 persons)
KSLA	17	177	338	3

^{1/} Institute for Telecommunications Sciences, NTIA, (Boulder, CO) Longley-Rice model.



Proposed Substitute Channel

A study has revealed that Channel 27 could be substituted at Ft. Smith as the DTV allotment for KPOM and would not cause more interference than that created by the present channel 17 allotment. The following tabulation of theoretical interference results from the application of the same ITS/NTIA model.

Interference to Others (Proposed CH 27)

<u>Facility</u>	<u>Ch</u>	<u>Bearing</u>	<u>Distance (km)</u>	<u>Intf Area (sq km)</u>
KHOG	29	008	34	182
KDEB	27	003	197	70

Interference Received (Proposed CH 27)

<u>Facility</u>	<u>Ch</u>	<u>Bearing</u>	<u>Distance (km)</u>	<u>Intf Area (sq km)</u>
KHOG	29	008	34	99
KDEB	27	033	197	57
KFOR-DT	27	268	303	236

Relocation Alternative

One obvious way of reducing adjacent channel interference would be the colocation of the channel 17 and 18 DTV transmission facilities. A study was conducted to evaluate this approach, but it revealed that the predicted interference to other stations (e.g. KFSM-DT, KHBS-DT, KLRT and KSLA-DT) would increase significantly while not entirely eliminating the adjacent channel problem.

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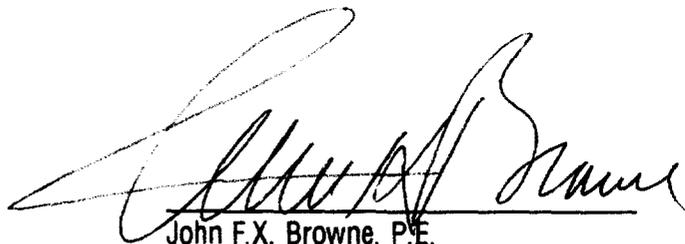
In addition, such colocation is based on the assumption that KPOM could gain access to a suitable antenna location at or near the KFSM-DT site. There is presently no guarantee that such a site would be available under practical conditions and reasonable terms. Therefore, given the additional interference which would be created, it is presumed that this is not an acceptable alternative.

Conclusion

It is concluded that KPOM-TV could be allotted channel 27 for its DTV service with less total interference impact than its present allotment on channel 17 and, most importantly, would permit it to render interference-free service in its principal community. While there would be interference "trade-offs" vis a vis the present allotment, the principal interference from KFSM-DT would be eliminated.

Certification

This statement was prepared by me or under my direction. All assertions contained in the statement are true of my own personal knowledge except where otherwise indicated and these latter assertions are based on information from reliable sources and are believed to be true.



John F.X. Browne, P.E.
December 1, 1997