

RECEIVED

DEC 17 1997

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

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Advanced Television Systems)
and Their Impact upon the) MM Docket No. 87-268
Existing Television Broadcast)
Service)

To: The Commission

COMMENTS OF
LINCOLN BROADCASTING COMPANY
ON EX PARTE SUBMISSIONS

LINCOLN BROADCASTING COMPANY,
A CALIFORNIA LIMITED PARTNERSHIP

Michael Fusaro
Director of Engineering
Lincoln Broadcasting Company

Michael D. Berg
Julian L. Shepard
Verner, Liipfert, Bernhard,
McPherson and Hand Chartered
901 15th Street, N.W.
Suite 700
Washington, D.C. 20005
(202) 371-6000

December 17, 1997

049

TABLE OF CONTENTS

	Page
SUMMARY	i
I. INTRODUCTION AND BACKGROUND	3
II. NEW INFORMATION INDICATES THAT THE AMOUNT OF DTV COVERAGE AND REPLICATION THAT KTSF MAY ATTAIN ON CHANNEL 27 IS DRASTICALLY LESS THAN STATED IN THE SIXTH REPORT AND ORDER ...	5
III. KTSF'S UNIQUE SERVICE TO AUDIENCES WOULD SUFFER AN ARBITRARY AND DISPROPORTIONATELY NEGATIVE IMPACT, UNLESS APPROPRIATE ADJUSTMENTS ARE MADE TO THE DTV TABLE OF ALLOTMENTS ON RECONSIDERATION	8
IV. LINCOLN SUPPORTS PROPOSED CHANGES TO THE DTV TABLE OF ALLOTMENTS SET FORTH IN THE MSTV EX PARTE SUBMISSION	11
V. LINCOLN OPPOSES THE ALTV REQUEST FOR AUTOMATIC GRANT OF POWER INCREASES, BUT SUPPORTS A POLICY PERMITTING APPLICANTS TO REQUEST POWER INCREASES BASED ON INFERENCE ABATEMENT TECHNIQUES	13
VI. CONCLUSION	14

SUMMARY

Lincoln Broadcasting Company, A California Limited Partnership ("Lincoln"), is the licensee of KTSF(TV), NTSC Channel 26, San Francisco, California. Lincoln has filed twice before, at earlier stages of this proceeding, to express concerns about aspects of its upper adjacent DTV channel assignment (Channel 27). Lincoln has also expressed its intent to proceed to implement DTV with its current channel assignments so long as that proves feasible in light of the expressed concerns.

In response to the MSTV Ex Parte submission, Lincoln submits these Comments to urge the Commission to adopt at least those recommendations of MSTV that are necessary to rectify the devastatingly low replication percentage (65%, according to MSTV) that results from correction of previously unknown errors in the Sixth Report and Order. Lincoln attaches to these Comments the supporting statement of its engineering consultants, Hammett & Edison, which confirms that actual replication will be vastly less than projected in the Sixth Report and Order, and that the MSTV approach, particularly the proposed reallocation of the station currently assigned to DTV Channel 28 in San Francisco, will solve the problem.

KTSF is a family-owned, independent commercial UHF station which since 1976 has dedicated itself mainly to serving traditionally underserved segments of the San Francisco area viewing public. Award-winning programming in multiple languages, particularly but not only the Asian languages spoken by many in the service area, would be lost to a large portion of the service area due to corrected interference calculations, and about half a million people would be affected. This could endanger KTSF's ability to continue broadcasting as a result of projected revenue losses. The Commission must, at a minimum at this juncture of the proceeding, act to

avert this drastically compromised service area, and to assure that KTSF is treated equitably, and not arbitrarily or in a discriminatory manner, vis-a-vis other stations in the market.

Lincoln also requests that the Commission refrain from an across-the-board UHF power increase as advocated by ALTV. That proposal, as made, would burden the affected stations with attaining a remedy. Lincoln supports, however, allowing stations to use beam-tilt and other techniques that may permit DTV power increases on a case-specific basis.

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

In the Matter of)
)
Advanced Television Systems)
and Their Impact upon the) MM Docket No. 87-268
Existing Television Broadcast)
Service)

To: The Commission

**COMMENTS OF
LINCOLN BROADCASTING COMPANY
ON EX PARTE SUBMISSIONS**

Lincoln Broadcasting Company, A California Limited Partnership ("Lincoln"), the licensee of KTSF(TV), NTSC Channel 26, San Francisco, California ("KTSF"), by its attorneys, hereby submits comments on the recent ex parte submissions in the above-referenced proceeding by: (1) the Association for Maximum Service Television, Inc. and other broadcasters ("MSTV"); and (2) the Association of Local Television Stations, Inc. ("ALTV"). Both these submissions are the subjects of a recent Public Notice inviting public comment.^{1/}

In light of recently discovered technical information presented in MSTV's submission, and the revelation that the Sixth

^{1/}Public Notice, "FCC Seeks Comment on Filings Addressing Digital TV Allotments (MM Docket No. 87-268)," released Dec. 2, 1997. Lincoln has participated twice before at earlier stages of this proceeding.

Report and Order^{2/} in this proceeding appears to have substantially overstated the amount of DTV coverage and service area replication that KTSF may attain on its DTV channel assignment, Lincoln urges the Commission to take immediate corrective steps on reconsideration to rectify KTSF's unacceptably low DTV coverage and replication, and, if possible, to do so without causing further harm to KTSF's NTSC service during the analog to digital transition. To do this, the Commission should adopt the improvements to the DTV Table of Allotments proposed by MSTV at least to the extent necessary to provide adequate relief to KTSF.

Lincoln also requests that the Commission refrain from adopting an across-the-board power increase for UHF stations as advocated by ALTV. Stations that would suffer interference from the ALTV plan would unfairly bear the burden of investigating and prosecuting FCC complaints to abate that interference. However, Lincoln supports the adoption of a policy permitting stations to utilize beam-tilt techniques and other interference abatement mechanisms described in the ALTV Ex Parte Submission that may permit increases in authorized DTV transmission power on a case-by-case basis, with the proponent of such changes bearing the

2/ Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, MM Docket No. 87-268, FCC 97-115, Sixth Report and Order (released April 21, 1997) ("Sixth Report and Order").

complete duty and cost of making an affirmative showing to the Commission of "no interference" in advance under the Commission's "maximization" procedure.

I. INTRODUCTION AND BACKGROUND

KTSF is a family-owned, independent, UHF commercial broadcast station that has been serving the San Francisco Bay Area on Channel 26 since 1976. Over the last two decades, KTSF has dedicated most of its broadcast schedule to serving the needs and interests of traditionally underserved segments of the local television audience. As a result, KTSF has grown to become one of California's, and the nation's, most significant multilingual television stations, broadcasting more than 100 hours of foreign-language programming each week. Nearly all of KTSF's prime-time schedule, and 64 percent of its programming schedule overall, is in this category.

Because KTSF primarily serves Northern California's Asian communities, its foreign-language programming consists largely of the rich and diverse tapestry of languages spoken by those populations. For example, KTSF's programming schedule features award-winning, locally-produced daily newscasts in two different Chinese dialects, Mandarin and Cantonese, as well as in Tagalog, the language spoken by many in the Bay Area's Filipino communities. In addition, the station carries a substantial

amount of programming in Japanese, Korean, Vietnamese, Cambodian and Laotian, as well as such other languages as Hindi, Farsi, and Greek.^{3/} No other station in the San Francisco Bay Area plays as substantial a role in serving these important segments of the local audience.

In the Sixth Report and Order, the Commission adopted a nationwide digital television ("DTV") Table of Allotments which assigned an upper-adjacent channel, Channel 27, to KTSF for DTV use. The Commission estimated that this DTV Channel assignment would provide DTV service to an area of approximately 15,750 square kilometers, serving 5,143,000 people.^{4/} This amount of DTV coverage was said to provide approximately 99.1 percent replication of KTSF's current NTSC coverage area based on operations at the maximum permissible DTV transmission power and antenna height.^{5/}

Lincoln expressed concern about the feasibility of this upper-adjacent DTV channel assignment in its Petition for Clarification and Reconsideration of the Sixth Report and Order filed on June 13, 1997 in this proceeding, and, subsequently, in its Qualified Opposition to Supplements to Petitions for

^{3/} KTSF also broadcasts a modest amount of programming each week in Portuguese and Italian, and in the past it has carried programming in Hebrew and Arabic.

^{4/} Sixth Report and Order, Appendix B, Table 1, p. B-11.

^{5/} Id.

Reconsideration filed on September 23, 1997. Nevertheless, Lincoln indicated its intention to move forward with this DTV channel assignment if feasible. However, this judgment, and Lincoln's entire DTV business plan, was based on the information contained in the Sixth Report and Order regarding the approximate amount of DTV coverage and accompanying replication to be attained with the DTV Channel 27 assignment.

II. NEW INFORMATION INDICATES THAT THE AMOUNT OF DTV COVERAGE AND REPLICATION THAT KTSF MAY ATTAIN ON CHANNEL 27 IS DRASTICALLY LESS THAN STATED IN THE SIXTH REPORT AND ORDER

On November 20, 1997, MSTV made an ex parte submission to the Commission ("MSTV Ex Parte Submission") containing, among other things, an "FCC DTV Table" (the "Corrected Table") with "corrected coverage and interference figures."^{6/} This Corrected Table indicates that KTSF would not attain the amount of DTV coverage and the amount of replication stated in the Sixth Report and Order. Indeed, the Corrected Table indicates that KTSF would attain only 10,212 square kilometers of DTV coverage, fully one-third less than the 15,750 square kilometers in the Sixth Report and Order. Moreover, the reduced DTV coverage would result in only 65 percent replication of KTSF's current interference-free

^{6/} See "Ex Parte Submission Based on New Technical Discoveries to Help the Commission Improve the DTV Table of Allotments/Assignments" in MM Docket No. 87-268, submitted on November 20, 1997 by the Association for Maximum Service Television, Inc., and Other Broadcasters ("MSTV Ex Parte Submission"), Exhibit 1B.

NTSC coverage area -- a reduction in replication of more than one third. While several other stations licensed to San Francisco appear to suffer slight reductions in DTV coverage and replication, KTSF is one of the two very extreme cases -- both of which involve stations originally licensed on NTSC UHF channels.^{7/} In sharp contrast, all of the stations licensed to San Francisco on NTSC VHF channels would attain replication of more than 90 percent.

Apparently, DTV-to-DTV adjacent channels were assigned too close together in the Table of Allotments in the Sixth Report and Order.^{8/} This is based on new information uncovered by neutral third-party analyses that neither the Commission nor the industry groups were aware of until recently. Essentially, the Advanced Television Technology Center ("ATTC") found that typical DTV-to-DTV adjacent channel performance was 22 decibels (22 dB) worse than that assumed by the industry and the FCC to develop the DTV Table of Allotments.^{9/} Furthermore, this finding was

^{7/} Both KTSF and KTMP (an NTSC Channel 32 station paired with DTV Channel 33) would attain substantially less DTV coverage resulting in replication of less than two-thirds of their current NTSC coverage areas.

^{8/} MSTV Ex Parte Submission, p.3.

^{9/} See "An Evaluation of the FCC RF Mask for the Protection of DTV Signals from Adjacent channel DTV Interference" Advanced Television Technology Center, Inc., Document No. 97-06 (July 17, 1997), submitted to the Commission in MM Docket No. 87-268 as Exhibit 2C to the MSTV Ex Parte Submission.

confirmed by experts in Canada who, according to MSTV, concluded that the DTV-to-DTV adjacent channel interference problem is serious enough to prohibit DTV-to-DTV adjacent channel assignments within 80 to 100 km of each other.^{10/} MSTV states that it has based its Corrected Table upon this new information.^{11/}

Attached is an independent expert assessment commissioned by Lincoln of the impact of revised DTV-to-DTV adjacent-channel interference D/U ratios on KTSF's DTV Channel 27 assignment. Lincoln's consulting engineer, Dane Ericksen of Hammett & Edison, found that if the D/U ratios from the ATTC study were used to predict the interference that would be caused by adjacent-channel DTV channel assignments to KTSF's DTV Channel 27 assignment, substantially more interference would result than was estimated in the Sixth Report and Order.^{12/} The Channel 27 assignment would result in interference-free DTV service to only 5,416 square kilometers -- vastly less than the 15,750 square kilometers estimated in the Sixth Report and Order.

It is Lincoln's understanding that direct comparisons of the actual values in the calculations from the MSTV Ex Parte Submission, the attached Engineering Exhibit, and the Sixth

^{10/} See MSTV Ex Parte Submission, p. 6 and Appendix 2.

^{11/} MSTV Ex Parte Submission, note 17.

^{12/} See Attached Engineering Exhibit, Figure 2.

Report and Order, are difficult, if not impossible, due to differences in the calculation methodology. However, the relative direction and magnitude of the findings in both the MSTV Ex Parte Submission and the attached Engineering Exhibit are reliable and clear: KTSF would attain drastically less DTV coverage and replication with the DTV Channel 27 assignment than indicated in the Sixth Report and Order.

III. KTSF'S UNIQUE SERVICE TO AUDIENCES WOULD SUFFER AN ARBITRARY AND DISPROPORTIONATELY NEGATIVE IMPACT, UNLESS APPROPRIATE ADJUSTMENTS ARE MADE TO THE DTV TABLE OF ALLOTMENTS ON RECONSIDERATION

In light of the new information pertaining to DTV-to-DTV adjacent channel interference contained in the MSTV Ex Parte Submission, it has become apparent that at least one third of the public now served by KTSF's unique programming would be permanently deprived of free access to KTSF's DTV programming service during, and after the end of, the analog-to-digital transition. In addition, the reduction of KTSF's DTV coverage by one-third would likely result in at least proportionate revenue declines for KTSF at the end of the analog-to-digital transition, and would place a black cloud over the station's future. Such reductions to the public's television service and harsh impacts on KTSF's revenues are clearly antithetical to the Commission's allotment/assignment goals. No station should have to accept this level of service area degradation and threat to its

existence, much less a station that dedicates the lion's share of its programming to serving traditionally underserved segments of the viewing public.

In the Sixth Report and Order, the Commission sought to specify digital channels in the DTV Table of Allotments that, to the maximum extent possible, would allow all existing broadcasters to provide DTV service to a geographic area that is comparable to their existing NTSC service area.^{13/} The goal of this approach was two-fold: 1) to provide DTV coverage comparable to a station's current coverage area and, 2) to provide the best correspondence between the size and shape of the proposed DTV channel's coverage area and the station's existing coverage.^{14/} This approach was to ensure that broadcasters have the ability to reach the audiences they now serve and that viewers have access to the stations that they can now receive over-the-air. While the Commission recognized that the service replication approach could lead to increased disparities among stations, certainly this was not a goal. Indeed, the Commission expressed its optimism that such unintended consequences could be

^{13/} The Commission's methodology used to calculate the service areas in the DTV Table of Allotments was based on the best available studies and methodologies developed by industry and the Advisory Committee on Advanced Television Service.

^{14/} Sixth Report and Order, ¶28-29.

minimized through a basic compromise plan set forth in the reply comments of AAPTS, the Broadcasters Caucus and others.^{15/}

Lincoln understands that the Commission used the best available information at the time the DTV Table of Allotments was adopted, but now it has become apparent that critical assumptions made by the Commission in calculations underlying the DTV Table of Allotments were incorrect. The Commission now owes a duty both to the public and to affected television broadcast licensees to correct the problems. Moreover, these problems should be corrected during the reconsideration phase of this proceeding, and should not be left unresolved for stations to pursue on a "case-by-case" basis.

A case-by-case approach to these problems would be contrary to the public interest for several reasons. First, it would be extremely consumptive of the Commission's scarce administrative resources, requiring case-by-case determinations and possibly adjudications involving many stations -- not simply those stations adversely affected by the errors. Second, it would thrust considerable expense on the affected stations during a time of already great financial burdens associated with the analog-to-digital transition. Third, it would delay the implementation of DTV by casting a cloud of uncertainty over the entire DTV Table of Allotments. Therefore, prompt resolution of

^{15/} Sixth Report and Order, ¶29.

these issues now -- during the reconsideration phase -- is required in the public interest.

IV. LINCOLN SUPPORTS PROPOSED CHANGES TO THE DTV TABLE OF ALLOTMENTS SET FORTH IN THE MSTV EX PARTE SUBMISSION

The "Improvements to the DTV Table" contained in Exhibit 1A of the MSTV Ex Parte Submission (the "Improved Table"), would enable KTSF to move forward with the DTV Channel 27 assignment, with improved DTV coverage and replication. In the Improved Table, MSTV estimates that KTSF would attain an estimated 15,842 square kilometers of DTV coverage, with accompanying replication of approximately 99.4 percent, operating at maximum authorized power and at the maximum permitted antenna height.^{16/} Not only would the changes in the Improved Table compensate for the erroneous calculation of adjacent-channel DTV-to-DTV interference in the Sixth Report and Order, the changes would result in potential coverage and replication marginally greater than the estimates in the Sixth Report and Order. Accordingly, Lincoln supports the changes to the DTV Table of Allotments recommended in the MSTV Ex Parte Submission to the extent that such changes would eliminate the DTV-to-DTV

^{16/} See MSTV Ex Parte Submission, Exhibit 1A: Improvements to the FCC's DTV Table that focus on correcting the DTV-to-DTV adjacent channel problem and reducing interference to NTSC service in the three Acute Problem Areas (the Northeast, the Great Lakes region and the California coastal region), p. 6.

interference that is responsible for decreased DTV coverage and replication for KTSF on DTV Channel 27.

According to the attached Engineering Exhibit, the primary case of DTV-to-DTV adjacent-channel interference directly responsible for the impairment of DTV coverage and replication for KTSF's DTV Channel 27 assignment is KPIX's DTV Channel 28 assignment, which the MSTV proposal resolves.^{17/} KTSF is not in a position to say how many additional changes, of the total advocated in the MSTV Ex Parte Submission, are necessary to permit the Commission to remedy the interference to KTSF's DTV Channel 27 assignment.

The Improved Table in the MSTV Ex Parte submission appears to embody a fair and even-handed approach to correcting the DTV-to-DTV adjacent-channel interference problems. It is both fair and expedient to adopt the changes in the Corrected Table, leaving only other types of minor changes in the DTV Table of Allotments, if any, for case-by-case analysis.

Therefore, if it is necessary to accept the Improved Table as a package, Lincoln supports that approach. However, Lincoln appreciates that the Commission may be reluctant to implement all of the changes included in the Improved Table. Accordingly, if it is possible to make fewer changes to the Table of Allotments and to remedy the interference to KTSF's DTV Channel 27

^{17/} See Engineering Exhibit, Figure 2B.

assignment without causing further interference to KTSF's NTSC service during the transition, Lincoln would be fully supportive of a narrower set of changes.

V. LINCOLN OPPOSES THE ALTV REQUEST FOR AUTOMATIC GRANT OF POWER INCREASES, BUT SUPPORTS A POLICY PERMITTING APPLICANTS TO REQUEST POWER INCREASES BASED ON INFERENCE ABATEMENT TECHNIQUES

ALTV's ex parte submission advocates the grant of an automatic DTV transmission power increase to one megawatt upon application by stations with NTSC UHF channel assignments, provided that beam tilt and other interference abatement techniques are utilized to prevent interference to other stations beyond that station's protected contour.^{18/} The ALTV Ex Parte Submission proposes procedures for resolving the interference disputes which will undoubtedly arise if such power increases are granted immediately on a presumption of no interference. ALTV advocates an approach where the Commission would be the "ultimate arbiter" of all complaints, with entire burden of investigating and prosecuting these interference complaints borne by the aggrieved stations. According to ALTV, "the aggrieved station must present actual field strength measurements taken by a registered professional engineering firm" in support of its

^{18/} See Ex Parte Letter of Mr. James B. Hedlund, President, Association of Local Television Stations, submitted in MM Docket No. 87-268 on Nov. 25, 1997, with attachment "UHF DTV Power: A Proposal to help Resolve the Issue" ("ALTV Ex Parte Submission").

complaint. In other words, there would be significant costs and burdens placed upon stations receiving interference resulting from "presumptions" by the Commission that such interference would not result.

While Lincoln urges the Commission to permit stations to utilize beam tilt and other interference abatement techniques in support of applications to maximize their DTV transmission power and antenna height according to the procedures already adopted in this proceeding ("maximization"), Lincoln opposes the procedure advocated by ALTV for automatic grant of power increases. Such a procedure would foist significant expenses and burdens upon stations during a time when resources will be stretched thin by the high costs of conversion from analog to digital transmission. Stations that would stand to gain from such power increases should bear the entire costs of pursuing such matters before the Commission under the procedures for maximization adopted in the Sixth Report and Order.

VI. CONCLUSION

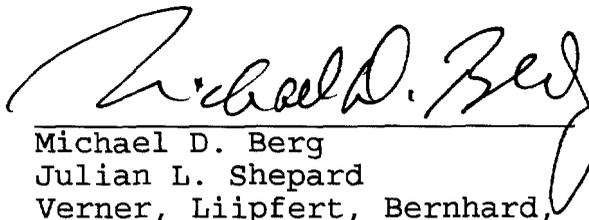
For the reasons set forth above, Lincoln urges the Commission to adopt the changes to the DTV Table of Allotments contained in the MSTV Ex Parte Submission, at least to the extent necessary to prevent the interference that would threaten KTSF's very existence and ability to continue its tradition of community

service. In addition, Lincoln supports the concept of permitting stations to use beam tilt and other interference abatement techniques to make an affirmative showing of no interference to other stations in the context of applications for maximization of DTV channel assignments. However, Lincoln opposes the automatic grant of one megawatt power increases as advocated by ALTV.

Respectfully submitted,

LINCOLN BROADCASTING COMPANY,
A CALIFORNIA LIMITED PARTNERSHIP

By:



Michael D. Berg
Julian L. Shepard
Verner, Liipfert, Bernhard,
McPherson and Hand Chartered
901 15th Street, N.W.
Suite 700
Washington, D.C. 20005
(202) 371-6000

Michael Fusaro
Director of Engineering
Lincoln Broadcasting Company

December 17, 1997

Attachment (Engineering Statement)

VLDC01-216139-1

**TV Station KTSF
Channels N26/D27
San Francisco, California**

**Engineering Exhibit in Support of
Certain Channel Changes Proposed by
the Association for Maximum
Service Television, Inc.**

December 15, 1997

©1997 All rights reserved.

TV Station KTSF • Channels N26/D27 • San Francisco, California

Statement of Dane E. Ericksen, P.E., Consulting Engineer

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Lincoln Broadcasting Company, licensee of TV Station KTSF, NTSC Channel 26/DTV Channel 27, San Francisco, California, to review the channel changes proposed in the November 20, 1997, *Ex Parte Submission Based on New Technical Discoveries to Help the Commission Improve the DTV Table of Allotments/Assignments* filed by the Association for Maximum Service Television, Inc. (“MSTV”).

KTSF Sixth R&O DTV Assignment

In the Sixth Report and Order to MM Docket 87-268 (“Sixth R&O”), TV Station KTSF, NTSC Channel 26, was assigned DTV Channel 27 with a maximum effective radiated power (“ERP”) of 91.1 kW, and TV Station KPIX, NTSC Channel 5, was assigned DTV Channel 28 with a maximum ERP of 1,000 kW. Although both stations are licensed to serve San Francisco, California, KTSF is located at San Bruno Mountain south of San Francisco, whereas KPIX is located on the Sutro Tower in San Francisco. The two sites are separated by 7.8 kilometers, which does not violate the 32.2-kilometer to 88.5-kilometer preclusion “doughnut” adopted in the Sixth R&O for adjacent-channel UHF DTV stations. However, this preclusion doughnut was based on the assumption that an adjacent-channel DTV signal would not cause interference unless the desired-to-undesired (“D/U”) signal ratio exceeded -42.0 dB for lower DTV-into-DTV, or -43.2 dB for upper DTV-into DTV. Further, although the transmitter-to-transmitter distances are met, there would obviously be a large number of KTSF D27 cells that would be in the 32.2- to 88.5-kilometer preclusion zone.

ATTC Report

On July 17, 1997, the Advanced Television Test Center (“ATTC”) issued a supplemental report, concluding that the adjacent channel DTV-into-DTV D/U ratios adopted in the Sixth R&O were too lenient by up to 22 dB; that is, the ATTC concluded that, instead of D/U ratios of -42.0 and -43.2 dB being acceptable, the actual ratios would be only -23 dB for lower DTV-into-DTV and only -21 dB for upper DTV-into-DTV.

As a result of this drastic change in adjacent-channel DTV-to-DTV interference criteria, MSTV filed its proposal to modify 357 of the approximately 1,600 DTV allotments. Of this number, 230 involve “short-spaced” DTV-to-DTV adjacent-channel situations. One of those involves KTSF.

Increased Interference to KTSF D27 by KPIX D28

Under the D/U ratios originally adopted in the Sixth R&O, non-located KPIX Channel D28 is predicted to cause interference for KTSF Channel D27 to 65,540 persons in 112.5 square kilometers, using the methodology spelled out in the Sixth R&O and in OET Bulletin No. 69 (“OET69”). This represents 0.8% of the present KTSF NTSC Grade B area and 1.1% of the Grade B population. The KTSF Channel D27 coverage for the FCC Sixth R&O parameters are shown in the attached Figure 1.

However, when the corrected ATTC D/U ratios are substituted, and if the greater transmitter-to-protected cell inclusion distances used by MSTV are employed,* then the interference caused by KPIX Channel D28 at Sutro Tower to KTSF Channel D27 at San Bruno Mountain dramatically increases, by about ten-fold, to 575,910 persons in 1,868 square kilometers. This now represents 13.9% of the KTSF NTSC Grade B coverage area and 10.0% of the Grade B population. (It is noted that this interference is more than 17 times the area and more than 9 times the population obtained when the Sixth R&O D/U ratios and inclusion distances are used.) The KTSF Channel D27 coverage and interference for this situation is shown in the attached Figure 2.

Elimination of D27/D28 Adjacency Problem under MSTV Proposal

Under the MSTV proposal, KPIX would have its DTV channel changed from Channel D28 to D29, while KTSF would continue to use Channel D27. Thus, the DTV-to-DTV adjacent channel problem with KPIX would disappear, meaning that more than half a million persons would be spared interference they would otherwise receive under the Sixth R&O Table of Allotments.

No Negative Impact to KTSF NTSC Channel 26

The proposed MSTV DTV channel changes would not worsen the interference that the KTSF NTSC Channel 26 signal would receive during the transition period. Under the Sixth R&O DTV allotments the KTSF terrain-limited and interference-free NTSC coverage would be 5,508 square kilometers and 4,658,576 persons, while, under the MSTV revised DTV allotments the KTSF terrain-limited and interference-free NTSC coverage would be 5,536 square kilometers and 4,660,356 persons. Therefore, the MSTV revised DTV allotments would actually result in slightly less interference to the KTSF NTSC coverage during the transition period.†

* MSTV used greater transmitter-to-protected cell distances to ensure that all potential interference sources that might possibly affect a protected cell are, in fact, studied. For example, Table 7 to OET69 only requires that cell sites within 50 kilometers be checked for D+1 interference, whereas MSTV used 150 kilometers.

† It should be noted that, for NTSC coverage and interference calculations, the question of whether the Sixth R&O D/U ratios are used or whether the ATTC D/U ratios are used is irrelevant, as the only the DTV-into-DTV ratios are different between the two (and then only for DTV to adjacent-channel DTV situations).

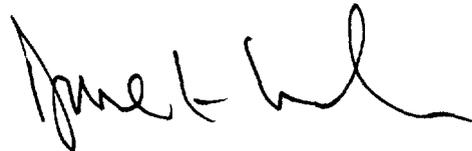
Conclusion

The proposal in the MSTV *ex parte* filing, which includes moving the KPIX DTV allotment from Channel D28 to D29, would eliminate the first-adjacent problem with the non-collocated KTSF Channel D27 allotment. This would in turn entirely eliminate the adjacent-channel interference that the KTSF DTV allotment would receive from the Sixth R&O KPIX DTV allotment. Incidentally, it would also entirely eliminate any adjacent-channel interference the KPIX Sixth R&O DTV allotment might receive from the unchanged KTSF DTV allotment, as the DTV channels assigned to KTSF and KPIX under the MSTV proposal would no longer be adjacent. Further, the proposed MSTV DTV allotments would cause no additional interference to the existing KTSF NTSC signal.

List of Figures

In carrying out these engineering studies, the following attached figures were prepared under my direct supervision:

1. Map showing KTSF D27 coverage and population based on Sixth R&O DTV allotments, Sixth R&O D/U ratios, and OET69 inclusion distances
2. Map showing KTSF D27 coverage and population based on Sixth R&O DTV allotments, ATTC D/U ratios, and MSTV inclusion distances.



Dane E. Ericksen, P.E.

December 15, 1997

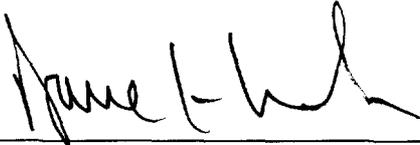


Affidavit

State of California
County of Sonoma | ss:

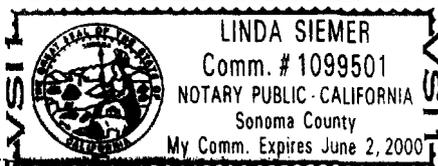
Dane E. Ericksen, being first duly sworn upon oath, deposes and says:

1. That he is a qualified Registered Professional Engineer, holds California Registration No. E-11654, which expires on September 30, 2000, and is employed by the firm of Hammett & Edison, Inc., Consulting Engineers, with offices located near the city of San Francisco, California,
2. That he graduated from California State University, Chico, in 1970, with a Bachelor of Science Degree in Electrical Engineering, was an employee of the Field Operations Bureau of the Federal Communications Commission from 1970 to 1982, with specialization in the areas of FM and television broadcast stations and cable television systems, and has been associated with the firm of Hammett & Edison, Inc., since October 1982,
3. That the firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Lincoln Broadcasting Company, licensee of TV Station KTSF, NTSC Channel 26/DTV Channel 27, San Francisco, California, to review the channel changes proposed in the November 20, 1997, *Ex Parte Submission Based on New Technical Discoveries to Help the Commission Improve the DTV Table of Allotments/Assignments* filed by the Association for Maximum Service Television, Inc.,
4. That such engineering work has been carried out by him or under his direction and that the results thereof are attached hereto and form a part of this affidavit, and
5. That the foregoing statement and the report regarding the aforementioned engineering work are true and correct of his own knowledge except such statements made therein on information and belief and, as to such statements, he believes them to be true.



Dane E. Ericksen, P.E.

Subscribed and sworn to before me this 15th day of December, 1997





TV Station KTSF • Channels N26/D27 • San Francisco, California

KTSF Channel D27 Service

Sixth R&O DTV Allotments, Sixth R&O Ratios, OET69 Inclusion Distances

