

**700 MHz TV Clearing, its Impact on TV Viewership,
and Options for Accelerating Public Safety Access**

by

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Table of Contents

Executive Summary.....	3
1 Introduction.....	4
2 Incumbent TV Stations in 700 MHz Band	7
3 Preclusion zones	11
4 Potential Impact on Channel 62-65/67-69 Viewers.....	16
5 Multiple Viewer Options in Markets Served by Channel 62-65, 67-69 stations.....	18
6 Options facilitating clearing of Channels 62-65 and 67-69.....	19
6.1 Operate only in DTV Allotment.....	19
6.1.1 Waiver already approved by Commission.....	20
6.2 Permit analog operations in DTV allotment.....	21
6.2.1 Waivers already filed at Commission.....	22
6.3 Delivery of service solely over Cable/Satellite Television.....	24
7 Commission Rules and Public Laws that Impede Clearing.....	25
7.1 Waivers	25
7.2 Must Carry.....	26
8 Conclusion	29
Appendix A.....	31
Appendix B.....	33
Appendix C.....	35
Appendix D.....	44
Appendix E	45
Appendix F	64

Executive Summary

Effective mobile and portable communications are essential to public safety operations. Police officers, firefighters, emergency medical personnel and their departments use mobile and portable communications to exchange information that can help protect public safety officials and the citizens they serve. Traditionally, this information was mostly by voice. Increasingly, as public safety entities strive to increase efficiency and effectiveness in today's world, they also need the capability to transmit and receive high performance data, still images and video reliably. Spectrum is the road upon which such communications travel and increased communications requirements lead to the need for more spectrum.

Based on a thorough justification of need, Congress and the Federal Communications Commission dedicated 24 MHz of spectrum in the 700 MHz band to public safety in 1997. However, six years later, incumbent television stations operating on channels 62, 63, 64, 65, 67, 68 and 69 prevent public safety access of this essential resource in most major urban areas where the demand for more spectrum is the greatest. The recent focus on increased interoperability and Homeland Security make availability of this public safety spectrum nationwide even more critical. Current law and policies set December 31, 2006 as the date for clearing television from the band. However, this is not a firm date. Broadcasters do not have to clear the band until 85% of the households in their service areas have the capability to receive digital TV, an environment unlikely to be met in most markets by yearend 2006.

In hearings on the public safety spectrum issue, some members of Congress expressed concern that a firm clearing date would impact the viewing public. As shown in this paper, the potential harm to the viewing public is minimal, compared to the public safety need for this spectrum, which Congress and the FCC already confirmed. First, only 75 stations, equaling 5% of the 1500 U.S. TV stations, impact public safety's availability of its 700 MHz band spectrum. Second, Motorola's analysis of independent television industry data shows that on average, only 14% of the TV households who have the option to view these stations actually do so at all and that of those viewing, 82% watch by cable. This means that, on average, only 3% of the TV households within these stations' coverage areas tune to these stations over-the-air sometime during an average week. Therefore, the public interest benefits of clearing the 700 MHz spectrum for public safety access nationwide no later than December 31, 2006, far outweigh those of allowing it to stay encumbered by television.

Additionally, we recommend a number of options that may accelerate the clearing of these TV stations, for enactment by the FCC and/or Congress. These include: (1) require analog TV stations to cease analog operations and operate only on their digital channel; (2) allow analog TV stations to temporarily move their analog operations and operate in analog mode on their digital channel; and (3) allow analog TV stations to temporarily stop over-the-air broadcasts and operate only via cable or satellite TV. While these may provide some quicker access, they do not preclude the need for Congress to change the law, removing the exceptions, so that December 31, 2006 is a firm date by which all TV stations must clear from channels 62, 63, 64, 65, 67, 68 and 69.

1 Introduction

Wireless communications is a critical tool for state, local and federal governments, as well as critical infrastructure, transportation and private industries, especially in view of today's heightened security concerns. This is particularly true for our nation's public safety first responders, where having the right information immediately available at the point of decision, wherever needed, is critical for protecting themselves and the citizens they serve. Simply put, public safety's uncompromising mission critical communication requirement is to have the right information, to the right people, at the right point in time, whether that information is transferred via voice, data or images. Public safety users best state this requirement as:

“The first priority must be to provide public safety with mission critical radio communication systems that provide reliable agency-specific – police, fire, EMS – communications. (Mission critical radio communications are those required when life or property is at stake.)”¹

Any discussion of wireless communications must begin with an explanation of radio spectrum. Communications systems use electromagnetic waves to send voice and data information across the airwaves. While the engineering and physics may be complicated, the most important point is that wireless communications cannot take place without users having access to sufficient spectrum in which to operate their communications systems. Spectrum designated for exclusive use by public safety is the lifeline to their emergency response, detection and prevention capabilities. The bottom line is that without access to adequate spectrum, wireless communications cannot take place, effectively and ubiquitously.

Spectrum is a finite resource for which more and more users of ever-growing wireless technologies are increasingly competing, especially in metropolitan and even suburban areas. Non-federal use is regulated by the Federal Communications Commission (FCC or Commission).² As state and local governments are also experiencing growth in number of users, agency jurisdictional coverage areas, and introduction of new technologies, existing public safety radio channels are becoming extremely crowded in these dense population centers.

Recognizing this urgent need for additional spectrum, the public safety community through the Public Safety Wireless Advisory Committee (PSWAC), issued a report on September 11, 1996 that documented the need for 97.5 MHz of additional spectrum to meet their communications needs

¹ “When They Can't Talk, Lives Are Lost” brochure, February 2003, developed by The National Task Force on Interoperability (NTFI), page 7. NTFI is comprised of members from 18 major national associations for local and State elected and appointed officials and public safety officers.

² The National Telecommunications and Information Administration regulates spectrum for federal government users and in many cases works jointly to with the Commission to address spectrum related issues of interest to both users.

through 2010.³ The greatest amount of this spectrum is needed for emerging advanced wireless wideband and broadband technologies, adapted for mission critical public safety applications. These include high-speed data, intranet access, imaging and video transfers and on-scene multi-media mobile command communications. The need for additional spectrum continues to exist and is even more critical today given the nationwide public safety focus to improve Homeland Security.

Recognizing public safety's need for spectrum, in 1997 Congress and the FCC reallocated 24 MHz of spectrum from TV channels in the 746-806 MHz band (TV channels 60-69) to support mission critical public safety communications. This band is generically called the 700 MHz band. Specific band segments within 700 MHz allocated to public safety are 764-776 MHz (TV channels 63 and 64) paired with 794-806 MHz (TV channels 68 and 69). Television stations within channels 60-69 are expected to vacate this spectrum as part of the transition from analog to digital television.

Notably, access to the 700 MHz band essentially doubles the spectrum public safety has to support wide area operation. The 700 MHz band is critical to public safety for two key reasons:

- (1) Together, the new 700 MHz and current 800 MHz bands provide the best opportunity to integrate interoperable communications. The 700 MHz band's close proximity to the 800 MHz band allows public safety agencies to expand their current 800 MHz narrowband voice and data systems for interoperability and regional coordination on an "intra" as well as "inter" agency basis. New portable and mobile radios, as well as infrastructure equipment, capable of operating in both the 700 and 800 MHz frequency bands in one radio are commercially available today. The Commission adopted Project 25 Phase 1 as the interoperability standard for narrowband voice and data communications in the 700 MHz band.⁴ Further, the Commission last year granted each state a license to operate such narrowband communications in the 700 MHz band. At the local level, public safety users are completing regional plans required by the Commission to start implementing local and regional systems.
- (2) 700 MHz is the only dedicated spectrum allocation where public safety can implement advanced mobile wide area systems that bring high-speed access to databases, the internet/intranet, imaging and video to first responders in the field.

The wideband technology to deliver high-speed data in the 700 MHz band offers a whole new level of mobile communications capabilities, which is far beyond today's voice and low speed data applications. For example:

- a. An officer or agent could transmit video of a potential bomb, or biological weapon and get real time counsel from an expert in another location.

³ Final Report of the Public Safety Wireless Advisory Committee to the Federal Communications Commission and the National Telecommunications and Information Administration, September 11, 1996, p3.

⁴ FCC Fourth Report and Order and Fifth Notice of Proposed Rulemaking, "The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010", WT Docket No. 96-86, released January 17, 2001.

- b. Local or state police could instantly send or receive a photograph of a missing or abducted child.
- c. Crime scene investigators can transmit live video of footprints, fingerprints and evidence to speed analysis and apprehension of perpetrators.
- d. Firefighters can access building blueprints, hydrant locations hazardous material data and other critical information.
- e. Paramedics can transmit live video of the patient to doctors at the hospital that could help save lives.

Motorola and Pinellas County, Florida, conducted a successful trial of technology that can provide all of the above capabilities as part of what we refer to as the Greenhouse Project. A subsequent Greenhouse Project is being finalized with another major metropolitan public safety department. The capabilities demonstrated are the emerging powerful multi-media applications that will bring public safety communications into the Twenty-First Century. Public safety users have completed the wideband interoperability standard through the Telecommunications Industry Association (TIA). In turn, TIA recommended this standard, identified as TIA-902, to the Public Safety National Coordination Committee (NCC), the Advisory Committee created by the Commission to provide recommendations on the use of the 700 MHz. As it did with the Project 25 narrowband standard, the NCC recommended the TIA-902 standard to the Commission for subsequent endorsement as the wideband interoperability standard in the 700 MHz band.⁵

Unfortunately, because of incumbent broadcast television use, most of this nation's largest metropolitan area public safety agencies cannot use this spectrum today, nor can they predict with any certainty when they might have access to these frequencies. Therefore, they cannot deploy, nor plan for the deployment of, the interoperability and advanced technology that will improve their effectiveness and safety. Under current law, while TV incumbents are required to vacate this spectrum at the end of 2006, they can receive an unlimited extension of this deadline based on the state of the transition in their particular market. Specifically, the Balanced Budget Act of 1997 set the guidelines for determining the end of the transition to digital television in a given market. The law set a conditional deadline of December 31, 2006 for broadcasters to complete the transition to digital broadcasting, stating that the Commission may not renew a television broadcast license that authorizes analog television service for a period that extends beyond that date. However, an analog broadcaster may request an extension of the deadline if it can demonstrate any one or more of the following are not met in that market area:⁶

1. Fewer than 85% of the households in the broadcaster's market are capable of receiving digital broadcasts. To be counted as broadcasts, households must be able to receive any one digital broadcast over-the-air using a digital TV set or analog set equipped with a digital-to-analog set-top converter box or be able to receive at least one digital programming channel of each broadcaster in the market from a multi-channel video programming distributor (MVPD) such as a cable system.

⁵ NCC Final Report to FCC Chairman, Michael Powell, by NCC Chair, Kathleen M.H. Wallman, July 25, 2003, filed as ExParte under WT Docket No. 96086.

⁶ Congressional Budget Office Paper, "Completing the Transition to Digital Television", September 1999.

2. One or more of the four largest networks has an affiliate in the broadcaster's market that, despite the "due diligence" required by the law, is not broadcasting a digital signal.
3. Digital to analog converter technology is not readily available in the broadcaster's market.

The law leaves most of the details of the market penetration test to the Commission's discretion.⁷

Many experts seem to accept that the 2006 date is not likely to be met in any television market. As a result, there is no "hard date" by which TV stations must vacate this spectrum to allow for public safety access, a situation that leaves the public safety community and those who support its efforts and needs unsure of the future.

In order for any public safety agency to use the spectrum it has been assigned in the 700 MHz band, any TV stations operating on those public safety transmit and receive frequencies (referred to as the co-TV channels) must have ceased operations. In addition, any TV stations in that market that are operating one TV channel up or down from the co-TV channel (referred to as the adjacent TV channels) also must have ceased operations. In effect, as many as seven TV channels (62-65 and 67-69) must be cleared before first responders in that market will be able to access the 24 MHz of new spectrum and deploy the equipment that uses this spectrum.

The purpose of this paper is to share Motorola's market and engineering analysis into this TV clearing issue. Motorola provides the results to date of this effort.

2 Incumbent TV Stations in 700 MHz Band

Before addressing the impact on TV viewers, it is necessary to understand why TV must be cleared to provide public safety access to its 700 MHz band spectrum. Sections 2 and 3 of this paper offer information to help provide that understanding.

Motorola has developed maps that identify the areas of blockage caused by TV broadcasters that are operating today on the public safety co-channels and adjacent channels throughout the country.⁸ As shown in the following Figure 1, public safety systems operate in a pairing of transmit and receive channels, in previous TV channels 63 and 68, and 64 and 69.⁹ In addition, adjacent channels would impact their operations. For the TV channels pairing of 63 and 68, the adjacent TV channels are 62, 64, 67 and 69. For the TV channels pairing of 64 and 69, the adjacent TV channels are 63, 65 and 69. The spectrum above TV channel 69 is already allocated to and used by land mobile radios (starting at 806 MHz), so there is no upper adjacent TV channel above channel 69.

⁷ ID.

⁸ Based on FCC current TV license data. These maps do not include Canadian and Mexican stations that border the U.S. Access to the 700 MHz public safety spectrum in the border areas is also dependent on negotiations with Canada and Mexico to facilitate clearing of any TV operations they have on channels 62-65 and 67-69. Canadian and Mexican regulatory agencies are also evaluating the benefits of making 700 MHz band spectrum available to public safety.

⁹ Figure 1 legend: PS = public safety, CMRS = Commercial Mobile Radio Service

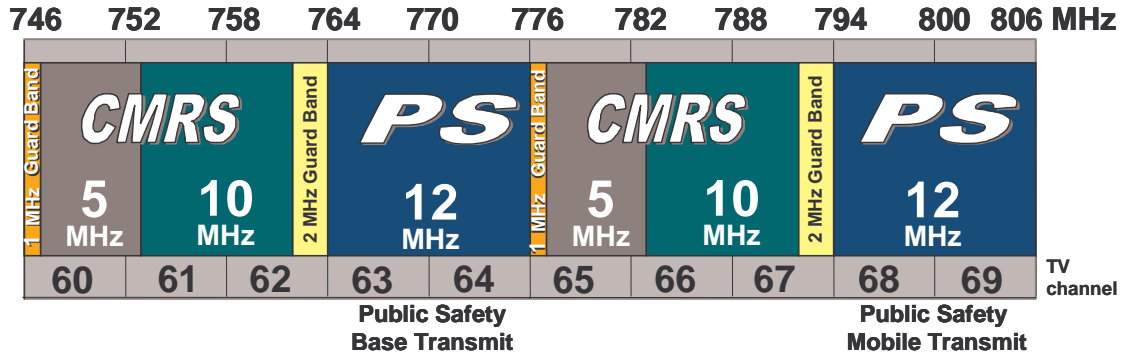
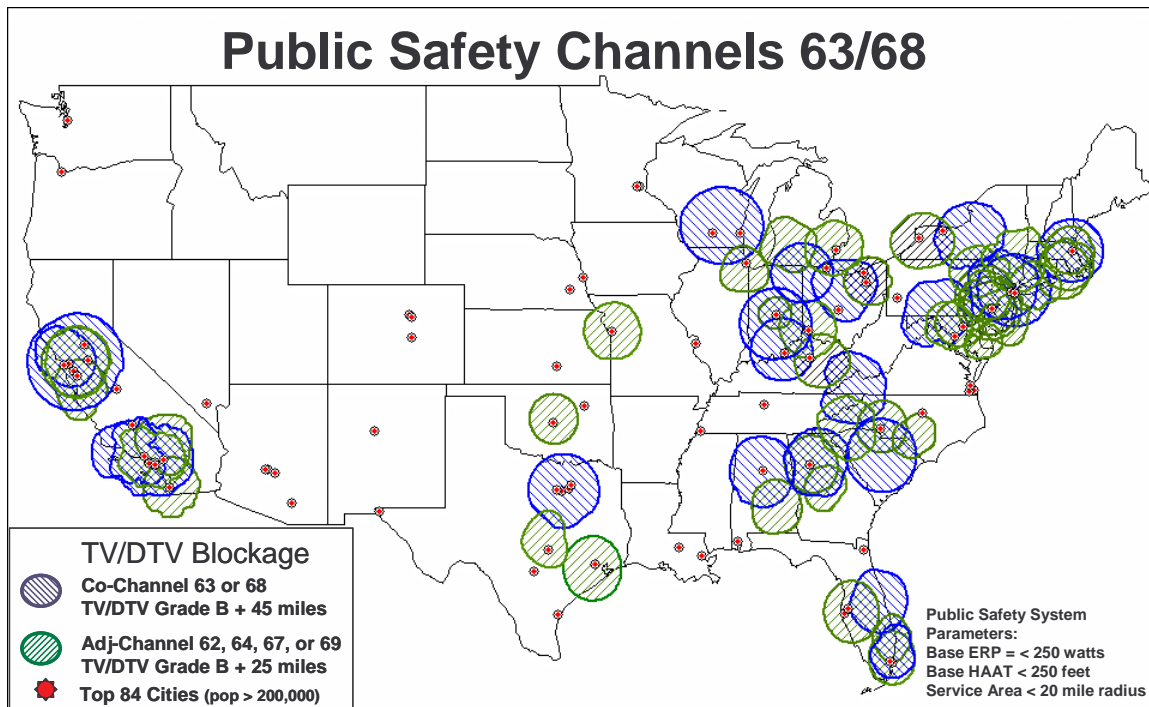
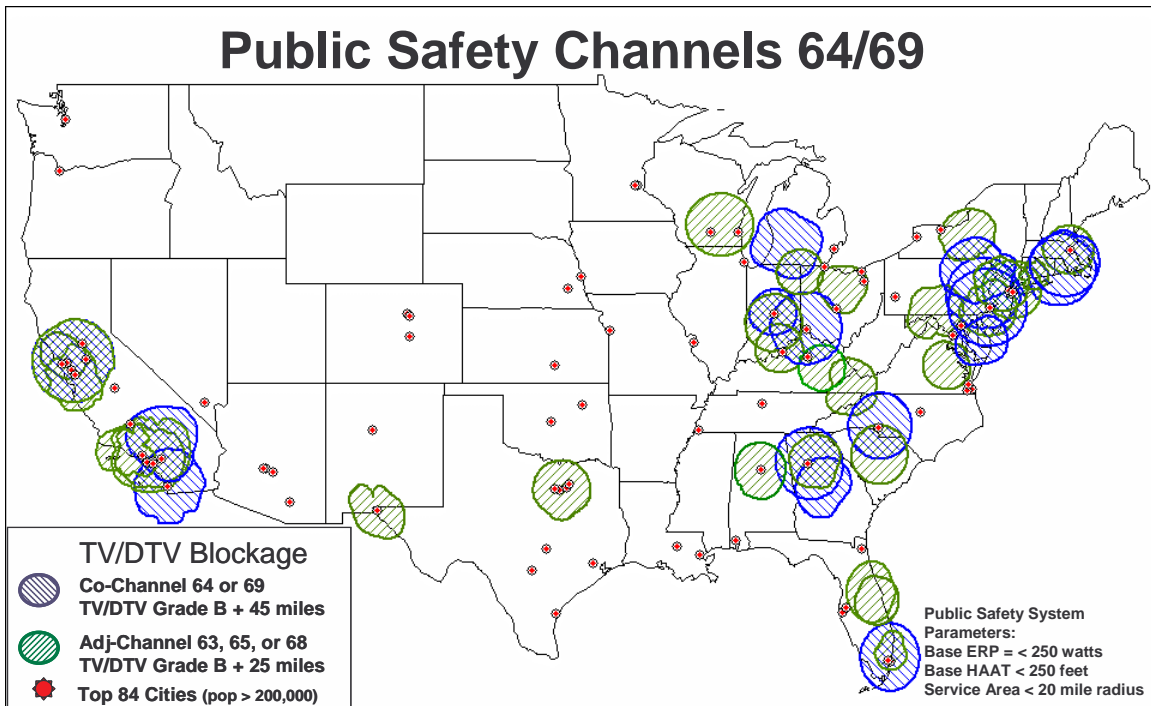


Figure 1: Current 746-806 MHz Band Plan

The following Map 1 and Map 2 show the implications of existing operations on each of the two pairings. The shaded circles indicate those areas where public safety agencies are currently blocked from using this spectrum by TV incumbents operating on the co-channels and/or the adjacent channels. The "blockage" areas, referred to as preclusion zones, are approximately 100 mile radius around TV stations operating on a co-channel basis and approximately 80 mile radius for TV stations operating on an adjacent channel. See the following Section 3 for a detailed explanation of preclusion zones.



Map 1: Areas where public safety is prevented from accessing Channel pair 63/68 due to existing TV stations.



Map 2: Areas where public safety is prevented from accessing Channel pair 64/69 due to existing TV stations.

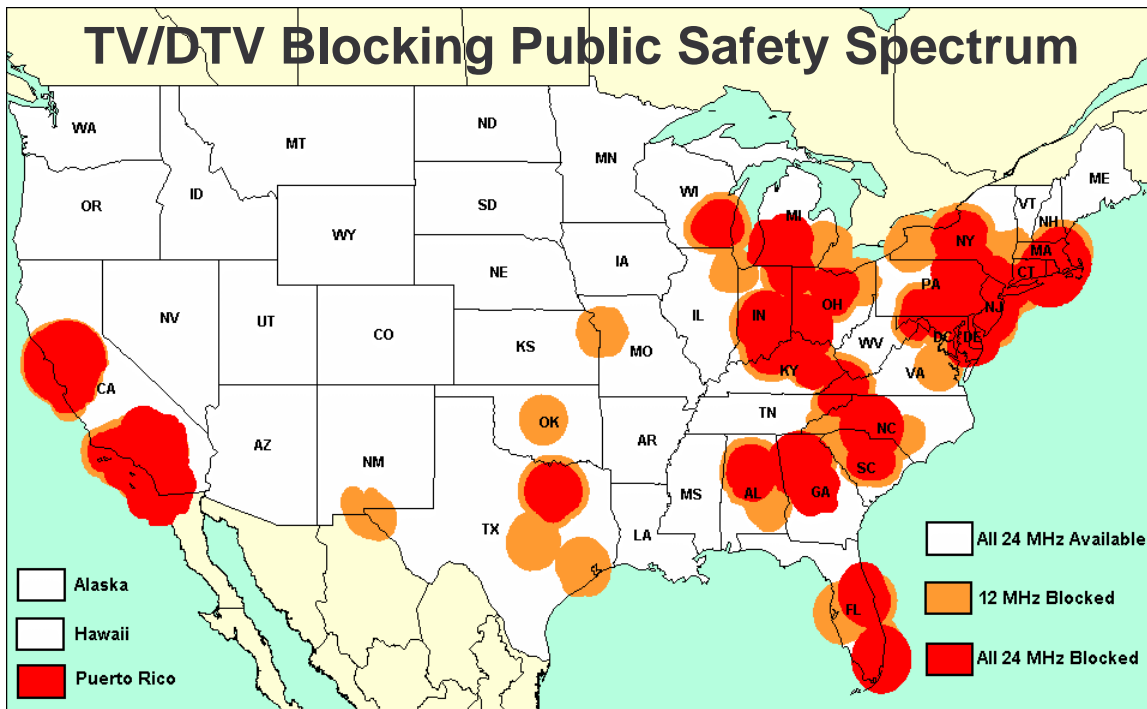
Combining the preclusion zones shown in the above Maps 1 and 2 provides a total view of the impact TV broadcasters have today on public safety access to the spectrum that was allocated to them six years ago. We have created a combined view, Map 3, which shows this impact on public safety access. Out of approximately 1500 TV stations operating in this country today, there are currently a total of 75 analog and digital TV stations operating on channels 62-65 and 67-69 in the 50 States and Puerto Rico that are causing this blockage.¹⁰

Map 3 shows those areas where existing TV stations block access to public safety communications in the 700 MHz spectrum allocated to public safety. In most of these areas, TV stations totally block access to public safety. These are the red areas on the map. This is where TV stations block both of the public safety channel pairs - all 24 MHz. That is, neither TV pairings of 63 and 68 nor 64 and 69, along with their respective adjacent channels, are available for access by public safety. An estimated 54% of the country's population lives in these areas where public safety has no access to 700 MHz spectrum.

¹⁰ See Appendix A for listing of TV stations, based on FCC TV Engineering Database – August 2003.

In a few metropolitan areas, TV stations block access to one half of the public safety spectrum.¹¹ These are the orange areas on Map 3. This is where TV stations block one of the public safety channel pairs - 12 MHz. An additional 16% of the country's population lives in these areas where public safety has only access to one half of their 700 MHz spectrum.

In total, 70% of the country's population lives in these totally blocked and half blocked areas.¹² It is no surprise that these blocked areas are in our nation's densest population centers, where public safety urgently needs access to the spectrum. Comparison of orange areas to the red areas also shows that clearing only half the 700 MHz Public safety spectrum allocation would yield little incremental access area (orange), while the difficulty is almost as great as that needed to clear the entire public safety 700 MHz band allocation (red and orange). See Appendix B for detailed spectrum availability to public safety in each of the top 84 cities.¹³



Map 3: Areas where co-channel or adjacent channel TV stations block access either to all (24 MHz) or to one half (12 MHz) of public safety spectrum.

¹¹ Some of the red areas show a larger orange area around the red areas. In these cases, the red is caused by TV on adjacent channels (smaller preclusion zone), while the orange is caused by TV on co-channels (larger preclusion zone).

¹² Population data was analyzed for every county within each of the preclusion zones (the red and orange areas within which public safety access to spectrum is impacted) on Map 3, then compared to the total U.S. population.

¹³ Top 84 cities represent those cities having populations over 200,000. City population based on 1994 Census data.

A review of all of these maps and the underlying information used to create them yields the following main conclusions:

- 1. Only 5 percent of TV stations operating in the U.S. today prevent over half the U.S. citizens from receiving any benefits of improved public safety communications in this new 700 MHz public safety band.*
- 2. Clearing both co-channel and adjacent channel TV stations from this band is critical to provide public safety access to its spectrum allocation.*
- 3. The clearing initiative should ensure that the entire 24 MHz of spectrum is made available nationwide.*

3 Preclusion zones

The presence of a television transmitter on channels 62, 63, 64, 65, 67, 68 or 69 will preclude public safety use of the 700 MHz band spectrum within an area that is approximately 2 to 3 times the coverage area of the TV station. Therefore, it is possible for a television station to preclude public safety use in both its own market and in adjacent markets.

The FCC Rules (47 CFR §§ 90.309 & 90.545) that define the spacing between new, primary public safety land mobile services and incumbent TV broadcast services are designed to minimize the interference to television reception throughout the television station's Grade B viewing area. The Grade B contour predicts a television station's coverage based on the station's power, antenna height and the height of surrounding terrain and the Commission's historical experience and models for predicting coverage. While each station's actual coverage varies, a typical predicted Grade B Service Area contour covers an average radius of about 55 miles.

Similarly, the FCC relies primarily on predicted coverage of public safety systems. A typical public safety Land Mobile Radio (LMR) service area contour is about 20 to 25 miles in radius. That is, mobile radios will communicate 20-25 miles to and from their associated base station(s). The following typical suburban land mobile base station parameters were used in our analysis of the areas blocked by incumbent TV stations: 250 watts effective radiated power (ERP) with 250 feet height above average terrain (HAAT).

An additional 20 to 25 mile spacing is required between the outer edges of the television and public safety coverage contours to minimize interference to fringe area TV receivers. As shown in Figure 2, this brings the total separation between a TV transmitter site and a co-channel land mobile base station site to about 100 miles (55 miles for TV Grade B coverage, plus 20 miles for LMR

coverage, plus 25 miles interference protection). Therefore, the typical television station precludes co-channel public safety base stations over an area of about almost 7900 square miles, over three times the area of the TV station’s predicted coverage. It precludes mobile use associated with those base stations over an area of approximately 5000 square miles, over twice that of its own predicted Grade B coverage area. For channels that support mobile operation, the preclusion area is further expanded when control stations are also used on those channels.¹⁴

LMR services operating on an adjacent TV channel can be spaced somewhat closer because the interference is attenuated by the TV receiver’s selectivity. The FCC Rules basically allow the mobiles to operate within 5 miles of the TV Grade B contour. As shown in Figure 3, this brings the total separation between a TV transmitter site and an adjacent channel land mobile base station site to about 80 miles (55 miles for TV Grade B coverage, plus 20 miles for LMR coverage, plus 5 miles interference protection).

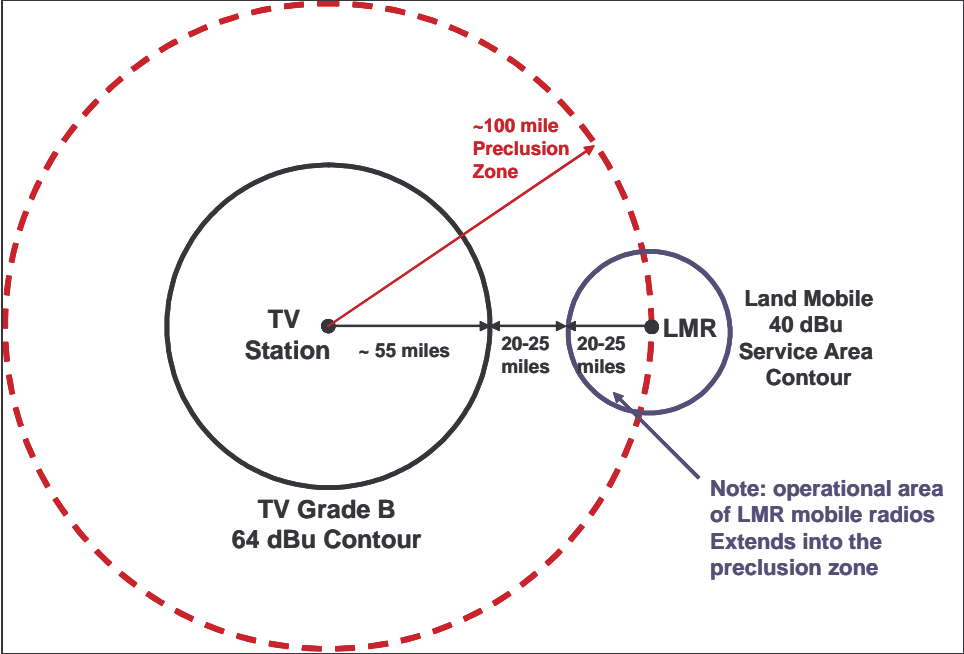


Figure 2: 100 mile Co-Channel Preclusion Zone

¹⁴ Control stations are routinely used in the operation of public safety systems.

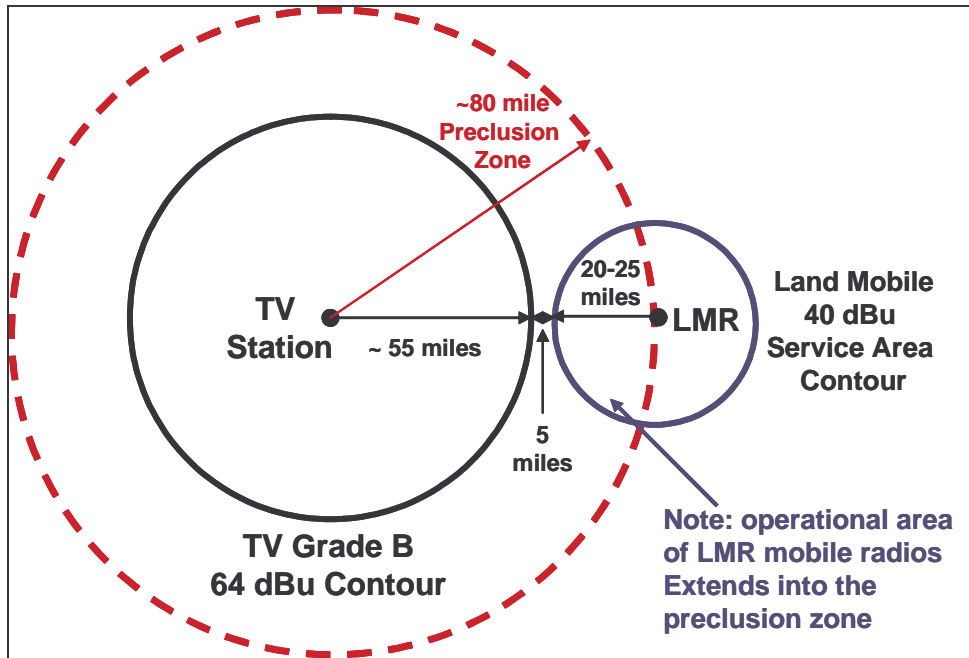


Figure 3: 80 mile Adjacent-Channel Preclusion Zone

Pending television clearing, it may be possible, on a case-by-case basis, to space some new public safety land mobile systems closer to incumbent TV broadcast services than the tables in the FCC rules (47 CFR § 90.309) normally allow. While potentially useful for some specific public safety users, this provides only marginal improvement for potential public safety access on a nationwide basis to the 700 MHz spectrum prior to television clearing, as discussed below.

The FCC rules (47 CFR § 90.545) allow terrain based engineering analysis to be conducted using the actual parameters of TV and land mobile stations. Actual parameters (terrain barriers, antenna patterns, lower radiated power) may be used to show that the land mobile base station could be located closer to the theoretical TV Grade B contour without causing interference. These actual parameters may mean that the TV station's Grade B contour does not extend out to the theoretical 55 miles. In addition, mobile radios for a specific public safety agency normally don't operate very far outside of their jurisdictional boundaries. To maximize frequency re-use and spectrum efficiency, public safety systems usually restrict the coverage of their land mobile system to the jurisdictional boundary or the boundary plus some small additional distance (typically 3 to 5 miles). Therefore, as shown in Figure 4, the radius of coverage of a public safety system site may be less than the 20-25 miles assumed by the tables in the FCC rules (47 CFR § 90.309). However, where multiple jurisdictions throughout an area need 700 MHz for interoperability, the reduced coverage area of any single jurisdiction may have little impact on the ability of public safety to use the spectrum.

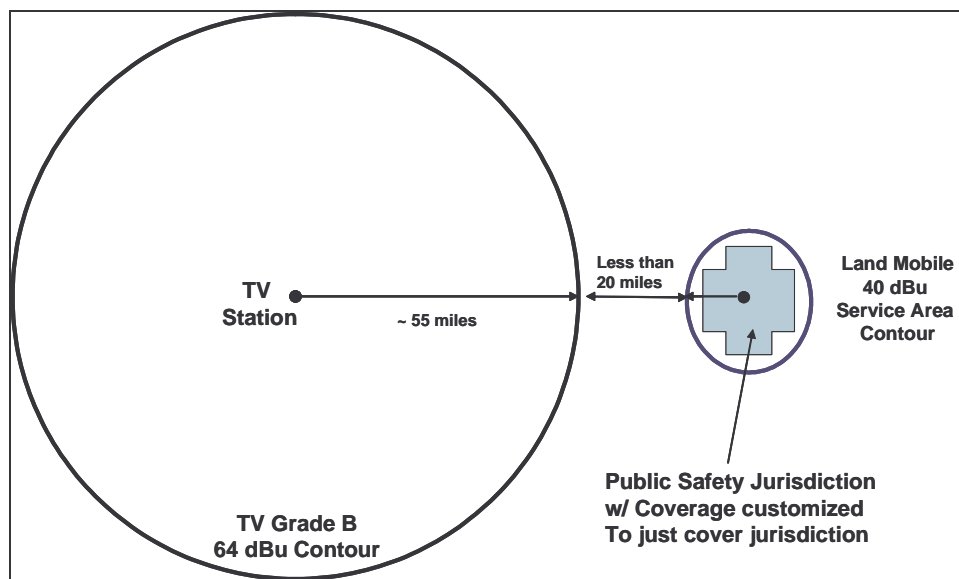


Figure 4: Customized coverage of specific public safety system may allow it to be spaced closer to TV Grade B contour

The 700 MHz public safety spectrum is divided into 2 types of services; narrowband (mainly for voice) and wideband (data and multi-media). Each 6 MHz block of spectrum (one TV channel) is split into a 3 MHz block of narrowband spectrum and a 3 MHz block of wideband spectrum. As shown in Figure 5, if a public safety agency is designing a system using narrowband on the channel adjacent to a TV station, and the narrowband spectrum block is located 3 to 6 MHz away from the edge of the TV channel, then it may be possible to place base stations closer to the TV Grade B contour or at limited locations inside the Grade B contour. Previous FCC Reports have shown that typical NTSC TV receivers have 20 to 40 dB additional protection (selectivity) in the range from 3 to 6 MHz from the channel edge, than in the range 0 to 3 MHz from the channel edge.¹⁵ This additional 20 to 40 dB of protection may allow mobiles to operate up to the TV Grade B contour or at limited locations inside the Grade B contour. Public safety systems must generally be located outside the adjacent channel's TV Grade B contour or in strong TV signal areas to avoid base stations and/or mobiles from interfering with TV reception in fringe or weak TV signal areas. However, there may be interference to land mobile base station and mobile receivers if public safety systems are located in very strong TV signal areas near the TV transmitter site. Terrain based engineering and interference analysis must be conducted using the actual parameters of TV and land mobile stations to determine the limited locations inside the adjacent channel's Grade B contour where public safety systems could be placed without causing or receiving interference.

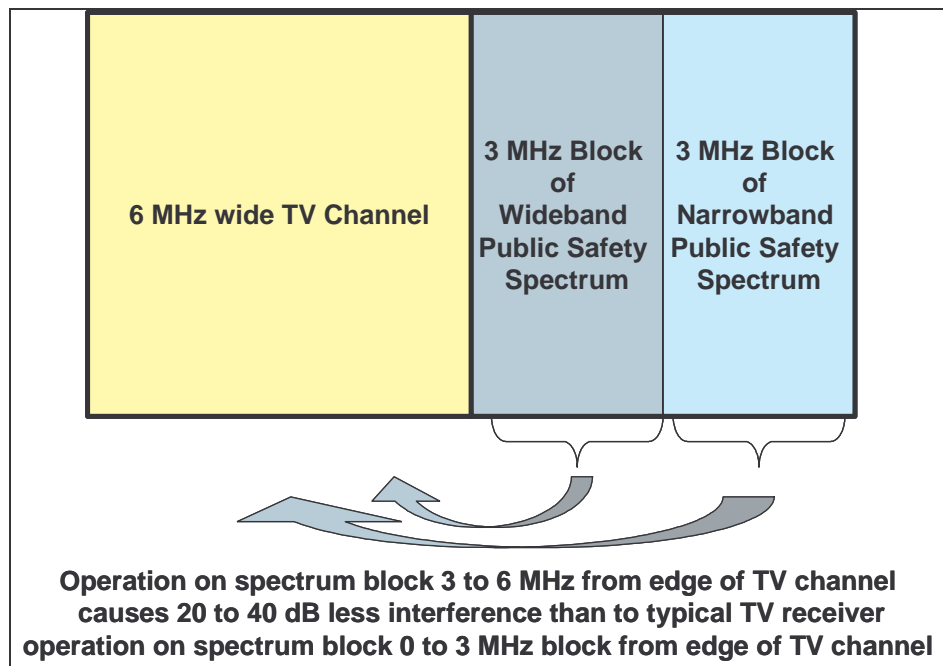


Figure 5

¹⁵ FCC/OET TM87-1 (April 1986) Receiver Susceptibility Measurements Relating to Interference Between UHF Television and Land Mobile Radio Services (Project No. EEB-84-4) by Daniel J. Stanks

Therefore, we conclude the following:

- 1. Case-by-case engineering considering actual TV or land mobile parameters and/or use of partial TV channels may provide some marginal relief in markets near those which contain co-channel or adjacent channel TV stations; but*
- 2. Such steps provide almost no relief for the same market in which a co-channel or adjacent channel TV station is located.*

4 Potential Impact on Channel 62-65/67-69 Viewers

As shown in the previous sections, incumbent television use of the 700 MHz band precludes use of the spectrum by public safety in the majority of densely populated areas, precluding deployment of vitally needed new wideband technology, as well as precluding the ability to expand capacity with 700 MHz systems that can interoperate with their existing 800 MHz systems. Providing a date certain by which broadcasters must vacate this spectrum is the best way to ensure its availability for public safety and to provide public safety with the certainty necessary to effectively plan for deployment of new systems. Given the current state of the transition to digital television, the original December 31, 2006 target date for completion of the transition appears unrealistic. However, providing a date certain for clearing channels 62, 63, 64, 65, 67, 68 and 69 to make this spectrum fully available for use by public safety could be reasonable when one looks at that the actual limited impact to viewers given available options.

Key elements for public safety to begin using this spectrum are in place, if the incumbent broadcasters were moved. The spectrum is allocated, states have already received licenses to use the 700 MHz band and local jurisdictions are engaged in regional planning needed to get a license. The FCC has adopted a 700 MHz narrowband interoperability standard and 700 MHz narrowband portable, mobile and base station equipment which meets that standard is available today. Available 700 MHz mobiles and portables also cover the 800 MHz band, supporting improved interoperability across multiple departments or jurisdictions. A 700 MHz wideband interoperability standard has been published by TIA. The public safety community has already recommended that standard to the FCC. Wideband technology consistent with this standard has been trialed in the public safety environment.

To better understand the potential impact on TV viewers currently tuning into these channels, we reviewed independent industry viewership data available for all of the 75 analog and digital TV stations currently operating in channels 62-65 and 67-69 in the 50 States and Puerto Rico. These are the stations that impact public safety use of the 700 MHz band. Appendix C shows the results of our analysis for all TV stations reporting viewership.¹⁶ It shows the total number of TV households within a TV station's viewing area, identified as the Grade B contour, for that station's Designated Market Area (DMA) and adjacent DMA's that fall within that viewing area. We then

¹⁶ Based on Warren Communications Television and Cable Factbook - Online. About 35% of the TV stations did not report viewership data. Generally these are public broadcasting and other non-commercial stations, which are not required to do so. No data is reported for the 5 stations in Puerto Rico.

compared that to the average number of TV households who actually watch that particular TV station on channels 62-65 or 67-69, at least once during the week. The number of TV households actually watching a channel 62-65 or 67-69 station is further separated into those who watch via cable versus non-cable (over-the-air or satellite).¹⁷

Results of our analysis show the following:

1. On average, only 14% of the TV households within these stations' viewing areas actually watch at least once during the week.¹⁸ That is, of the households who have the option to watch the TV stations on channels 62-65 and 67-69, on average fewer than 1 out of 7 actually do so at least once a week.
2. 82% of the households, over 4 out of 5, who actually watch channels 62-65 or 67-69 do so over cable. The remainder of the households watch either over-the-air or via satellite.
3. Of the total TV households within a channel 62-65 or 67-69 station's coverage area, the median number of households watching that station over the air (or via satellite receiver) is only 3%.¹⁹ That is, on average, fewer than 1 out of 30 households in the viewing areas actually watch these stations over-the-air at least once per week.

The analysis points to two important conclusions: (1) there is an overall low percent of TV households who view the TV channel 62 through 69 stations, except for a few mainly major network stations (2) Of those viewers who do watch channels 62 through 69, a very high percent watch over cable. As a result, if TV channel 62 through 69 stations were required to turn off all over-the-air broadcasts today, an average of only 3 % of the TV viewing households in each station's viewing area would be adversely affected.

To show the minimal impact on TV viewing households compared to the realizable benefits of improved 700 MHz public safety communications for the entire population in a major metropolitan area, we further analyzed four metropolitan areas. See Appendix D. Highlights of metro analysis show the following:

1. BOSTON – Out of 22 TV stations serving the market, 2 stations (plus another 2 stations that don't serve the Boston market) prevent improved public safety communications for about 7.4 million people. Only an average 3% of the TV households would be impacted if these stations no longer transmitted over-the-air.
2. CHICAGO - Out of 16 TV stations serving the Chicago Market, 1 station (plus 1 other station that doesn't serve the Chicago market) prevent improved public safety

¹⁷ Data to further separate over the air and satellite use was not provided. The assumption can be made that the over the air viewership is somewhat less than the non-cable totals.

¹⁸ This statistic is the median, meaning that one half of the stations have greater than 14% and half have lower than 14% viewership.

¹⁹ Only 4 stations exceeded 10%, none exceeded 20%.

communications for about 9.3 million people. The Chicago market station is reported to have 100% cable viewership. Data was not reported for the other station, in Fond du Lac, Wisconsin.

3. DALLAS/FT. WORTH - Out of 18 TV stations serving the market, 1 station (plus 1 other station that doesn't serve the Dallas market) prevent improved public safety communications for about 6.2 million people. An average 6% of the TV households would be impacted if these stations no longer transmitted over-the-air.
4. DETROIT - Out of 10 TV stations serving the market, 1 station (plus 2 that don't serve the Detroit market) prevent improved public safety communications for about 7.4 million people. An average 15% of the TV households would be impacted if these stations no longer transmitted over-the-air. This statistic is high relative to most cities, because the Detroit station on channel 62 is CBS, which 15% of TV households watch over-the-air.

Conclusions:

1. *The major pieces are in place to allow public safety to begin using the 700 MHz band. Essentially all that remains is for Congress and the FCC to clear TV incumbents out of the band. Doing so no later than December 31, 2006 would provide public safety with timely access on a nationwide basis.*
2. *Independent television industry data shows that clearing TV from the 700 MHz band will impact only a small percentage of the viewing public.*

5 Multiple Viewer Options in Markets Served by Channel 62-65, 67-69 stations

The above analysis shows that clearing channels 62-69 could be achieved with impact to only a minimal percentage of the TV households. The remainder of this paper examines various alternatives for clearing the TV stations from channels 62-65 and 67-69. If, after the following options or various combinations of these options have been implemented, there are any TV viewers remaining who still cannot receive a specific channel 62-65/67-69 broadcast, even these impacted households would not be left without similar over-the-air programming options. Appendix E identifies all TV stations operating over-the-air in DMA's that currently have one or more TV channel 62-65 or 67-69 stations operating in that DMA.²⁰ It further identifies the programming format of each station to show whether impacted TV households (who watch channel 62-65 or 67-69 stations over-the-air) have other TV channel choices that feature similar programming. While programming alternatives are somewhat subjective, based on individual viewer preferences, this

²⁰ Data is derived from the following sources:

- (A) 100K Watts US Radio and TV Directory,
- (B) Warren Communications Television & Cable Factbook: Online
- (C) MediaPost.com

analysis does show that in many DMA's viewers have similar programming alternatives to the channel 62-65 or 67-69 stations.

6 Options facilitating clearing of Channels 62-65 and 67-69

While the most desirable mechanism for making the 700 MHz spectrum fully available to public safety is to complete the full conversion to digital television by December 31, 2006, it is widely recognized that unless Congress enacts date certain legislation requiring these stations on channels 62-65 and 67-69 to cease operating by December 31, 2006 without exception, this transition will extend well beyond that date. To facilitate more timely access to this spectrum by public safety entities, various options are suggested below to vacate current TV operations in channels 62-65 and 67-69 prior to the full transition to digital television. Options include (1) requiring broadcasters impacting public safety use to operate only on their digital allotment as of a date certain, (2) providing flexibility for broadcasters to temporarily operate in analog mode in the channel it is assigned for digital operations, and (3) delivery of service solely over cable/satellite television. These options will require action by the FCC and/or Congress as noted below and in the following Section 7. Also, while these options may provide some quicker access to the spectrum allocated to public safety on a case-by-case basis, they do not preclude the need for Congressional passage of December 31, 2006 date certain legislation.

6.1 Operate only in DTV Allotment

All broadcasters currently have two television channel allotments, one for analog TV operation and one for digital TV operation. Many of the analog stations currently have some form of digital operations in the digital allotment. As detailed in Appendix A, of the 75 TV stations operating on channels 62-65 and 67-69, 65 are currently analog stations and 10 are digital. As of September 1, 2003, the Commission database²¹ and NAB²² indicates that 32 of these 65 analog stations are currently also on the air in their digital allotment. The FCC rules mandate a schedule whereby all stations have to begin digital operation and should enforce this schedule.

In this option, analog TV stations operating in channels 62-65 / 67-69 will be required to cease such analog operations and be permitted to operate only in digital on their digital TV channel after a date certain.²³ The mandated date certain should be December 31, 2006, as specified in BBA-97, without the current allowance for market-by-market exceptions. This would be applied to the 65

²¹ FCC status of TV licenses can be obtained via the Media Bureau Consolidated Data Base Search Page at http://svartifoss2.fcc.gov/prod/cdbs/pubacc/prod/cdbs_pa.htm.

²² National Association of Broadcasters (NAB) indicates that as of September 9, 2003 that 1004 stations are operating in digital mode, details can be found at <http://www.nab.org/Newsroom/issues/digitaltv/DTVStations.asp>

²³ Three of the analog stations also have their digital operations in channels 62-65 or 67-69: KFTL channel 64 and 62 (DTV) in Stockton CA, KRCA channel 62 and 68 (DTV) in Riverside CA, and WECN channel 64 and 65 (DTV) in Naranjito PR.

analog stations currently operating in these channels. Stations would operate only on their digital allotment on channels that do not impact public safety use of the spectrum, i.e., other than channels 62-65 / 67-69.

This transition alone will not completely clear the TV channels 62-65/67-69 since 10 stations currently have digital allotments in those channels. The FCC should reassign new digital channels below channel 52 to these 10 digital stations, in order to also clear these stations out of the band.²⁴ In addition, until these stations are able to operate in digital on their new assignments, the FCC could authorize them to operate only on their current analog allotment below channel 52.²⁵

To minimize the impact on TV households currently watching channel 62-65/67-69 over-the-air, viewers could be provided access to digital-to-analog converters. This allows TV households who do not have digital TV sets to convert the digital signal back to analog for viewing the broadcast on an analog TV set. The cost of such converters depends on the market demand by all TV consumers.

Another way to limit the impact of this approach is to make the clearing of a TV station contingent on the LMR system implementation plans of the public safety entities within that TV station's preclusion zone. Under this proposal, a public safety entity will be required to provide notice to the FCC at least one year in advance of its intention to implement an LMR system. Any TV stations impacting the notifying public safety entity's use would be required to vacate their channel several months prior to the implementation date, so that the public safety public safety entity has assurance that the spectrum available for systems testing and implementation for system testing and implementation.

6.1.1 Waiver already approved by Commission

The FCC recently approved digital only operations to facilitate vacating the commercial lower 700 MHz spectrum (TV channels 52-59). Commonwealth Public Broadcasting Corporation (CPBC), the licensee of analog noncommercial educational television station WNVT-TV, channel 53, and permittee of digital television station WNVT-DT, channel 30, Goldvein Virginia, petitioned the FCC, requesting authority to (1) cease analog broadcasting on channel 53 and surrender its license for the channel prior to the end of the DTV transition period, and (2) thereafter operate only in channel 30 as a digital-only station. The FCC granted the petition on September 3, 2003. While 3.3% of the population, or almost 150,000 persons, would no longer have access to the station's analog service after WNVT converts to digital, CPBC pointed out that only 3,000 television households within its viewing area (Grade B contour) reported viewing its over-the-air signal in November 2002. CPBC further reported that it has been off-the-air pending completion of digital conversion work at the transmitter site since May 2003, and "has received virtually no viewer complaints about the absence of an off-air signal" during this time.²⁶

²⁴ The FCC established channels 2-52 as the DTV core band for continued TV operation after the transition.

²⁵ This waiver approach does not work for the three broadcasters that operate both analog and digital stations in channels 62-65 / 67-69. The FCC should reassign them new digital channels below channel 52, and then allow them one of the 3 options named herein.

²⁶ FCC order, DA 03-2845, see http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-03-2845A1.doc

6.2 Permit analog operations in DTV allotment

Another possible way to help clear TV channels 62-65 and 67-69 as soon as possible is to allow broadcasters with an analog assignment on these channels to temporarily move their analog operations to their digital allotment on channels that do not impact public safety use of the spectrum, i.e., other than channels 62-65 / 67-69. The FCC recently reaffirmed its authority to permit such operations in light of the Auction Reform Act of 2002.²⁷ This option may not be feasible in all cases because of potential interference to other TV broadcasters. In order to assess such a relocation option, detailed engineering analysis must be performed to evaluate the potential for interference. To make spectrum available for public safety use, the FCC should provide greater technical and operational flexibility, as detailed below, on a temporary basis to TV stations that want to implement this approach. The station would ultimately be required to transition to digital operation in order to comply with FCC DTV implementation requirements.

The FCC rules define the TV spacing requirements, for various combinations of analog and digital TV operations.²⁸ These spacing requirements are based on typical parameters of the TV stations, and were developed to minimize interference signals between TV channels. Because analog-to-analog spacing requirements have become institutionalized over about the last half-century, these requirements have not evolved with potential receiver performance capabilities. Digital spacing rules are based on new, improved digital receiver performance specifications. As a result, the analog-to-digital spacing requirements are generally shorter than the analog-to-analog spacing requirements. TV spacing requirements are based on typical operating parameters of analog and digital TV stations, such as power, antenna height and direction, carrier frequency and terrain. Pending the results of detailed analysis, the FCC may waive these requirements. “Short-spacing” is the term used to refer to TV stations operating at spacing distances less than the minimum required by the FCC rules.²⁹

To assess if short-spacing is possible, a detailed engineering analysis should be conducted, using actual TV station parameters and terrain based coverage analysis tools. Technical parameters that require detailed evaluation (e.g., lower power operation, directional antennas, shift in carrier frequency, terrain blockage) could allow these stations to be short-spaced and still provide adequate protection of all TV operations. This engineering analysis relies on proposed operating characteristics along with detailed information on the terrain surrounding the affected area to assess the interference potential to the viewership of other TV stations.³⁰

²⁷ FCC Second Order on Reconsideration of the Third Report and Order in WT Docket No. 99-168, FCC 03-236, November 3, 2003. See http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-236A1.pdf

²⁸ FCC rules 47 CFR 73.610 – minimum distance separations between (NTSC) stations, 47 CFR 73.698 Tables – Table II (NTSC “taboo” channel spacings), and 47 CFR 73.623 – DTV applications and changes to DTV allocations.

²⁹ Short-spacing is the case in which two stations are separated by less than the distance called for in FCC rule 47 CFR 73.610. In many cases, other terrain obstructions result in signal loss and will result in no additional interference to any TV operations, even though the standard spacing requirements are not met.

³⁰ The analysis uses location specific information to provide the most accurate prediction of interference levels using techniques for propagation such as those found in OET-69 (*Longley-Rice Methodology for Evaluating TV Coverage and Interference*). See http://www.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet69/oet69.pdf

In many instances, modifying a station’s radiated power may allow it to be short-spaced against another TV station. This normally results in the station having to modify its TV viewing (coverage) area for the TV viewers actually watching the station over-the-air. It can reduce the coverage area in one particular location while increasing coverage in another. However, a reduction in coverage area does not necessarily translate to an equivalent percentage reduction in the TV households covered. Often, the TV station covers a population center (principal city center), while the population density near the coverage fringe, that is the outer edges of the Grade B contour, is significantly lower than the population near the center of the coverage area. In any case, cable coverage area could be maintained as is even if the over-the-air coverage were modified.

6.2.1 Waivers already filed at Commission

In response to an FCC decision in which the FCC adopted mechanisms intended to facilitate voluntary clearing of the 700 MHz band, several TV broadcasters operating in Channel 60-69 have petitioned the FCC to implement this approach. As shown in the following Table 1, the FCC has currently received 15 filings for TV broadcasters operating in channels 60-69 requested FCC permission to move their current analog operations and temporarily operate in analog mode on their digital allotment.³¹ Eight of these analog TV stations are currently operating in channels 62-65 / 67-69.³² However, the Auction Reform Act of 2002 limits the FCC’s ability to short-space TV stations, even in instances where no interference or loss of TV viewership would occur. As a result, a number of these applications are in jeopardy of being denied.³³

Table 1: Applications to operate in analog mode in digital allotment.

Station	Analog Channel	Digital Channel	Application Status
KOPX – Oklahoma City, OK	62	50	Approved – 3/26/2002
WPXQ – Block Island, RI	69	17	Pending
KPXD – Arlington, TX	68	42	Pending
WBPX – Boston, MA	68	32	Pending
WPXW – Manassas, VA	66	43	Pending
WXPX – Bradenton, FL	66	42	Pending
WLJC – Beattyville, KY	65	7	Pending
WQPX – Scranton, PA	64	32	Pending
WHSG – Monroe, GA	63	44	Pending
WPPX – Wilmington, DE	61	31	Pending
WNEU – Merrimack, NH	60	34	Pending

³¹ FCC Third Report and Order in WT Docket No. 99-168, FCC 01-25, January 18, 2001. See http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-01-25A1.pdf

³² See Appendix F for detailed applications.

³³ Report to Congress on Auction Reform Act of 2002 at 79, FCC 03-138, 19 June 2003. See http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-138A1.pdf. To date, the FCC has denied three applications, dismissed one, and approved one.

Station	Analog Channel	Digital Channel	Application Status
WRJM – Troy, AL	67	48	Denied – 6/13/2003
KPXO – Kaneohe, HI	66	41	Denied – 7/14/2003
WTJP – Gadsden, AL	60	26	Denied – 7/9/2003
WWPX – Martinsburg, WV	60	12	Dismissed – 7/14/2003

To support permitting analog operations on their digital allotments, the petitioners have proposed to adjust the station’s technical parameters to avoid causing interference. In doing so, some issues associated with the requested operations still remain and require specific temporary waivers of the Commissions rules:³⁴

- Short-spacing requirements – The Commission’s policies generally allow short-spacing between television stations in cases where there is no interference or where the interference is determined to be *de minimis* (below a level deemed negligible). In such cases, an engineering analysis based on actual systems parameters is used to determine the level of interference and the station’s coverage area. In conjunction with these short-spacing issues, some petitioners have requested relocation of analog operations with the following additional waivers:
 - Interference above *de minimis* from analog stations– Under current FCC policy, the interference level consider to be *de minimis* for DTV transmissions is a 2% loss of population while the interference level considered *de minimis* for analog transmissions is 0.5%. For transitions impacting the public safety channels the Commission should consider aligning the interference level that is considered *de minimis* from analog with the DTV definition. That is, operations for which interference causes 2% or below loss of viewer population should be considered as *de minimis* in these limited number of cases.
 - Agreements to exceed *de minimis* – In cases where the transition would result in exceeding the 2% *de minimis* policy, the Commission should consider any agreements that can be obtained by the broadcaster wishing to relocate with the affected party.
 - Creation of gray areas³⁵ – In trying to modify the operating parameters of the stations, areas may be created in which only one station can provide adequate coverage. While this may be undesirable for large populations, the Commission should consider permitting the creation of such gray areas where impact to the public is minimal. For example, alternate means of delivery such as cable could be considered.

³⁴ Most petitions show compatible operations based on *de minimis* interference to nearby stations operating in the same frequency bands. For interference from an analog station the *de minimis* requirement is no more than 0.5% as found in the FCC Order on reconsideration of the third report and order at ¶15 (FCC 01-258, http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-01-258A1.pdf, September 7, 2001). For interference from a digital station the *de minimis* requirement in FCC rule 47 CFR 73.623(c)(2) is that no more than an additional 2% of the population served by another station being subject to interference; provided, however, that no new interference may be caused to any station that already experiences to 10% or more of its population.

³⁵ Gray areas are where only one station provides adequate coverage to any particular population base.

- City grade coverage³⁶ – in some instances modifications to avoid interference have resulted in the Commission’s requirements for city grade coverage not being met. However, the impact is minimal because multiple stations still provide service to these areas and cable rather than over-the-air is the dominant means of delivery to the viewers.
- Loss of over-the-air reception – The proposed modifications to avoid interference may cause loss of over-the-air reception. However, in most instances those areas where over-air-reception from a single station is lost, viewers still receive adequate signal from multiple stations and other means, such as cable.
- Must carry implications – Due to loss of over-the-air coverage associated with minimizing interference, a broadcast station should retain the must carry rights and requirements associated with its original coverage area. This will minimize the impact to the viewing public since the overwhelming majority of viewers get their content via cable delivery (see Section 6).

It should be noted that all of the above waiver requests are temporary, i.e., once the stations transition to DTV operations these stations must meet the obligations under the current rules.

6.3 Delivery of service solely over Cable/Satellite Television

One option for stations that, for technical reasons, cannot operate on their digital allotments in analog mode or use the digital only operations option is to permit that station to temporarily stop over-the-air broadcast operations. In this situation viewers would be provided content via other distribution methods such as Cable and/or Broadcast Satellite or even by an agreement with other stations that serve the market.

As illustrated in Section 4, the great majority of viewers in many markets receive content via means other than over-the-air broadcast. Many cases exist where viewers receive content over cable systems in which the signals delivered to the customer are digitally transmitted through the cable system. Depending on the technology choice of the cable provider, the conversion to analog is performed at the cable headend or at the home. Many operators are upgrading cable systems to deliver digital content directly to the home to take advantage of the opportunity to provide other value-added services. In this case, conversion is performed in the home where a cable set top box will convert the signal to analog for viewing on analog TV sets.

While this will impact the relatively small percentage of viewers that receive the station over-the-air, in most cases viewers that are losing access to a single station will have coverage from multiple other stations, some of which provide similar programming, as detailed in Section 5.

³⁶ City grade coverage is the minimum signal level required to cover the city of license for the broadcast TV station. One of the principals used by the Commission to set this value is that a higher level will limit the extent to which stations could migrate away from their community of license (Presentation from Alan Stillwell of the FCC to ATSC forum, October 2001, <http://www.atscforum.org/presentations/FCC-Stillwell-eng.ppt>)

Conclusions:

1. *The Commission has multiple options open to it can implement to facilitate the early clearing of the television stations blocking access to public safety 700 MHz spectrum.*
2. *These options provide case-by-case relief and do not necessarily solve the clearing problem on a nationwide basis.*

7 Commission Rules and Public Laws that Impede Clearing

The current regulatory / legal environment will continue to hold back the clearing of the 700 MHz band unless changes are made to the current laws and the Commission takes appropriate action. The legal environment includes provisions in the Balanced Budget Act of 1997 and the Auction Reform Act of 2002 that negatively impact the timely access by public safety to this important spectrum.

7.1 Waivers

The Balanced Budget Act of 1997 set the guidelines for determining the end of the transition to digital television in a given market. First, the law set a conditional deadline of December 31, 2006 for broadcasters to complete the transition to digital broadcasting, stating that the Commission may not renew a television broadcast license that authorizes analog television service for a period that extends beyond that date. However, as detailed in Section 1 of this paper, an analog broadcaster may request an extension of the deadline under conditions likely to be present in most markets. Congress did not provide the Commission sufficient leeway to deny an extension, even though such a denial may be beneficial to public safety and the public they serve.

In addition, the Auction Reform Act of 2002, at Section 6 (“The Act”) appears to prevent the Commission from granting pending and future television short-spacing waiver applications, even though the waivers are necessary to make the 700 MHz spectrum available for public safety.³⁷

³⁷ Auction Reform Act of 2002, Pub. L. No. 107-195, 116 Stat. 715 (“Auction Reform Act”); 47 U.S.C. § 309(j)(15)(C)(iv). SEC. 6. INTERFERENCE PROTECTION.

(a) INTERFERENCE WAIVERS - In granting a request by a television broadcast station licensee assigned to any of channels 52-69 to utilize any channel of channels 2-51 that is assigned for digital broadcasting in order to continue analog broadcasting during the transition to digital broadcasting, the Federal Communications Commission may not, either at the time of the grant or thereafter, waive or otherwise reduce--

(1) the spacing requirements provided for analog broadcasting licensees within channels 2-51 as required by section 73.610 of the Commission's rules (and the table contained therein) (47 CFR 73.610), or

(2) the interference standards provided for digital broadcasting licensees within channels 2-51 as required by sections 73.622 and 73.623 of such rules (47 CFR 73.622, 73.623), if such waiver or reduction will result in any degradation in or loss of service, or an increased level of interference, to any television household except as the Commission's rules would otherwise expressly permit, exclusive of any waivers previously granted.

While the Act allows the Commission to grant short-spacing waivers for TV stations seeking to vacate channels 63, 64, 68, and 69 (stations that are co-channel to the 700 MHz band public safety allocation), no such exception was included for stations who wish to vacate adjacent channels which also impact public safety access to 700 MHz band spectrum. As described in Sections 2 and 3 of this paper, television stations on adjacent channels 62, 65 and 67 also significantly impact the availability of public safety spectrum in major markets and therefore also need to be cleared. The result of this apparent oversight is that the FCC does not have the flexibility it needs to accommodate those TV stations that wish to clear the adjacent channels by obtaining necessary waivers to relocate analog operations to their digital allotments.

Some of the measures described above in which a specific station broadcasts solely on its DTV channel (see section 6.1), moves its analog operations to its DTV channel (see section 6.2), or delivers service only over cable/satellite TV (see section 6.3) require that the Commission grant waivers of its rules. For those stations in channels 62-65 or 67-69, the Commission should expedite processing and approval of such waivers.

7.2 *Must Carry*

In granting the above waivers, the Commission should retain the “must carry” rights of stations wishing to vacate channel 62-65 or 67-69. “Must carry” refers to the Congressional and FCC requirements cable systems have to ensure the availability to the public of television broadcast service. Must-carry requirements are best summarized in the Commission’s First Report and Order on Carriage of Digital Television Broadcast Signals.³⁸

Pursuant to Section 614 of the Act, and the implementing rules adopted by the Commission in Implementation of the Cable Television Consumer Protection and Competition Act of 1992, Broadcast Signal Carriage Issues Report and Order (“Must Carry Order”),³⁹ a commercial television broadcast station is entitled to request carriage on cable systems located within the station’s market. A station’s market for this purpose is its “designated market area,” or DMA, as defined by Nielsen Media Research.⁴⁰ The Act states that systems

(b) EXCEPTION FOR PUBLIC SAFETY CHANNEL CLEARING - The restrictions in subsection (a) shall not apply to a station licensee that is seeking authority (either by waiver or otherwise) to vacate the frequencies that constitute television channel 63, 64, 68, or 69 in order to make such frequencies available for public safety purposes pursuant to the provisions of section 337 of the Communications Act of 1934 (47 U.S.C. 337).

³⁸ See *Carriage of the Transmissions of Digital Television Broadcast Signals*, First Report and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd 2598 (2001).

³⁹ *Broadcast Signal Carriage Issues*, 8 FCC Rcd 2965 (1993) (“*Must Carry Order*”); See also, *Broadcast Signal Carriage Issues*, MM Docket 92-259, 9 FCC Rcd 6723 (1994) (“*Must Carry Reconsideration*”).

⁴⁰ A DMA is a geographic market designation that defines each television market exclusive of others, based on measured viewing patterns.

with more than 12 usable activated channels must carry local commercial television stations, “up to one-third of the aggregate number of usable activated channels of such system[s].”⁴¹ Beyond this requirement, the carriage of additional television stations is at the discretion of the cable operator. In addition, cable systems are obliged to carry local noncommercial educational television stations (“NCE stations”) according to a different formula and based upon a cable system’s number of usable activated channels.⁴² Low power television stations, including Class A stations, may request carriage if they meet six statutory criteria.⁴³ A cable operator, however, cannot carry a low power television station in lieu of a full power television station.⁴⁴

As noted above, all analog stations are entitled to must-carry rights. With respect to digital signals, however, in January 2001, the Commission tentatively concluded that cable systems are *not required* to carry *both* the analog *and* digital signals of broadcasters during the transition, finding that such a “dual carriage” requirement appears to be unconstitutional. The Commission has yet to reach a final determination on this matter. However, the Commission has determined that (1) *new* digital-only stations, and (2) stations that obtain the Commission’s authority to return their analog spectrum and commence broadcasting as digital-only stations are entitled to must-carry rights (akin to analog stations). Further, cable system operators could voluntarily carry both the analog and digital signals of any TV station vacating the 700 MHz spectrum to provide access to public safety. This would demonstrate that cable operators are good corporate citizens who consider the public safety needs of the communities that they serve.

The Commission has already addressed the option described in section 6.1, in which a station would cease operation of its analog signal and only broadcast a digital signal. As described in section 6.1.1, the Commission granted WNVT-TV permission to cease analog broadcasting even though the loss of the analog channel would potentially result in loss of over-the-air analog service to 3,000 television households in the Grade B contour. In order to provide adequate signals for cable carriage, however, the FCC did require WNVT-DT to supply all cable systems carrying its signal with equipment necessary for conversion of the digital signal to an analog signal.

⁴¹ 47 U.S.C. §534(b)(1)(B); 47 C.F.R. §76.56(b)(2). A cable operator of a cable system with 12 or fewer usable activated channels shall carry the signals of at least three local commercial television stations, except that if such a system has 300 or fewer subscribers, it shall not be subject to any requirements under this section so long as such system does not delete from carriage by that system any signal of a broadcast television station. 47 U.S.C. §534(b)(1)(A); 47 C.F.R. §76.56(b)(1).

⁴² Noncommercial television stations are considered qualified, and may request carriage if they: (1) are licensed to a community within fifty miles of the principal headend of the cable system; or (2) place a Grade B contour over the cable operator's principal headend. Cable systems with: (1) 12 or fewer usable activated channels are required to carry the signal of one qualified local noncommercial educational station; (2) 13-36 usable activated channels are required to carry no more than three qualified local noncommercial educational stations; and (3) more than 36 usable activated channels shall carry at least three qualified local noncommercial educational stations. *See* 47 U.S.C. §535(b) and (e); 47 C.F.R. §76.56(a).

⁴³ *See* 47 U.S.C. §534(h)(2); 47 C.F.R. §76.55(d).

⁴⁴ 47 U.S.C. §§534(b)(1)(A) and (h)(2); 47 C.F.R. §76.56(b)(1) and (b)(4)(i).

The option discussed in Section 6.2 relocates analog operations to the station's DTV allotment. In many regions, however, this relocation, combined with adjustments needed to reduce interference, would result in a modification of the station's signal coverage area. Under the FCC's current must-carry regime, this could impact the station's must-carry rights, as the signal delivered to the DMA may or may not meet the requirements summarized above. In this case we recommend that the must-carry rights of the analog station prior to relocation be continued during analog operations on the DTV allotment. The relocated station, however, would still be required to meet the FCC's requirements for the delivery of its signal to the principal cable headend as prescribed by the rules. In addition, these must-carry rights would only be in force until the station makes its transition to digital broadcasting. At that time, the must carry rights pertinent to the station's digital operation could supercede any temporary rights granted to allow clearing of the public safety 700 MHz band spectrum.

The option described in section 6.3 in which a station temporarily would cease all over-the-air broadcasting and only provide content to cable and/or satellite systems also could be accommodated by modifications to the existing must-carry requirements. Under this scenario, cable systems which currently carry an analog broadcast station signal in channels 62-65 or 67-69 would continue to carry the signal while the station temporarily ceases over-the-air operation. The station would be required to provide its signal to the principal cable headend by other means and would be required to return to over-the-air broadcasting using its digital allotment by a specific date established by the Commission.

The Commission should consider issuing a declaratory ruling or statement clarifying that the above must-carry policies are acceptable and that requests for such rights will be favorably viewed where appropriate for stations currently operating in channels 62-65 and 67-69.

Conclusions:

1. Changes to Public Laws:

- *Remove the exemptions from the BBA-97 act so that December 31, 2006 is a firm date by which all television operations cease on channels 62-65 and 67-69.*
- *Expand the Auction Reform Act of 2002 to include Channels 62, 65 and 67 in the list of channels in which the FCC may approve interference waivers.*

2. Changes to Commission Rules:

- *The Commission should issue a declaratory ruling in which it indicates that broadcast stations on channels 62-65 and 67-69 that modify their operations or discontinue over-the-air transmission in order to clear spectrum for public safety will retain their current must-carry rights while they complete the transition to their digital allotments. The rights will be time-limited and contingent upon the broadcast station providing an adequate signal and any necessary conversion equipment to the principal cable headend.*

- *The Commission should expeditiously grant temporary waivers that will facilitate relocation from public safety channels. Waivers of the rules include:*
 - **Short-Spacing Requirements**
 - **Exemptions where agreements with affected stations exists**
 - **City grade coverage**
 - **Permission to cease analog operations**
 - **Interference above *de minimis***
 - **Loss of over-the-air reception to some portions of the general public**
 - **Creation of gray areas**

8 Conclusion

Congress and the FCC have the opportunity to bring to fruition the beneficial policy they began back in 1997 when they allocated 24 MHz of additional spectrum to public safety in the 700 MHz band. Public safety access to this spectrum in major metro areas where spectrum need is the greatest requires that television operations on channels 62-65 and 67-69 be cleared. Current laws and regulations target December 31, 2006 for such clearing, but include significant exceptions that make yearend 2006 clearing unlikely. Congress must change the law and the FCC must change related policies and take additional steps as necessary to support nationwide public safety access to this spectrum. A number of options are additionally available to the FCC to accelerate TV clearing.

Analysis of independent television market data summarized in this paper shows that enacting a yearend 2006 or sooner date certain for television clearing would result in minimal impact on the TV viewing public, especially compared to the significant benefits of making this spectrum available for public safety.

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Appendix A

Listing of TV Stations on Channels 62-65 and 67-69

FCC TV Engineering Database - 29 August, 2003						
channel	state	city	callsign	service	analog channel	party_name
62	CA	RIVERSIDE	KRCA	TV		KRCA LICENSE CORP.
62	CA	STOCKTON	KFTL	DT	64	FAMILY STATIONS, INC.
62	FL	VENICE	WVEA-TV	TV		ENTRAVISION HOLDINGS, LLC
62	IN	HAMMOND	WJYS	TV		JOVON BROADCASTING CORPORATION
62	MA	LAWRENCE	WMFP	TV		WSAH LICENSE, INC.
62	MD	FREDERICK	WFPT	TV		MARYLAND PUBLIC BROADCASTING COMMISSION
62	MI	DETROIT	WWJ-TV	TV		CBS BROADCASTING INC.
62	MO	KANSAS CITY	KSMO-TV	TV		KSMO LICENSEE, INC.
62	NC	ASHEVILLE	WASV-TV	TV		MEDIA GENERAL BROADCASTING OF SOUTH CAROLINA HOLDINGS, INC.
62	NC	FAYETTEVILLE	WFPX	TV		PAXSON COMMUNICATIONS LICENSE COMPANY, LLC
62	NJ	ATLANTIC CITY	WWSI	TV		HISPANIC BROADCASTERS OF PHILADELPHIA, L.L.C.
62	NY	KINGSTON	WRNN-TV	TV		WRNN-TV ASSOCIATES LIMITED PARTNERSHIP
62	OK	OKLAHOMA CITY	KOPX	TV		PAXSON OKLAHOMA CITY LICENSE, INC.
62	PA	ALLENTOWN	WLVTV	DT	39	LEHIGH VALLEY PUBLIC TELECOMMUNICATIONS CORP.
62	TX	KILLEEN	KAKW	TV		KAKW LICENSE PARTNERSHIP, L.P.
63	CA	CONCORD	KTNC-TV	DT	42	KTNC LICENSE, LLC
63	CA	OXNARD	KADY-TV	TV		BILTMORE BROADCASTING, L.L.C.
63	FL	BOCA RATON	WPPB-TV	TV		THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA
63	GA	MONROE	WHSG	TV		TRINITY BROADCASTING NETWORK
63	IN	ANGOLA	WINM	TV		TRI-STATE CHRISTIAN TV, INC.
63	IN	BLOOMINGTON	WIPX	TV		PAXSON INDIANAPOLIS LICENSE, INC.
63	NJ	NEWTON	WMBC-TV	TV		MOUNTAIN BROADCASTING CORPORATION
63	SC	SUMTER	WBHQ	TV		COLUMBIA BROADCASTING, INC.
64	CA	BARSTOW	KHIZ	TV		SUNBELT TELEVISION, INC.
64	CA	STOCKTON	KFTL	TV		FAMILY STATIONS, INC.
64	DE	SEAFORD	WDPB	TV		WHYY, INC.
64	GA	MACON	WGNM	TV		GOOD NEWS TELEVISION
64	MI	KALAMAZOO	WLLA	TV		CHRISTIAN FAITH BROADCAST, INC.
64	NC	KANNAPOLIS	WAXN	TV		WSOC-TV HOLDINGS, INC.
64	OH	CINCINNATI	WSTR-TV	TV		WSTR LICENSEE, INC.
64	PA	PHILADELPHIA	WPVI-TV	DT	6	ABC, INC.
64	PA	SCRANTON	WQPX	TV		PAXSON SCRANTON LICENSE, INC.
64	RI	PROVIDENCE	WNAC-TV	TV		WNAC, LLC
65	CA	LOS ANGELES	KTTV	DT	11	FOX TELEVISION STATIONS, INC.
65	CA	SAN JOSE	KKPX	TV		PAXSON SAN JOSE LICENSE, INC.
65	CT	NEW HAVEN	WEDY	TV		CONNECTICUT PUBLIC BROADCASTING, INC.
65	FL	ORLANDO	WRBW	TV		FOX TELEVISION STATIONS, INC.
65	KY	BEATTYVILLE	WLJC-TV	TV		HOUR OF HARVEST, INC.
65	NJ	VINELAND	WUVP	TV		UNIVISION PHILADELPHIA LLC
65	TX	EL PASO	KTFN	TV		ENTRAVISION HOLDINGS, LLC
65	VA	ASHLAND	WUPV	TV		BELL BROADCASTING, L.L.C.

FCC TV Engineering Database - 29 August, 2003						
channel	state	city	callsign	service	analog_ channel	party_name
67	FL	LAKE WORTH	WPXP	TV		PAXSON WEST PALM BEACH LICENSE, INC.
67	KY	MOREHEAD	WUPX-TV	TV		PAXSON LEXINGTON LICENSE, INC.
67	MD	BALTIMORE	WMPB	TV		MARYLAND PUBLIC BROADCASTING COMMISSION
67	NY	SMITHTOWN	WFTY	TV		UNIVISION NEW YORK LLC
67	NY	SPRINGVILLE	WNGS	TV		CAROLINE K. POWLEY D/B/A UNICORN/SPRINGVILLE
67	OH	CANTON	WOAC	TV		WRAY, INC.
67	PA	PHILADELPHIA	WCAU	DT	10	NBC SUBSIDIARY (WCAU-TV), L.P.
67	TX	ALVIN	KFTH	TV		TELEFUTURA HOUSTON LLC
68	AL	BIRMINGHAM	WABM	TV		BIRMINGHAM (WABM-TV) LICENSEE, INC.
68	CA	NOVATO	KTLN-TV	TV		CHRISTIAN COMMUNICATIONS CHICAGOLAND
68	CA	RIVERSIDE	KRCA	DS	62	KRCA LICENSE CORP.
68	FL	COCOA	WBCC	TV		BREVARD COMMUNITY COLLEGE
68	KY	LOUISVILLE	WKMJ-TV	TV		KENTUCKY AUTHORITY FOR EDUCATIONAL TV
68	MA	BOSTON	WBPX	TV		PAXSON BOSTON-68 LICENSE, INC.
68	MD	HAGERSTOWN	WJAL	TV		ENTRAVISION HOLDINGS, LLC
68	NJ	NEWARK	WFUT	TV		UNIVISION NEW YORK LLC
68	NY	SYRACUSE	WSYT	TV		WSYT LICENSEE L.P.
68	OH	MANSFIELD	WMFD-TV	TV		MID-STATE TELEVISION, INC.
68	TX	ARLINGTON	KPXD	TV		PAXSON DALLAS LICENSE, INC.
68	VA	GRUNDY	WLFQ	TV		LIVING FAITH MINISTRIES, INC.
68	WI	FOND DU LAC	WMMF-TV	TV		PAPPAS TELECASTING OF WISCONSIN, A CALIFORNIA LTD PARTNRSHP
69	CA	SAN DIEGO	KSWB-TV	TV		KSWB INC.
69	FL	HOLLYWOOD	WAMI-TV	TV		TELEFUTURA MIAMI LLC
69	GA	ATLANTA	WUPA	TV		VIACOM STATIONS GROUP OF ATLANTA INC.
69	IN	INDIANAPOLIS	WTBU-TV	TV		BUTLER UNIVERSITY
69	PA	ALLEN TOWN	WFMZ-TV	TV		MARANATHA BROADCASTING COMPANY, INC.
69	RI	BLOCK ISLAND	WPXQ	TV		OCEAN STATE TELEVISION, L.L.C.
62	PR	AGUADA	WQHA	DT	50	CONCILIO MISION CRISTIANA FUENTE DE AGUA VIVA, INC.
64	PR	NARANJITO	WECN	TV		ENCUENTRO CHRISTIAN NETWORK
65	PR	NARANJITO	WECN	DT	64	ENCUENTRO CHRISTIAN NETWORK
68	PR	HUMACAO	WVSN	TV		LA CADENA DEL MILAGRO, INC.
69	PR	AQUADILLA	WOLE-TV	DT		WESTERN BROADCASTING CORP. OF PUERTO RICO

Appendix B

Public Safety Spectrum Availability for Top 84 Cities

CITY ⁴⁵	STATE	AVAILABILITY	CH.63/68 ⁴⁶	CH.64/69 ⁴⁶
New York	NY	BLOCKED	4	4
Los Angeles	CA	BLOCKED	4	4
Chicago	IL	50% BLOCKED	1	0
Houston	TX	50% BLOCKED	1	0
Philadelphia	PA	BLOCKED	7	3
San Diego	CA	BLOCKED	2	5
Phoenix	AZ	OPEN	0	0
San Antonio	TX	OPEN	0	0
Dallas	TX	BLOCKED	1	1
Detroit	MI	BLOCKED	5	5
San Jose	CA	BLOCKED	5	4
San Francisco	CA	BLOCKED	4	4
Indianapolis	IN	BLOCKED	2	3
Jacksonville	FL	OPEN	0	0
Columbus	OH	BLOCKED	1	2
Baltimore	MD	BLOCKED	3	1
El Paso	TX	50% BLOCKED	0	1
Memphis	TN	OPEN	0	0
Austin	TX	50% BLOCKED	1	0
Milwaukee	WI	BLOCKED	1	1
Boston	MA	BLOCKED	4	3
Seattle	WA	OPEN	0	0
Charlotte	NC	BLOCKED	2	2
Washington	DC	50% BLOCKED	3	0
Nashville	TN	OPEN	0	0
Portland	OR	OPEN	0	0
Fort Worth	TX	BLOCKED	1	1
Cleveland	OH	BLOCKED	2	3
Denver	CO	OPEN	0	0
Oklahoma City	OK	50% BLOCKED	1	0
Tucson	AZ	OPEN	0	0
New Orleans	LA	OPEN	0	0
Kansas City	MO	50% BLOCKED	1	0
Long Beach	CA	BLOCKED	3	5
Virginia Beach	VA	OPEN	0	0
Albuquerque	NM	OPEN	0	0
Las Vegas	NV	OPEN	0	0
Sacramento	CA	BLOCKED	4	2
Fresno	CA	OPEN	0	0
Atlanta	GA	BLOCKED	2	3

⁴⁵ Cities listed by population size

⁴⁶ Number of TV stations blocking Public Safety Access

CITY ⁴⁵	STATE	AVAILABILITY	CH.63/68 ⁴⁶	CH.64/69 ⁴⁶
Honolulu	HI	OPEN	0	0
Omaha	NE	OPEN	0	0
Tulsa	OK	OPEN	0	0
Miami	FL	BLOCKED	2	2
Mesa	AZ	OPEN	0	0
Oakland	CA	BLOCKED	5	4
Minneapolis	MN	OPEN	0	0
Colorado Springs	CO	OPEN	0	0
Pittsburgh	PA	OPEN	0	0
Wichita	KS	OPEN	0	0
St. Louis	MO	OPEN	0	0
Cincinnati	OH	BLOCKED	2	1
Arlington	TX	BLOCKED	1	1
Santa Ana	CA	BLOCKED	4	5
Toledo	OH	BLOCKED	4	2
Anaheim	CA	BLOCKED	4	5
Buffalo	NY	BLOCKED	2	2
Tampa	FL	50% BLOCKED	1	0
Corpus Christi	TX	OPEN	0	0
Riverside	CA	BLOCKED	4	4
Newark	NJ	BLOCKED	7	5
Raleigh	NC	OPEN	0	0
Anchorage	AK	OPEN	0	0
St. Paul	MN	OPEN	0	0
Louisville	KY	BLOCKED	2	2
Aurora	CO	OPEN	0	0
Birmingham	AL	BLOCKED	1	1
Stockton	CA	BLOCKED	4	4
Lexington	KY	BLOCKED	3	2
St. Petersburg	FL	50% BLOCKED	1	0
Plano	TX	BLOCKED	1	1
Jersey City	NJ	BLOCKED	6	5
Norfolk	VA	OPEN	0	0
Bakersfield	CA	BLOCKED	1	2
Lincoln	NE	OPEN	0	0
Rochester	NY	BLOCKED	2	2
Hialeah	FL	BLOCKED	3	2
Akron	OH	BLOCKED	2	1
Madison	WI	BLOCKED	1	1
Baton Rouge	LA	OPEN	0	0
Fremont	CA	BLOCKED	5	4
Chesapeake	VA	OPEN	0	0
Glendale	AZ	OPEN	0	0
Mobile	AL	OPEN	0	0

	Number of Cities	Percent of top 84 Cities
OPEN	34	40%
50% Blocked	9	11%
100% Blocked	41	49%

Appendix C

Analysis of TV Channels 62-69 Household Viewership⁴⁷

Channel	City	State	TV vs. DTV	Station's Neilsen Designated Market Area's (DMA)			Total TV Households within Grade B contour			Cable TV Households within Grade B contour			Non-Cable TV Households within Grade B Contour			Percentage of Total Households Watching Station over Non-cable
							Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	
62	Allentown	PA	DT	Primary	Philadelphia	Total TV Households (HHs)										
62	Asheville	NC	TV	Primary	Greenville-Ashvl	Total TV Households (HHs)	741,990	695,380	46,610	452,620	452,620	0	289,370	242,760	46,610	
				Secondary	Charlotte	HHs Watching Station (wk.avg)	165,228	161,935	3,393	109,312	109,312	0	55,916	52,523	3,393	
				Other DMA	Atlanta		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							22.27%	23.29%	7.28%	66.16%	67.50%		33.84%	32.43%	100.00%	7.54%
62	Atlantic City	NJ	TV	Primary	Philadelphia	Total TV Households (HHs)										
62	Detroit	MI	TV	Primary	Detroit	Total TV Households (HHs)	1,907,040	1,878,670	28,370	1,419,260	1,878,670	6,230	487,780	465,640	22,140	
				Secondary	Flint	HHs Watching Station (wk.avg)	1,100,172	1,097,545	2,627	809,833	808,948	885	290,339	288,597	1,742	
				Other DMA	Toledo		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							57.69%	58.42%	9.26%	73.61%	73.71%	33.69%	26.39%	26.29%	66.31%	15.22%
62	Fayetteville	NC	TV	Primary	Raleigh-Durham	Total TV Households (HHs)	215,840	156,330	59,510	166,360	131,850	34,510	49,480	24,480	25,000	
				Secondary	Greensboro	HHs Watching Station (wk.avg)	37,343	26,475	10,868	30,198	23,359	6,839	7,145	3,116	4,029	
				Other DMA	Greenville-New Bern		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							17.30%	16.94%	18.26%	80.87%	88.23%	62.93%	19.13%	11.77%	37.07%	3.31%
62	Frederick	MD	TV	Primary	Washington, DC	Total TV Households (HHs)										
62	Hammond	IN	TV	Primary	Chicago	Total TV Households (HHs)	19,960	19,960	0	19,960	19,960	0	0	0	0	
				Secondary		HHs Watching Station (wk.avg)	1,178	1,178	0	1,178	1,178	0	0	0	0	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							5.90%	5.90%		100.00%	100.00%		0.00%	0.00%		0.00%

⁴⁷ Based on Warren Communications Television and Cable Factbook - Online. About 35% of the TV stations did not report viewership data. Generally these are public broadcasting and other non-commercial stations, which are not required to do so. No data is reported for the 5 stations in Puerto Rico.

Channel	City	State	TV vs. DTV	Station's Nielsen Designated Market Area's (DMA)			Total TV Households within Grade B contour			Cable TV Households within Grade B contour			Non-Cable TV Households within Grade B Contour			Percentage of Total Households Watching Station over Non-cable
							Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	
62	Kansas City	MO	TV	Primary	Kansas City	Total TV Households (HHs)	837,510	792,080	45,430	570,200	546,760	23,440	267,310	245,320	21,990	
				Secondary	St Joseph, MO	HHs Watching Station (wk.avg)	256,689	250,119	6,570	173,538	169,300	4,238	83,151	80,819	2,332	
				Other DMA	Topeka, KS		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						30.65%	31.58%	14.46%	67.61%	67.69%	64.51%	32.39%	32.31%	35.49%	9.93%	
62	Killeen	TX	TV	Primary	Waco	Total TV Households (HHs)	265,640	255,390	10,250	187,800	187,800	0	77,840	67,590	10,250	
				Secondary	Austin	HHs Watching Station (wk.avg)	64,623	64,100	523	50,004	50,004	0	14,619	14,096	523	
				Other DMA	Dallas		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						24.33%	25.10%	5.10%	77.38%	78.01%		22.62%	21.99%	100.00%	5.50%	
62	Kingston	NY	TV	Primary	New York City	Total TV Households (HHs)										
62	Lawrence	MA	TV	Primary	Boston	Total TV Households (HHs)										
62	Oklahoma City	OK	TV	Primary	Oklahoma City	Total TV Households (HHs)	534,390	533,250	1,140	364,250	364,250	0	170,140	169,000	1,140	
				Secondary	Tulsa	HHs Watching Station (wk.avg)	78,783	78,716	67	47,126	47,126	0	31,657	31,590	67	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						14.74%	14.76%	5.88%	59.82%	59.87%		40.18%	40.13%	100.00%	5.92%	
62	Riverside	CA	TV	Primary	Los Angeles	Total TV Households (HHs)	307,710	307,710		0	0		307,710	307,710		
				Secondary		HHs Watching Station (wk.avg)	15,693	15,693		0	0		15,693	15,693		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						5.10%	5.10%		0.00%	0.00%		100.00%	100.00%		5.10%	
62	Stockton	CA	DT	Primary	Sacramento	Total TV Households (HHs)										
62	Venice	FL	TV	Primary	Tampa	Total TV Households (HHs)	301,090	301,090		301,090	301,090		0	0		
				Secondary		HHs Watching Station (wk.avg)	17,570	17,570		17,570	17,570		0	0		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						5.84%	5.84%		100.00%	100.00%		0.00%	0.00%		0.00%	

Channel	City	State	TV vs. DTV	Station's Nielsen Designated Market Area's (DMA)			Total TV Households within Grade B contour			Cable TV Households within Grade B contour			Non-Cable TV Households within Grade B Contour			Percentage of Total Households Watching Station over Non-cable
							Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	
63	Angola	IN	TV	Primary	Ft Wayne	Total TV Households (HHs)	18,590	18,590		12,280	12,280		6,310	6,310		
				Secondary	Toledo	HHs Watching Station (wk.avg)	1,111	1,111		783	783		328	328		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						5.98%	5.98%		70.48%	70.48%		29.52%	29.52%		1.76%	
63	Bloomington	IN	TV	Primary	Indianapolis	Total TV Households (HHs)	814,840	808,540	6,300	602,090	602,090	0	212,750	206,450	6,300	
				Secondary	Terre Haute	HHs Watching Station (wk.avg)	105,335	103,955	1,380	80,212	80,212	0	25,123	23,743	1,380	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						12.93%	12.86%	21.90%	76.15%	77.16%		23.85%	22.84%	100.00%	3.08%	
63	Boca raton	FL	TV	Primary	Miami	Total TV Households (HHs)										
63	Concord	CA	DT	Primary	San Francisco	Total TV Households (HHs)	31,070	31,070	0	31,070	31,070	0	0	0	0	
				Secondary	Sacramento	HHs Watching Station (wk.avg)	2,113	2,113	0	2,113	2,113	0	0	0	0	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						6.80%	6.80%		100.00%	100.00%		0.00%	0.00%		0.00%	
63	Monroe	GA	TV	Primary	Atlanta	Total TV Households (HHs)	443,410	438,950	4,460	321,180	321,180	0	122,230	117,770	4,460	
				Secondary	Greenville-Spartnbrg	HHs Watching Station (wk.avg)	30,755	30,340	415	22,193	22,193	0	8,562	8,147	415	
				Other DMA	Macon		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						6.94%	6.91%	9.30%	72.16%	73.15%		27.84%	26.85%	100.00%	1.93%	
63	Newton	NJ	TV	Primary	New York City	Total TV Households (HHs)										
63	Oxnard	CA	TV	Primary	Los Angeles	Total TV Households (HHs)	324,880	123,620	201,260	324,880	123,620	201,260	0	0	0	
				Secondary	Santa Barbara	HHs Watching Station (wk.avg)	40,004	17,060	22,944	40,004	17,060	22,944	0	0	0	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						12.31%	13.80%	11.40%	100.00%	100.00%	100.00%	0.00%	0.00%		0.00%	
63	Sumter	SC	TV	Primary	Columbia, SC	Total TV Households (HHs)	264,890	264,890		188,170	188,170		76,720	76,720		
				Secondary	Charlotte, NC	HHs Watching Station (wk.avg)	51,113	51,113		46,263	46,263		4,850	4,850		
				Other DMA	Florence, SC		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
						19.30%	19.30%		90.51%	90.51%		9.49%	9.49%		1.83%	

Channel	City	State	TV vs. DTV	Station's Nielsen Designated Market Area's (DMA)		Total TV Households within Grade B contour			Cable TV Households within Grade B contour			Non-Cable TV Households within Grade B Contour			Percentage of Total Households Watching Station over Non-cable	
						Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA		
64	Barstow	CA	TV	Primary	Los Angeles	Total TV Households (HHs)										
64	Cincinnati	OH	TV	Primary	Cincinnati	Total TV Households (HHs)	840,710	806,520	34,190	537,410	537,410	0	303,300	269,110	34,190	
				Secondary	Dayton	HHs Watching Station (wk.avg)	313,084	309,678	3,406	202,925	202,925	0	110,159	106,753	3,406	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							37.24%	38.40%	9.96%	64.81%	65.53%		35.19%	34.47%	100.00%	13.10%
64	Kalamazoo	MI	TV	Primary	Grand Rapids	Total TV Households (HHs)	13,900	13,900		13,900	13,900		0	0		
				Secondary		HHs Watching Station (wk.avg)	1,056	1,056		1,056	1,056		0	0		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							7.60%	7.60%		100.00%	100.00%		0.00%	0.00%		0.00%
64	Kannapolis	NC	TV	Primary	Charlotte	Total TV Households (HHs)	899,560	888,830	10,730	641,640	641,640	0	257,920	247,190	10,730	
				Secondary	Greensboro	HHs Watching Station (wk.avg)	238,533	237,977	556	190,189	190,189	0	48,344	47,788	556	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							26.52%	26.77%	5.18%	79.73%	79.92%		20.27%	20.08%	100.00%	5.37%
64	Macon	GA	TV	Primary	Macon	Total TV Households (HHs)	136,750	136,750		110,610	110,610		26,140	26,140		
				Secondary		HHs Watching Station (wk.avg)	26,267	26,267		22,952	22,952		3,315	3,315		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							19.21%	19.21%		87.38%	87.38%		12.62%	12.62%		2.42%
64	Philadelphia	PA	DT	Primary	Philadelphia	Total TV Households (HHs)	3,350,660	2,660,220	690,440	2,758,880	2,165,890	592,990	591,780	494,330	97,450	
				Secondary	New York City	HHs Watching Station (wk.avg)	2,204,706	2,045,723	158,983	1,801,239	1,658,988	142,251	403,467	386,735	16732	
				Other DMA	Harrisburg, PA		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							65.80%	76.90%	23.03%	81.70%	81.10%	89.48%	18.30%	18.90%	10.52%	12.04%
64	Providence	RI	TV	Primary	Providence, RI	Total TV Households (HHs)	795,420	600,730	194,690	637,420	491,990	145,430	158,000	108,740	49,260	
				Secondary	Boston	HHs Watching Station (wk.avg)	256,824	242,199	14,625	211,659	200,170	11,489	45,165	42,029	3,136	
				Other DMA	Hartford, CT		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							32.29%	40.32%	7.51%	82.41%	82.65%	78.56%	17.59%	17.35%	21.44%	5.68%

Channel	City	State	TV vs. DTV	Station's Nielsen Designated Market Area's (DMA)			Total TV Households within Grade B contour			Cable TV Households within Grade B contour			Non-Cable TV Households within Grade B Contour			Percentage of Total Households Watching Station over Non-cable
							Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	
64	Scranton	PA	TV	Primary	Scranton, PA	Total TV Households (HHs)	437,340	437,340		381,320	381,320		56,020	56,020		
				Secondary		HHs Watching Station (wk.avg)	58,169	58,169		52,355	52,355		5,814	5,814		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							13.30%	13.30%		90.00%	90.00%		10.00%	10.00%		1.33%
64	Seaford	DE	TV	Primary	Salisbury, MD	Total TV Households (HHs)										
64	Stockton	CA	TV	Primary	Sacramento	Total TV Households (HHs)	11,450	11,450		11,450	11,450		0	0		
				Secondary	San Francisco	HHs Watching Station (wk.avg)	572	572		572	572		0	0		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							5.00%	5.00%		100.00%	100.00%		0.00%	0.00%		0.00%
65	Ashland	VA	TV	Primary	Richmond, VA	Total TV Households (HHs)	408,550	405,570	2,980	316,980	314,000	2,980	91,570	91,570	0	
				Secondary	Washington, DC	HHs Watching Station (wk.avg)	120,291	119,999	292	99,249	98,957	292	21,042	21,042	0	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							29.44%	29.59%	9.80%	82.51%	82.46%	100.00%	17.49%	17.54%		5.15%
65	Beattyville	KY	TV	Primary	Lexington, KY	Total TV Households (HHs)	43,660	43,660		42,360	42,360		1,300	1,300		
				Secondary		HHs Watching Station (wk.avg)	5,217	5,217		5,122	5,122		95	95		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							11.95%	11.95%		98.18%	98.18%		1.82%	1.82%		0.22%
65	El Paso	TX	TV	Primary	El Paso	Total TV Households (HHs)										
65	Los Angeles	CA	DT	Primary	Los Angeles	Total TV Households (HHs)										
65	New Haven	CT	TV	Primary	New Haven	Total TV Households (HHs)										
65	Orlando	FL	TV	Primary	Orlando	Total TV Households (HHs)	1,137,460	1,137,460		888,030	888,030		249,430	249,430		
				Secondary	Tampa	HHs Watching Station (wk.avg)	299,308	299,308		243,466	243,466		55,842	55,842		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							26.31%	26.31%		81.34%	81.34%		18.66%	18.66%		4.91%

Channel	City	State	TV vs. DTV	Station's Nielsen Designated Market Area's (DMA)			Total TV Households within Grade B contour			Cable TV Households within Grade B contour			Non-Cable TV Households within Grade B Contour			Percentage of Total Households Watching Station over Non-cable
							Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	
65	San Jose	CA	TV	Primary	San Francisco	Total TV Households (HHs)	2,205,890	1,985,900	219,990	1,996,560	1,835,880	160,680	209,330	150,020	59,310	
				Secondary	Sacramento	HHs Watching Station (wk.avg)	177,690	157,678	20,012	163,163	148,077	15,086	14,527	9,601	4,926	
				Other DMA	Monterey		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							8.06%	7.94%	9.10%	91.82%	93.91%	75.38%	8.18%	6.09%	24.62%	0.66%
65	Vineland	NJ	TV	Primary	Philadelphia	Total TV Households (HHs)										
67	Alvin	TX	TV	Primary	Houston	Total TV Households (HHs)										
67	Baltimore	MD	TV	Primary	Baltimore	Total TV Households (HHs)										
67	Canton	OH	TV	Primary	Cleveland	Total TV Households (HHs)										
67	Lake worth	FL	TV	Primary	West Palm Beach	Total TV Households (HHs)	645,200	645,200		586,320	586,320		58,880	58,880		
				Secondary		HHs Watching Station (wk.avg)	97,712	97,712		90,279	90,279		7,433	7,433		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							15.14%	15.14%		92.39%	92.39%		7.61%	7.61%		1.15%
67	Monterey	CA	TV	Primary	Monterey	Total TV Households (HHs)	229,450	229,450		170,140	170,140		59,310	59,310		
				Secondary		HHs Watching Station (wk.avg)	31,499	31,499		20,726	20,726		10,773	10,773		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							13.73%	13.73%		65.80%	65.80%		34.20%	34.20%		4.70%
67	Morehead	KY	TV	Primary	Lexington	Total TV Households (HHs)										
67	Philadelphia	PA	DT	Primary	Philadelphia	Total TV Households (HHs)	3,747,300	2,660,220	1,087,080	3,156,460	2,165,890	990,570	590,840	494,330	96,510	
				Secondary	New York City	HHs Watching Station (wk.avg)	2,097,665	1,930,360	167,305	1,700,848	1,550,971	149,877	396,817	379,389	17,428	
				Other DMA	Harrisburg, PA		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							55.98%	72.56%	15.39%	81.08%	80.35%	89.58%	18.92%	19.65%	10.42%	10.59%
67	Smithtown	NY	TV	Primary	New York City	Total TV Households (HHs)										
67	Springville	NY	TV	Primary	Buffalo	Total TV Households (HHs)	372,970	372,970		372,970	372,970		0	0		
				Secondary		HHs Watching Station (wk.avg)	53,445	53,445		53,445	53,445		0	0		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							14.33%	14.33%		100.00%	100.00%		0.00%	0.00%		0.00%

Channel	City	State	TV vs. DTV	Station's Nielsen Designated Market Area's (DMA)			Total TV Households within Grade B contour			Cable TV Households within Grade B contour			Non-Cable TV Households within Grade B Contour			Percentage of Total Households Watching Station over Non-cable
							Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	
67	Troy	AL	TV	Primary	Montgomery	Total TV Households (HHs)										
68	Arlington	TX	TV	Primary	Dallas	Total TV Households (HHs)	2,025,630	1,973,870	51,760	1,091,230	1,039,470	51,760	934,400	934,400	0	
				Secondary		HHs Watching Station (wk.avg)	243,057	237,363	5,694	118,704	113,010	5,694	124,353	124,353	0	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							12.00%	12.03%	11.00%	48.84%	47.61%	100.00%	51.16%	52.39%		6.14%
68	Birmingham	AL	TV	Primary	Birmingham	Total TV Households (HHs)	605,490	605,490		443,050	443,050		162,440	162,440		
				Secondary		HHs Watching Station (wk.avg)	175,015	175,015		141,439	141,439		33,576	33,576		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							28.90%	28.90%		80.82%	80.82%		19.18%	19.18%		5.55%
68	Boston	MA	TV	Primary	Boston	Total TV Households (HHs)	1,786,790	1,786,790		1,493,840	1,493,840		292,950	292,950		
				Secondary	Providence, RI	HHs Watching Station (wk.avg)	203,657	203,657		162,064	162,064		41,593	41,593		
				Other DMA	Nartford		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							11.40%	11.40%		79.58%	79.58%		20.42%	20.42%		2.33%
68	Cocoa	FL	TV	Primary	Orlando	Total TV Households (HHs)										
68	Fond du Lac	WI	TV	Primary	Green Bay, WI	Total TV Households (HHs)										
68	Grundy	VA	TV	Primary	Tri-Cities, TN-VA	Total TV Households (HHs)	254,310	215,720	38,590	252,160	213,570	38,590	2,150	2,150	0	
				Secondary	Charleston	HHs Watching Station (wk.avg)	20,469	17,687	2,782	20,224	17,442	2,782	245	245	0	
				Other DMA	Blue Field		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							8.05%	8.20%	7.21%	98.80%	98.61%	100.00%	1.20%	1.39%		0.10%
68	Hagerstown	MD	TV	Primary	Washington, DC	Total TV Households (HHs)	266,110	229,620	36,490	215,120	193,290	21,830	50,990	36,330	14,660	
				Secondary	Johnstown, PA	HHs Watching Station (wk.avg)	38,347	35,664	2,683	32,956	31,035	1,921	5,391	4,629	762	
				Other DMA	Harrisburg, PA		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							14.41%	15.53%	7.35%	85.94%	87.02%	71.60%	14.06%	12.98%	28.40%	2.03%
68	Louisville	KY	TV	Primary	Louisville	Total TV Households (HHs)										

Channel	City	State	TV vs. DTV	Station's Nielsen Designated Market Area's (DMA)			Total TV Households within Grade B contour			Cable TV Households within Grade B contour			Non-Cable TV Households within Grade B Contour			Percentage of Total Households Watching Station over Non-cable
							Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	
68	Mansfield	OH	TV	Primary	Cleveland	Total TV Households (HHs)	79,450	56,680	22,770	54,890	38,100	16,790	24,560	18,580	5,980	
				Secondary	Columbus	HHs Watching Station (wk.avg)	12,328	9,973	2,355	8,568	6,972	1,596	3,760	3,001	759	
				Other DMA	Toledo		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							15.52%	17.60%	10.34%	69.50%	69.91%	67.77%	30.50%	30.09%	32.23%	4.73%
68	Newark	NJ	TV	Primary	New York City	Total TV Households (HHs)										
68	Novato	CA	TV	Primary	San Francisco	Total TV Households (HHs)										
68	Riverside	CA	DT	Primary	Los Angeles	Total TV Households (HHs)	307,710	307,710		0	0		307,710	307,710		
				Secondary		HHs Watching Station (wk.avg)	15,693	15,693		0	0		15,693	15,693		
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							5.10%	5.10%		0.00%	0.00%		100.00%	100.00%		5.10%
68	Syracuse	NY	TV	Primary	Syracuse	Total TV Households (HHs)	408,330	358,280	50,050	291,360	283,230	8,130	116,970	75,050	41,920	
				Secondary	Utica	HHs Watching Station (wk.avg)	184,884	180,234	4,650	153,855	152,933	922	31,029	27,301	3,728	
				Other DMA	Rochester		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							45.28%	50.31%	9.29%	83.22%	84.85%	19.83%	16.78%	15.15%	80.17%	7.60%
69	Allentown	PA	TV	Primary	Philadelphia	Total TV Households (HHs)	1,468,920	1,371,020	97,900	1,359,770	1,284,640	75,130	109,150	86,380	22,770	
				Secondary	New York City	HHs Watching Station (wk.avg)	160,179	148,703	11,476	148,992	140,343	8,649	11,187	8,360	2,827	
				Other DMA	Scranton, PA		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							10.90%	10.85%	11.72%	93.02%	94.38%		6.98%	5.62%	24.63%	0.76%
69	Atlanta	GA	TV	Primary	Atlanta	Total TV Households (HHs)	1,712,010	1,698,540	13,470	1,333,360	1,323,560	9,800	378,650	374,980	3,670	
				Secondary		HHs Watching Station (wk.avg)	523,237	520,439	2,798	421,713	419,139	2,574	101,524	101,300	224	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							30.56%	30.64%	20.77%	80.60%	80.54%	91.99%	19.40%	19.46%	8.01%	5.93%
69	Block Island	RI	TV	Primary	Providence, RI	Total TV Households (HHs)	519,520	519,520	0	491,990	491,990	0	27,530	27,530	0	
				Secondary	Boston	HHs Watching Station (wk.avg)	68,144	68,144	0	64,048	64,048	0	4,096	4,096	0	
				Other DMA	Hartford, CT		% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							13.12%	13.12%		93.99%	93.99%		6.01%	6.01%		0.79%

Channel	City	State	TV vs. DTV	Station's Nielsen Designated Market Area's (DMA)			Total TV Households within Grade B contour			Cable TV Households within Grade B contour			Non-Cable TV Households within Grade B Contour			Percentage of Total Households Watching Station over Non-cable
							Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	Total	Within Station's DMA	Other DMA	
69	Hollywood	FL	TV	Primary	Miami	Total TV Households (HHs)	1,546,680	1,546,680	0	1,171,610	1,171,610	0	375,070	375,070	0	
				Secondary	West Palm Beach	HHs Watching Station (wk.avg)	179,752	179,752	0	136,437	136,437	0	43,315	43,315	0	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							11.62%	11.62%		75.90%	75.90%		24.10%	24.10%		2.80%
69	Indianapolis	IN	TV	Primary	Indianapolis	Total TV Households (HHs)										
69	San Diego	CA	TV	Primary	San Diego	Total TV Households (HHs)	975,690	975,690	0	826,160	826,160	0	149,530	149,530	0	
				Secondary		HHs Watching Station (wk.avg)	375,963	375,963	0	323,029	323,029	0	52,934	52,934	0	
				Other DMA			% HHs watching station			% Watching Station via Cable			% Watching Station via Non-cable			
							38.53%	38.53%		85.92%	85.92%		14.08%	14.08%		5.43%
62	Aguada	PR	DT	Primary		Total TV Households (HHs)										
64	Naranjito	PR	TV	Primary		Total TV Households (HHs)										
65	Naranjito	PR	DT	Primary		Total TV Households (HHs)										
68	Humaco	PR	TV	Primary		Total TV Households (HHs)										
69	Aquadilla	PR	DT	Primary		Total TV Households (HHs)										

Appendix D

Major Metropolitan Metro Impact Analysis

Channel	TV Station	TV City	Affiliation	Total TV Households in Viewing Area (in station's Grade B contour)	Households watching station (average weekly)	% of Total TV Households watching station (average weekly)	Households watching station by cable (average weekly)	% of Viewing Households watching by cable (average weekly)	Households watching station over non-cable (average weekly)	% of Total TV Households watching over non-cable (average weekly)
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Boston

62	WMFP	Lawrence, MA	Homeshop	Data not reported		Data not reported		Data not reported		Data not reported
64	WNAC	Providence, RI	FOX	795,420	256,824	32%	211,659	82%	45,165	6.00%
68	WBPX	Boston, MA	PAX	1,786,790	203,657	11%	162,064	80%	41,593	2.00%
69	WPXQ	Block Island, RI	PAX	519,520	68,144	13%	64,048	94%	4,096	1.00%
Total				3,101,730	528,625	17%	437,771	83%	90,854	2.93%

Chicago

62	WJYS	Hammond IN/Chicago IL	Independent	19,960	1,178	6%	1,178	100%	0	0.00%
68	WMMF	Fond du Lac, WI	Family Net	Data not reported		Data not reported		Data not reported		Data not reported
Total				19,960	1,178	6%	1,178	100%	0	0.00%

Dallas/Fort Worth

62	KAKW	Waco/Killeen, TX	UPN/WB	265,640	64,100	24%	50,004	77%	14,619	6.00%
68	KPXD	Arlington, TX	PAX	2,025,630	243,057	12%	118,704	49%	124,353	6.00%
Total				2,291,270	307,157	13%	168,708	55%	138,972	6.07%

Detroit

62	WWJ	Detroit	CBS	1,907,040	1,100,172	58%	809,833	74%	290,339	15.00%
63	WINM	Angola, IN	TBN	18,590	1,111	6%	783	70%	328	2.00%
68	WMFD	Mansfield, OH	ANC	79,450	12,328	16%	8,568	70%	3,760	5.00%
Total				1,986,490	1,113,611	56%	819,184	74%	294,427	14.82%

Note: Canadian stations also impact Public Safety use in Detroit

Appendix E

All Stations by DMA and Programming where Public Safety Frequencies are Blocked⁴⁸

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
1	New York, NY	WCBS-TV	2	CBS	Viacom Inc. (Group Owner)	New York	Network - CBS
1		WNBC-TV	4	NBC	National Broadcasting Co. (Group Owner)	New York	Network - NBC
1		WNYW-TV	5	FOX	Fox Television Stations, Inc. (Group Owner)	New York	Network - FOX
1		WABC-TV	7	ABC	Disney Enterprises Inc. (Group Owner)	New York	Network - ABC
1		WWOR-TV	9	UPN	Fox Television Stations, Inc. (Group Owner)	Seacaucus, NJ	Network-UPN
1		WPIX-TV	11	WBN	Tribune Broadcasting Co. (Group Owner)	New York	Network - WBN
1		WNET-TV	13	PBS	Educational Broadcasting Corp (Group Owner)	Newark, NJ	Donor Supported - PBS
1		WLIW-TV	21	PBS	Long Island ETV Council Inc. (Group Owner)	Garden City	Donor Supported - PBS
1		WNYE-TV	25	PBS	Board of Education of City of NY (Group Owner)	New York	Educational
1		WPXN-TV	31	PAX	Paxson Communications Corp. (Group Owner)	New York	Network - PAX
1		WXTV-TV	41	UNV	Univision Communications Inc. (Group Owner)	Paterson, NJ	Spanish
1		WNJU-TV	47	TMO	National Broadcasting Co. (Group Owner)	Linden, NJ	Spanish
1		WTBY-TV	54	TBN	Trinity Broadcasting Network Inc. (Group Owner)	Poughkeepsie	Religious
1		WLNY-TV	55	IND	WLNY-TV Inc. (Group Owner)	Riverhead	Syndicated Programs
1		WRNN-TV	62	IND	New Mass Media Inc. (Group Owner)	Kingston	News
1		WMBC-TV	63	IND	Mountain Broadcasting Corp. (Group Owner)	Newton, NJ	Ethnic/Religious/Local
1	WFTY	67	TEL	Univision Communications Inc. (Group Owner)	Smithtown	Spanish	
1	WFUT-TV	68	TEL	Univision Communications Inc. (Group Owner)	Newark, NJ	Spanish	

⁴⁸

Data is derived from the following sources:

100k Watts US Radio and TV Directory

Warren Communications Television & Cable Factbook : Online
Media Post.com

Yellow indicates Analog operations blocking Public Safety frequencies

Red indicates Digital operations blocking Public Safety frequencies

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
2	Los Angeles, CA	KCBS-TV	2	CBS	Viacom Inc. (Group Owner)	Los Angeles	Network - CBS
2		KNBC-TV	4	NBC	National Broadcasting Co. (Group Owner)	Los Angeles	Network - NBC
2		KTLA-TV	5	WBN	Tribune Broadcasting Co. (Group Owner)	Los Angeles	Network - WBN
2		KABC-TV	7	ABC	Disney Enterprises Inc. (Group Owner)	Los Angeles	Network - ABC
2		KCAL-TV	9	IND	Viacom Inc. (Group Owner)	Los Angeles	Syndicated Programs
2		KTTV-TV	11	FOX	Fox Television Stations, Inc. (Group Owner)	Los Angeles	Network - FOX
2		KCOP-TV	13	UPN	Fox Television Stations, Inc. (Group Owner)	Los Angeles	Network - UPN
2		KSCI-TV	18	IND	International Media Group (Group Owner)	Long Beach	Ethnic
2		KWHY-TV	22	TMO	National Broadcasting Co. (Group Owner)	Los Angeles	Spanish
2		KVCR-TV	24	PBS	San Bernardino Community College District (Group Owner)	San Bernardino	Donor Supported - PBS
2		KCET-TV	28	PBS	Community TV of Southern California (Group Owner)	Los Angeles	Donor Supported - PBS
2		KPXN-TV	30	PAX	Paxson Communications Corp. (Group Owner)	San Bernardino	Network - PAX
2		KVMD-TV	31	SILENT	Ronald Ulloa (Group Owner)	Twentynine Palms	Silent
2		KMEX-TV	34	UNV	Univision Communications Inc. (Group Owner)	Los Angeles	Spanish
2		KNET-TV	38	IND	World Television	Los Angeles	Spanish/Ethnic
2		KTBN-TV	40	TBN	Trinity Broadcasting Network Inc. (Group Owner)	Santa Ana	Religious
2		KFTR-TV	46	TEL	Univision Communications Inc. (Group Owner)	Los Angeles	Spanish
2		KOCE-TV	50	PBS	Coast Community College District - (Group Owner)	Huntington Beach	Donor Supported - PBS
2		KVEA-TV	52	TMO	National Broadcasting Co. (Group Owner)	Corona	Spanish
2		KDOC-TV	56	IND	Golden Orange Broadcasting Co. Inc. (Group Owner)	Anaheim	Syndicated Programs
2	KJAL-TV	57	IND	Costa Del Oro Television	Los Angeles	Spanish	
2	KLCS-TV	58	PBS	Los Angeles City Board of Education	Los Angeles	Donor Supported - PBS	
2		KRCA-TV	62	IND	Lieberman Broadcasting Inc. (Group Owner)	Riverside	Asian/Ethnic
2		KADY-TV	63	UPN	Biltmore Broadcasting LLC (Group Owner)	Oxnard	Network - UPN
2		KHIZ-TV	64	IND	Sunbelt Television Inc. (Group Owner)	Barstow	Syndicated and Local Programming
2		KTTV-DT	65	FOX	Fox Television Stations, Inc. (Group Owner)	Los Angeles	Network - Fox
2		KRCA-DT	68	IND	LBI Media Inc. (Group Owner)	Riverside	Asian/Ethnic
3	Chicago, IL	WBBM-TV	2	CBS	Viacom Inc. (Group Owner)	Chicago	Network - CBS
3		WMAQ-TV	5	NBC	National Broadcasting Co. (Group Owner)	Chicago	Network - NBC
3		WLS-TV	7	ABC	Disney Enterprises Inc. (Group Owner)	Chicago	Network - ABC
3		WGN-TV	9	WBN	Tribune Broadcasting Co. (Group Owner)	Chicago	Syndicated Programs
3		WTTW-TV	11	PBS	Window to the World Communications Inc. (Group Owner)	Chicago	Donor Supported - PBS
3		WYCC-TV	20	PBS	Board of Trustees, Community College No. 508 (Group Owner)	Chicago	Educational
3		WCIU-TV	26	IND	Weigel Broadcasting Co. (Group Owner)	Chicago	Syndicated Programs
3		WFLD-TV	32	FOX	Fox Television Stations, Inc. (Group Owner)	Chicago	Network - FOX
3		WWTO-TV	35	TBN	Trinity Broadcasting Network Inc. (Group Owner)	La Salle	Religious
3		WCPX-TV	38	PAX	Paxson Communications Corp. (Group Owner)	Chicago	Network - PAX
3		WSNS-TV	44	TMO	National Broadcasting Co. (Group Owner)	Chicago	Spanish
3		WPWR-TV	50	UPN	Fox Television Stations, Inc. (Group Owner)	Gary	Network - UPN
3		WYIN-TV	56	PBS	Northwest Indiana Public Broadcasting Inc. (Group Owner)	Gary	Donor Supported - PBS
3		WXFT-TV	60	TEL	Univision Communications Inc. (Group Owner)	Aurora	Spanish
3			WJYS-TV	62	IND	Jovon Broadcasting Corp. (Group Owner)	Hammond
3		WGBO-TV	66	UNV	Univision Communications Inc. (Group Owner)	Joliet	Spanish

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
4	Philadelphia, PA	KYW-TV	3	CBS	Viacom Inc. (Group Owner)	Philadelphia	Network - CBS
4		WPVI-TV	6	ABC	Disney Enterprises Inc. (Group Owner)	Philadelphia	Network - ABC
4		WCAU-TV	10	NBC	National Broadcasting Co. (Group Owner)	Philadelphia	Network - NBC
4		WHYY-TV	12	PBS	WHYY Inc. (Group Owner)	Wilmington	Donor Supported - PBS
4		WPHL-TV	17	WBN	Tribune Broadcasting Co. (Group Owner)	Philadelphia	Network - WBN
4		WNJS-TV	23	PBS	New Jersey Public Broadcasting Authority (Group Owner)	Camden, NJ	Donor Supported - PBS
4		WTFX-TV	29	FOX	Fox Television Stations, Inc. (Group Owner)	Philadelphia	Network - FOX
4		WYBE-TV	35	ETV	Independence Public Media of Philadelphia (Group Owner)	Philadelphia	Educational
4		WLVT-TV	39	PBS	Lehigh Valley Public Telecommunications Corp. (Group Owner)	Allentown	Donor Supported - PBS
4		WMGM-TV	40	NBC	South Jersey Radio Inc.	Wildwood, NJ	News
4		WGTW-TV	48	IND	Brunson Communications Inc. (Group Owner)	Burlington, NJ	Syndicated Programs
4		WNJN-TV	50	PBS	New Jersey Public Broadcasting Authority (Group Owner)	Montclair, NJ	Donor Supported - PBS
4		WTVE-TV	51	IND	Reading Broadcasting Inc. (Group Owner)	Reading	Shopping/Religious
4		WNJT-TV	52	PBS	New Jersey Public Broadcasting Authority (Group Owner)	Trenton, NJ	Donor Supported - PBS
4		WWAC-TV	53	IND	H. Chase Lenfest (Group Owner)	Atlantic City, NJ	Syndicated Programs/ Informercials/Local
4		WPSG-TV	57	UPN	Viacom Inc. (Group Owner)	Philadelphia	Network - UPN
4		WNJB-TV	58	PBS	New Jersey Public Broadcasting Authority (Group Owner)	New Brunswick	Donor Supported - PBS
4		WBPH-TV	60	IND	Sonshine Family TV Inc. (Group Owner)	Bethlehem	Religious
4		WPPX-TV	61	PAX	Paxson Communications Corp. (Group Owner)	Wilmington	Network - PAX
4		WWSI-TV	62	TMO	Council Tree Communications (Group Owner)	Atlantic City, NJ	Spanish
4	WLVT-DT	62	PBS	Lehigh Valley Public Telecommunications Corp. (Group Owner)	Allentown	Donor Supported - PBS	
4	WPVI-DT	64	ABC	Disney Enterprises Inc. (Group Owner)	Philadelphia	Network - ABC	
4	WUVP - TV	65	UNV	Univision Communications Inc. (Group Owner)	Vineland	Spanish	
4	WCAU-DT	67	NBC	National Broadcasting Co. (Group Owner)	Philadelphia	Network - NBC	
4	WFMZ-TV	69	IND	Maranatha Broadcasting Co. (Group Owner)	Allentown	Syndicated Programs/ Informercials	

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
5	San Francisco-Oakland-San Jose, CA	KTVU-TV	2	FOX	Cox Enterprises Inc. (Group Owner)	Oakland	Network - FOX
5		KRON-TV	4	IND	Youn Broadcasting (Group Owner)	San Francisco	News/Syndicated Programs
5		KPIX-TV	5	CBS	Viacom Inc. (Group Owner)	San Francisco	Network - CBS
5		KGO-TV	7	ABC	Disney Enterprises Inc. (Group Owner)	San Francisco	Network - ABC
5		KFWU-TV	8	IND	Pappas Telecasting Companies	Fort Bragg	Spanish
5		KQED-TV	9	PBS	KQED Inc. (Group Owner)	San Francisco	Donor Supported - PBS
5		KNTV-TV	11	NBC	National Broadcasting Co. (Group Owner)	San Jose	Network - NBC
5		KDTV-TV	14	UNV	Univision Communications Inc. (Group Owner)	San Francisco	Spanish
5		KCU-TV	15	TMO	National Broadcasting Co. (Group Owner)	Salinas	Spanish
5		KBWB-TV	20	WBN	Granite Broadcasting Corp. (Group Owner)	San Francisco	Network - WBN
5		KRCB-TV	22	PBS	Rural California Broadcasting Corp. (Group Owner)	Cotati	Donor Supported - PBS
5		KTSF-TV	26	IND	Lincoln Broadcasting Co. (Group Owner)	San Francisco	Ethnic
5		KMTP-TV	32	ETV	Minority Television Project/Channel 32 (Group Owner)	San Francisco	Ethnic
5		KICU-TV	36	IND	Cox Enterprises Inc. (Group Owner)	San Jose	Syndicated Programs/Infomercials
5		KCNS-TV	38	IND	Summit America Television Inc. (Group Owner)	San Francisco	Shopping
5		KTNC-TV	42	IND	Pappas Telecasting Companies	Concord	Azteca/Spanish
5		KBHK-TV	44	UPN	Viacom Inc. (Group Owner)	San Francisco	Network - UPN
5		KSTS-TV	48	TMO	National Broadcasting Co. (Group Owner)	San Jose	Spanish
5		KFTY-TV	50	IND	Clear Channel Broadcasting (Group Owner)	Santa Rosa	News
5		KTEH-TV	54	PBS	KTEH-TV Foundation (Group Owner)	San Jose	Donor Supported - PBS
5		KCSM-TV	60	PBS	San Mateo County Community College District (Group Owner)	San Mateo	Donor Supported - PBS
5		KTNC-DT	63	IND	Pappas Telecasting Companies (Group Owner)	Concord	Spanish
5		KKPX-TV	65	PAX	Paxson Communications Corp. (Group Owner)	San Jose	Network - PAX
5		KFSF-TV	66	TEL	Univision Communications Inc. (Group Owner)	Vallejo	Spanish
5		KTLN-TV	68	IND	Christian Communications of Chicagoland (Group Owner)	Novato	Christian

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
6	Boston, MA Manchester, NH	WGBH-TV	2	PBS	WGBH Educational Foundation	Boston	Donor Supported - PBS
6		WBZ-TV	4	CBS	Viacom Inc. (Group Owner)	Boston	Network - CBS
6		WCVB-TV	5	ABC	Hearst-Argyle Television Inc. (Group Owner)	Boston	Network - ABC
6		WHDH-TV	7	NBC	Sunbeam Television Corp. (Group Owner)	Boston	Network - NBC
6		WMUR-TV	9	ABC	Hearst-Argyle Television Inc. (Group Owner)	Manchester, NH	Network - ABC
6		WENH-TV	11	PBS	University of New Hampshire (Group Owner)	Durham, NH	Donor Supported - PBS
6		WPXG-TV	21	PAX	Paxson Communications Corp. (Group Owner)	Concord	Network - PAX
6		WFXT-TV	25	FOX	Fox Television Stations, Inc. (Group Owner)	Boston	Network - FOX
6		WUNI-TV	27	UNV	Entravision Communications (Group Owner)	Worcester	Spanish
6		WSBK-TV	38	UPN	Viacom Inc. (Group Owner)	Boston	Network - UPN
6		WGBX-TV	44	PBS	WGBH Educational Foundation	Boston	Donor Supported - PBS
6		WLED-TV	49	PBS	University of New Hampshire (Group Owner)	Littleton, NH	Donor Supported - PBS
6		WNDS-TV	50	IND	CTV of Derry Inc (Group Owner)	Derry, NH	Syndicated Programs
6		WEKW-TV	52	PBS	University of New Hampshire (Group Owner)	Keene, NH	Donor Supported - PBS
6		WLVI-TV	56	WBN	Tribune Broadcasting Co. (Group Owner)	Cambridge	Network - WBN
6		WDPX-TV	58	PAX	Paxson Communications Corp. (Group Owner)	Vineyard Haven	Network - PAX
6		WMFP-TV	62	IND	Summit American TV Inc. (Group Owner)	Lawrence	Shopping
6		WUTF-TV	66	TEL	Univision Communications Inc. (Group Owner)	Marlborough	Spanish
6		WBPX-TV	68	PAX	Paxson Communications Corp. (Group Owner)	Boston	Network - PAX
7		Dallas-Ft. Worth, TX	KDTN-TV	2	ETV	North Texas Public Broadcasting Inc. (Group Owner)	Denton
7	KDFW-TV		4	FOX	Fox Television Stations, Inc. (Group Owner)	Dallas	Network - FOX
7	KXAS-TV		5	NBC	Station Venture Operations LP (Group Owner)	Fort Worth	Network - NBC
7	WFAA-TV		8	ABC	Belo Corp (Group Owner)	Dallas	Network - ABC
7	KTVT-TV		11	CBS	Viacom Inc. (Group Owner)	Fort Worth	Network - CBS
7	KERA-TV		13	PBS	North Texas Public Broadcasting Inc. (Group Owner)	Dallas	Donor Supported - PBS
7	KTXA-TV		21	UPN	Viacom Inc. (Group Owner)	Arlington	Network - UPN
7	KUVN-TV		23	UNV	Univision Communications Inc. (Group Owner)	Garland	Spanish
7	KDFI-TV		27	IND	Fox Television Stations, Inc. (Group Owner)	Dallas	Syndicated Programs
7	KMPX-TV		29	IND	Word of Good Fellowship Inc. (Group Owner)	Decatur	Religious
7	KDAF-TV		33	WBN	Tribune Broadcasting Co. (Group Owner)	Dallas	Network - WBN
7	KXTX-TV		39	TEL	National Broadcasting Co. (Group Owner)	Dallas	Spanish
7	KTAQ-TV		47	IND	New World Broadcasting Corp. (Group Owner)	Greenville	Shopping/Infomercials/ Religious
7	KSTR-TV		49	TEL	Univision Communications Inc. (Group Owner)	Irvine	Spanish
7	KFWD-TV		52	IND	HIC Broadcast Partners (Group Owner)	Fort Worth	Syndicated Programs/ Infomercials
7	KLDT-TV		55	IND	Douglas Johnson (Group Owner)	Lake Dallas	Shopping/Infomercials
7	KDTX-TV		58	TBN	Trinity Broadcasting Network Inc. (Group Owner)	Dallas	Religious
7	KPXD-TV	68	PAX	Paxson Communications Corp. (Group Owner)	Arlington	Network - PAX	

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
8	Washington, DC	WRC-TV	4	NBC	National Broadcasting Co. (Group Owner)	Washington	Network - NBC
8		WTG-TV	5	FOX	Fox Television Stations, Inc. (Group Owner)	Washington	Network - FOX
8		WJLA-TV	7	ABC	Albritton Communications Co. (Group Owner)	Washington	Network - ABC
8		WUSA-TV	9	CBS	Gannett Broadcasting Group (Group Owner)	Washington	Network - CBS
8		WFDC-TV	14	TEL	Univision Communications Inc. (Group Owner)	Arlington	Spanish
8		WDCA-TV	20	UPN	Fox Television Stations, Inc. (Group Owner)	Washington	Network - UPN
8		WHAG-TV	25	NBC	Quorum Broadcast Holdings Inc. (Group Owner)	Hagerstown	Network - NBC
8		WETA-TV	26	PBS	Greater Washington Educational Telecom. Assn. (Group Owner)	Washington	Donor Supported - PBS
8		WHUT-TV	32	PBS	Howard University (Group Owner)	Washington	Donor Supported - PBS
8		WBDC-TV	50	WBN	Tribune Broadcasting Co. (Group Owner)	Washington	Network - WBN
8		WNVTV-TV	53	ETV	Commonwealth Public Broadcasting Corp. (Group Owner)	Goldvein	Educational
8		WNVC-TV	56	ETV	Commonwealth Public Broadcasting Corp. (Group Owner)	Fairfax, VA	Ethnic
8		WVPX-TV	60	PAX	Paxson Communications Corp. (Group Owner)	Martinsburg, WV	Network - PAX
8		WPXW-TV	66	PAX	Paxson Communications Corp. (Group Owner)	Manassas, VA	Network - PAX
8			WJAL-TV	68	IND	Entravision Communications (Group Owner)	Hagerstown, MD
9	Atlanta, GA	WSB-TV	2	ABC	Cox Enterprises Inc. (Group Owner)	Atlanta	Network - ABC
9		WAGA-TV	5	FOX	Fox Television Stations, Inc. (Group Owner)	Atlanta	Network - FOX
9		WGTV-TV	8	PBS	Georgia Public Telecommunications Commission (Group Owner)	Athens	Donor Supported - PBS
9		WXIA-TV	11	NBC	Gannett Broadcasting Group (Group Owner)	Atlanta	Network - NBC
9		WPXA-TV	14	PAX	Paxson Communications Corp. (Group Owner)	Rome	Network - PAX
9		WTBS-TV	17	IND	AOL Time Warner Inc. (Group Owner)	Atlanta	TBS SuperStation
9		WJSP-TV	28	PBS	Georgia Public Telecommunications Commission (Group Owner)	Warm Springs	Donor Supported - PBS
9		WDCO-TV	29	PBS	Georgia Public Telecommunications Commission (Group Owner)	Cochran	Donor Supported - PBS
9		WPBA-TV	30	PBS	Board of Educatoin of the City of Atlanta (Group Owner)	Atlanta	Donor Supported - PBS
9		WATL-TV	36	WBN	Tribune Broadcasting Co. (Group Owner)	Atlanta	Network - WBN
9		WGCL-TV	46	CBS	Meredith Corp. (Group Owner)	Atlanta	Network - CBS
9		WATC-TV	57	ETV	Community Television Inc. (Group Owner)	Atlanta	Educational
9			WHSG-TV	63	TBN	Trinity Broadcasting Network Inc. (Group Owner)	Monroe
9		WUPA-TV	69	UPN	Viacom Inc. (Group Owner)	Atlanta	Network - UPN
10	Detroit, MI	WJBK-TV	2	FOX	Fox Television Stations, Inc. (Group Owner)	Detroit	Network - FOX
10		WDIV-TV	4	NBC	Post-NewsweekStations Inc. (Group Owner)	Detroit	Network - NBC
10		WXYZ-TV	7	ABC	E.W. Scripps Co. (Group Owner)	Detroit	Network - ABC
10		WDWB-TV	20	WBN	Granite Broadcasting Corp. (Group Owner)	Detroit	Network - WBN
10		WPXD-TV	31	PAX	Paxson Communications Corp. (Group Owner)	Ann Arbor	Network - PAX
10		WADL-TV	38	IND	Adell Broadcasting Corp. (Group Owner)	Mount Clemens	Not Available
10		WKBD-TV	50	UPN	Viacom Inc. (Group Owner)	Detroit	Network - UPN
10		WTVS-TV	56	PBS	Detroit Educational Television Foundation (Group Owner)	Detroit	Donor Supported - PBS
10			WWJ-TV	62	CBS	Viacom Inc. (Group Owner)	Detroit

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming	
11	Houston, TX	KPRC-TV	2	NBC	Post-NewsweekStations Inc. (Group Owner)	Houston	Network - NBC	
11		KUHT-TV	8	PBS	University of Houston (Group Owner)	Houston	Donor Supported - PBS	
11		KHOU-TV	11	CBS	Belo Corp (Group Owner)	Houston	Network - CBS	
11		KTRK-TV	13	ABC	Disney Enterprises Inc. (Group Owner)	Houston	Network - ABC	
11		KETH-TV	14	ETV	Community Educational Television Inc. (Group Owner)	Houston	Educational	
11		KTXH-TV	20	UPN	Fox Television Stations, Inc. (Group Owner)	Houston	Network - UPN	
11		KLTJ-TV	22	ETV	Word of Good Fellowship Inc. (Group Owner)	Galveston	Religious	
11		KRIV-TV	26	FOX	Fox Television Stations, Inc. (Group Owner)	Houston	Network - FOX	
11		KHWB-TV	39	WBN	Tribune Broadcasting Co. (Group Owner)	Houston	Network - WBN	
11		KXLN-TV	45	UNV	Univision Communications Inc. (Group Owner)	Rosenberg	Spanish	
11		KTMD-TV	48	TMO	National Broadcasting Co. (Group Owner)	Galveston	Spanish	
11		KPXB-TV	49	PAX	Paxson Communications Corp. (Group Owner)	Conroe	Network - PAX	
11		KNWS-TV	51	IND	Douglas Johnson (Group Owner)	Katy	Syndicated Programs	
11		KTBU-TV	55	IND	Humanity Interested Media Inc. (Group Owner)	Conroe	Syndicated Programs	
11		KAZH-TV	57	IND	Pappas Telecasting Companies (Group Owner)	Baytown	Azteca/Spanish	
11		KZJL-TV	61	IND	Lieberman Broadcasting Inc. (Group Owner)	Houston	Spanish	
11			KHSH-TV	67	TEL	Univision Communications Inc. (Group Owner)	Alvin	Spanish
12	Seattle-Tacoma, WA	KOMO-TV	4	ABC	Fisher Broadcasting Inc.	Seattle	Network - CBS	
12		KING-TV	5	NBC	KING-TV Inc.	Seattle	Network - NBC	
12		KIRO-TV	7	CBS	KIRO-TV Holdings, Inc.	Seattle	Network - CBS	
12		KCTS-TV	9	PBS	KCTS Television	Seattle	Donor Supported - PBS	
12		KSTW	11	UPN	Viacom Inc. (Group Owner)	Tacoma	Network - UPN	
12		KCPQ	13	FOX	Tribune Television Northwest Inc.	Tacoma	Network - FOX	
12		KCKA	15	PBS	Bates Technical College (Group Owner)	Centralia	Donor Supported - PBS	
12		KONG-TV	16	IND	Belo Corp (Group Owner)	Everett	Gen'l Entertainment	
12		KTBW-TV	20	TBN	Trinity Broadcasting Network Inc. (Group Owner)	Tacoma	Religious	
12		KTWB-TV	22	WBN	Tribune Broadcasting Co. (Group Owner)	Seattle	Network - WBN	
12		KBCB	24	IND	World Television of Washington LLC	Bellingham	Gen'l Entertainment	
12		KBTC-TV	28	PBS	Bates Technical College (Group Owner)	Tacoma	Donor Supported - PBS	
12		KWPX	33	PAX	Paxson Communications Corp. (Group Owner)	Bellevue	Network - PAX	
12		KHCV-TV	45	IND	North Pacific International TV Inc.	Seattle	Shopping	
12		KWOG	51	IND	African-American Broadcasting Co. (Group Owner)	Bellevue	Ethnic	
12			KWDK	56	ETV	Puget Sound Educational TV (Group Owner)	Tacoma	Educational

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
13	Tampa-St. Petersburg (Sarasota), FL	WEDU-TV	3	PBS	Florida West Coast Public Broadcasting (Group Owner)	Tampa	Donor Supported - PBS
13		WFLA-TV	8	NBC	Media General Inc. (Group Owner)	Tampa	Network - NBC
13		WTSP-TV	10	CBS	Gannett Broadcasting Group (Group Owner)	St. Petersburg	Network - CBS
13		WTVT-TV	13	FOX	Fox Television Stations, Inc. (Group Owner)	Tampa	Network - FOX
13		WUSF-TV	16	PBS	University of South Florida Board of Trustees (Group Owner)	Tampa	Educational
13		WCLF-TV	22	IND	Christian Television Corp. Inc. (Group Owner)	Clearwater	Religious
13		WFTS-TV	28	ABC	E.W. Scripps Co. (Group Owner)	Tampa	Network - ABC
13		WMOR-TV	32	IND	Hearst Broadcasting (Group Owner)	Lakeland	Syndicated Programs
13		WTTA-TV	38	WBN	Bay Television (Group Owner)	St. Petersburg	Network - WBN
13		WWSB-TV	40	ABC	Southern Broadcast Corp. of Sarasota (Group Owner)	Sarasota	Network - ABC
13		WTOG-TV	44	UPN	Viacom Inc. (Group Owner)	St. Petersburg	Network - UPN
13		WFTT-TV	50	TEL	Univision Communications Inc. (Group Owner)	Tampa	Spanish
13		WVEA-TV	62	UNV	Entravision Communications (Group Owner)	Venice	Spanish
13		WXPX-TV	66	PAX	Paxson Communications Corp. (Group Owner)	Bradenton	Network - PAX
15	Cleveland-Akron (Canton), OH	WKYC-TV	3	NBC	Gannett Broadcasting Group (Group Owner)	Cleveland	Network - NBC
15		WEWS-TV	5	ABC	E.W. Scripps Co. (Group Owner)	Cleveland	Network - ABC
15		WJW-TV	8	FOX	Fox Television Stations, Inc. (Group Owner)	Cleveland	Network - FOX
15		WDLI-TV	17	TBN	Trinity Broadcasting Network Inc. (Group Owner)	Canton	Religious
15		WOIO-TV	19	CBS	Raycom Media Inc. (Group Owner)	Shaker Heights	Network - CBS
15		WVPX-TV	23	PAX	Paxson Communications Corp. (Group Owner)	Akron	Network - PAX
15		WVIZ-TV	25	PBS	Media Inc. (Group Owner)	Cleveland	Donor Supported - PBS
15		WUAB-TV	43	UPN	Raycom Media Inc. (Group Owner)	Lorain	Network - UPN
15		WNEO-TV	45	PBS	Northeastern Educational Television of Ohio (Group Owner)	Alliance	Donor Supported - PBS
15		WEAO-TV	49	PBS	Northeastern Educational Television of Ohio (Group Owner)	Akron	Donor Supported - PBS
15		WGGN-TV	52	TBN	Christian Faith Broadcast Inc. (Group Owner)	Sandusky	Religious
15		WBNX-TV	55	WBN	Winston Broadcasting Network Inc. (Group Owner)	Akron	Network - WBN
15		WQHS-TV	61	UNV	Univision Communications Inc. (Group Owner)	Cleveland	Spanish
15		WOAC-TV	67	IND	Summit America Television Inc. (Group Owner)	Canton	Shopping
15	WMFD-TV	68	IND	Mid States Television Inc. (Group Owner)	Mansfield	News	

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
17	Miami-Ft. Lauderdale, FL	WPBT-TV	2	PBS	Community TV Foundation of South Florida Inc. (Group Owner)	Miami	Donor Supported - PBS
17		WFOR-TV	4	CBS	Viacom Inc. (Group Owner)	Miami	Network - CBS
17		WTVJ-TV	6	NBC	National Broadcasting Co. (Group Owner)	Miami	Network - NBC
17		WSVN-TV	7	FOX	Sunbeam Television Corp. (Group Owner)	Miami	Network - FOX
17		WVIB-TV	8	IND	Hispanic Keys Broadcasting Corp. (Group Owner)	Key West	Spanish
17		WPLG-TV	10	ABC	Post-NewsweekStations Inc. (Group Owner)	Miami	Network - ABC
17		WLRN-TV	17	PBS	School Board of Date County/WLRN-TV (Group Owner)	Miami	Donor Supported - PBS
17		WEYS-TV	22	IND	De La Pena Family Trust	Key West	Spanish
17		WLTW-TV	23	UNV	Univision Communications Inc. (Group Owner)	Miami	Spanish
17		WBFS-TV	33	UPN	Viacom Inc. (Group Owner)	Miami	Network - UPN
17		WPXM-TV	35	PAX	Paxson Communications Corp. (Group Owner)	Miami	Network - PAX
17		WBZL-TV	39	WBN	Tribune Broadcasting Co. (Group Owner)	Miami	Network - WBN
17		WHFT-TV	45	TBN	Trinity Broadcasting Network Inc. (Group Owner)	Miami	Religious
17		WSCV-TV	51	TMO	National Broadcasting Co. (Group Owner)	Ft. Lauderdale	Spanish
17		WAMI-TV	69	TEL	Univision Communications Inc. (Group Owner)	Hollywood	Spanish
19	Sacramento-Stockton-Modesto, CA	KCRA-TV	3	NBC	Hearst-Argyle Television Inc. (Group Owner)	Sacramento	Network - NBC
19		KVIE-TV	6	PBS	KVIE Inc. (Group Owner)	Sacramento	Donor Supported - PBS
19		KXTV-TV	10	ABC	Gannett Broadcasting Group (Group Owner)	Sacramento	Network - ABC
19		KOVR-TV	13	CBS	Sinclair Broadcast Group Inc. (Group Owner)	Stockton	Network - CBS
19		KUVS-TV	19	UNV	Univision Communications Inc. (Group Owner)	Modesto	Spanish
19		KBSV-TV	23	ETV	BET-NAHRAIN Inc. (Group Owner)	Ceres	Ethnic
19		KSPX-TV	29	PAX	Paxson Communications Corp. (Group Owner)	Sacramento	Network - PAX
19		KMAX-TV	31	UPN	Viacom Inc. (Group Owner)	Sacramento	Network - UPN
19		KTXL-TV	40	FOX	Tribune Broadcasting Co. (Group Owner)	Sacramento	Network - FOX
19		KQCA-TV	58	WBN	Hearst-Argyle Television Inc. (Group Owner)	Stockton	Network - WBN
19		KFTL-DT	62	IND	Family Stations Inc. (Group Owner)	Stockton	Shopping/Religious
19	KFTL-TV	64	IND	Family Stations Inc. (Group Owner)	Stockton	Shopping/Religious	

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming	
20	Orlando-Daytona Beach-Melbourne, FL	WESH-TV	2	NBC	Hearst-Argyle Television Inc. (Group Owner)	Daytona Beach	Network - NBC	
20		WKMG-TV	6	CBS	Post-NewsweekStations Inc. (Group Owner)	Orlando	Network - CBS	
20		WFTV-TV	9	ABC	Cox Enterprises Inc. (Group Owner)	Orlando	Network - ABC	
20		WCEU-TV	15	ETV	Daytona Beach Community College District (Group Owner)	New Smyrna Beach	Educational	
20		WKCF-TV	18	WBN	Emmis Communications Corp (Group Owner)	Clermont	Network - WBN	
20		WMFE-TV	24	PBS	Community Communications Inc. - Florida (Group Owner)	Orlando	Donor Supported - PBS	
20		WOFL-TV	35	FOX	Fox Television Stations, Inc. (Group Owner)	Orlando	Network - FOX	
20		WOTF-TV	43	TEL	Univision Communications Inc. (Group Owner)	Melbourne	Spanish	
20		WOGX-TV	51	FOX	Fox Television Stations, Inc. (Group Owner)	Ocala	Network - FOX	
20		WTGL-TV	52	IND	Good Life Broadcasting Inc. (Group Owner)	Cocoa	Religious	
20		WACX-TV	55	IND	Associated Christian Television System Inc. (Group Owner)	Leesburg	Religious	
20		WOPX-TV	56	PAX	Paxson Communications Corp. (Group Owner)	Melbourne	Network - PAX	
20			WRBW-TV	65	UPN	Fox Television Stations, Inc. (Group Owner)	Orlando	Network - UPN
20			WBCC-TV	68	ETV	Brevard Community College (Group Owner)	Cocoa	Educational
21	Pittsburgh, PA	KDKA-TV	2	CBS	Viacom Inc. (Group Owner)	Pittsburgh	Network - CBS	
21		WTAE-TV	4	ABC	Hearst-Argyle Television Inc. (Group Owner)	Pittsburgh	Network - ABC	
21		WPXI-TV	11	NBC	Cox Enterprises Inc. (Group Owner)	Pittsburgh	Network - NBC	
21		WQED-TV	13	PBS	WQED Pittsburgh (Group Owner)	Pittsburgh	Donor Supported - PBS	
21		WQEX-TV	16	PBS	WQED Pittsburgh (Group Owner)	Pittsburgh	Donor Supported - PBS	
21		WNPA-TV	19	UPN	Viacom Inc. (Group Owner)	Jeannette	Network - UPN	
21		WCWB-TV	22	WBN	Sinclair Broadcast Group Inc. (Group Owner)	Pittsburgh	Network - WBN	
21		WNPB-TV	24	PBS	West Virginia Educatoinal Broadcasting Authority (Group Owner)	Morgantown	Donor Supported - PBS	
21		WPCB-TV	40	IND	Cornerstone Television Inc. (Group Owner)	Greensburg	Religious	
21		WPGH-TV	53	FOX	Sinclair Broadcast Group Inc. (Group Owner)	Pittsburgh	Network - FOX	
24	Baltimore, MD	WMAR-TV	2	ABC	E.W. Scripps Co. (Group Owner)	Baltimore	Network - ABC	
24		WBAL-TV	11	NBC	Hearst-Argyle Television Inc. (Group Owner)	Baltimore	Network - NBC	
24		WJZ-TV	13	CBS	Viacom Inc. (Group Owner)	Baltimore	Network - CBS	
24		WMPT-TV	22	PBS	Maryland Public Television (Group Owner)	Annapolis	Donor Supported - PBS	
24		WUTB-TV	24	UPN	Fox Television Stations, Inc. (Group Owner)	Baltimore	Network - UPN	
24		WCPB-TV	28	PBS	Maryland Public Television (Group Owner)	Salisbury	Donor Supported - PBS	
24		WWPB-TV	31	PBS	Maryland Public Television (Group Owner)	Hagerstown	Donor Supported - PBS	
24		WGPT-TV	36	PBS	Maryland Public Television (Group Owner)	Oakland	Donor Supported - PBS	
24		WBFF-TV	45	FOX	Sinclair Broadcast Group Inc. (Group Owner)	Baltimore	Network - FOX	
24		WNUV-TV	54	WBN	Cunningham Broadcasting Corp. (Group Owner)	Baltimore	Network - WBN	
24		WFPT-TV	62	PBS	Maryland Public Television (Group Owner)	Frederick	Donor Supported - PBS	
24		WMPB-TV	67	PBS	Maryland Public Television (Group Owner)	Baltimore	Donor Supported - PBS	

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
25	Indianapolis, IN	WTTV-TV	4	WBN	Tribune Broadcasting Co. (Group Owner)	Bloomington	Network - WBN
25		WRTV-TV	6	ABC	McGraw-Hill Broadcasting Co. (Group Owner)	Indianapolis	Network - ABC
25		WISH-TV	8	CBS	LIN TV Corp. (Group Owner)	Indianapolis	Network - CBS
25		WTHR-TV	13	NBC	Dispatch Broadcast Group (Group Owner)	Indianapolis	Network NBC
25		WFYI-TV	20	PBS	Metropolitan Indianapolis Public Broadcasting Inc. (Group Owner)	Indianapolis	Donor Supported - PBS
25		WNDY-TV	23	UPN	Viacom Inc. (Group Owner)	Marion	Network - UPN
25		WTTK-TV	29	WBN	Tribune Broadcasting Co. (Group Owner)	Kokomo	Network - WBN
25		WTIU-TV	30	PBS	Indiana U. (Group Owner)	Bloomington	Donor Supported - PBS
25		WHMB-TV	40	IND	Le Sea Broadcasting Co. (Group Owner)	Indianapolis	Religious
25		WCLJ-TV	42	TBN	Trinity Broadcasting Network Inc. (Group Owner)	Bloomington	Religious
25		WIPB-TV	49	PBS	Ball State U. (Group Owner)	Muncie	Donor Supported - PBS
25		WXIN-TV	59	FOX	Tribune Broadcasting Co. (Group Owner)	Indianapolis	Network - FOX
25		WIPX-TV	63	PAX	Paxson Communications Corp. (Group Owner)	Bloomington	Network - PAX
25		WTBU-TV	69	ETV	Butler U. (Group Owner)	Indianapolis	Educational
26		San Diego, CA	XETV-TV	6	FOX	Grupo Televisa (Group Owner)	Tijuana, Mexico
26	KFMB-TV		8	CBS	Midwest Television Inc. (Group Owner)	San Diego	Network - CBS
26	KGTV-TV		10	ABC	McGraw-Hill Broadcasting Co. (Group Owner)	San Diego	Network - ABC
26	KPBS-TV		15	PBS	California State U. for San Diego State U. (Group Owner)	San Diego	Donor Supported - PBS
26	KNSD-TV		39	NBC	Station Venture Operations LP (Group Owner)	San Diego	Network - NBC
26	KUSI-TV		51	UPN	McKinnon Broadcasting Co. (Group Owner)	San Diego	Network - UPN
26	KSWB-TV		69	WBN	Tribune Broadcasting Co. (Group Owner)	San Diego	Network - WBN
27	Hartford & New Haven CT	WFSB	3	CBS	Meredith Corp. (Group Owner)	Hartford	Network - CBS
27		WTNH	8	ABC	LIN TV Corp. (Group Owner)	New Haven	Network - ABC
27		WUVN	18	UNV	Entravision Communications (Group Owner)	Hartford	Spanish
27		WTXX	20	WBN	Tribune Broadcasting Co. (Group Owner)	Waterbury	Network - WBN
27		WEDH	24	PBS	Connecticut Public Television & Radio (Group Owner)	Norwich	Donor Supported - PBS
27		WHPX	26	PAX	Paxson Hartford License Inc.	New London	Network - PAX
27		WVIT	30	NBC	National Broadcasting Co. (Group Owner)	New Britain	Network - NBC
27		WEDN	53	PBS	Connecticut Public Television & Radio (Group Owner)	Norwich	Donor Supported - PBS
27		WCTX	59	UPN	LIN TV Corp. (Group Owner)	New Haven	Network - UPN
27		WTIC-TV	61	FOX	Tribune Broadcasting Co. (Group Owner)	Hartford	Network - FOX
27	WEDY	65	PBS	Connecticut Public Television & Radio (Group Owner)	New Haven	Donor Supported - PBS	
28	Charlotte, NC	WBTV-TV	3	CBS	Jefferson-Pilot Communications Co. (Group Owner)	Charlotte	Network - CBS
28		WSOC-TV	9	ABC	Cox Enterprises Inc. (Group Owner)	Charlotte	Network - ABC
28		WHKY-TV	14	IND	Long Communications LLC (Group Owner)	Hickory	Shopping/Religious
28		WCCB-TV	18	FOX	Bahakel Communications Ltd. (Group Owner)	Charlotte	Network - FOX
28		WNSC-TV	30	PBS	South Carolina ETV Commission (Group Owner)	Rock Hill	Educational
28		WCNC-TV	36	NBC	Belo Corp (Group Owner)	Charlotte	Network - NBC
28		WTVI-TV	42	PBS	Charlotte-Mecklenburg Public Bestg. Authority (Group Owner)	Charlotte	Donor Supported - PBS
28		WJZY-TV	46	UPN	Capitol Broadcasting Co. Inc. (Group Owner)	Belmont	Network - UPN
28		WWWB-TV	55	WBN	Capitol Broadcasting Co. Inc. (Group Owner)	Rock Hill	Network - WBN
28		WAXN-TV	64	IND	Cox Enterprises Inc. (Group Owner)	Kannapolis	Syndicated Programs

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
29	Raleigh-Durham, NC	WUNC-TV	4	PBS	U. of North Carolina (Group Owner)	Chapel Hill	Donor Supported - PBS
29		WRAL-TV	5	CBS	Capitol Broadcasting Inc. (Group Owner)	Raleigh	Network - CBS
29		WTVD	11	ABC	Disney Enterprises Inc. (Group Owner)	Durham	Network - ABC
29		WNCN	17	NBC	National Broadcasting Co. (Group Owner)	Goldstboro	Network - NBC
29		WLFL	22	WBN	Sinclair Broadcast Group Inc. (Group Owner)	Raleigh	Network - WBN
29		WRDC	28	UPN	Sinclair Broadcast Group Inc. (Group Owner)	Durham	Network - UPN
29		WRAY-TV	30	IND	Summit America Television Inc. (Group Owner)	Wilson	Not Available
29		WUNP-TV	36	PBS	U. of North Carolina (Group Owner)	Roanoke Rapids	Donor Supported - PBS
29		WUVC	40	UNV	Univision Communications Inc. (Group Owner)	Fayetteville	Spanish
29		WRPX	47	PAX	Paxson Communications Corp. (Group Owner)	Rocky Mount	Network - PAX
29		WFPX	62	PAX	Paxson Communications Corp. (Group Owner)	Fayetteville	Network - PAX
31	Milwaukee, WI	WTMJ-TV	4	NBC	Journal Broadcast Group Inc. (Group Owner)	Milwaukee	Network - NBC
31		WITI-TV	6	FOX	Fox Television Stations, Inc. (Group Owner)	Milwaukee	Network - FOX
31		WMVS-TV	10	PBS	Milwaukee Area Dist. Bd. Of Vocational, Tech., & Adult Education (Group Owner)	Milwaukee	Educational
31		WISN-TV	12	ABC	Hearst-Argyle Television Inc. (Group Owner)	Milwaukee	Network - ABC
31		WVTV-TV	18	WBN	Sinclair Broadcast Group Inc. (Group Owner)	Milwaukee	Network - WBN
31		WCGV-TV	24	UPN	Sinclair Broadcast Group Inc. (Group Owner)	Milwaukee	Network - UPN
31		WVCY-TV	30	IND	VCY/America Inc. (Group Owner)	Milwaukee	Religious
31		WMVT-TV	36	PBS	Milwaukee Area Dist. Bd. Of Vocational, Tech., & Adult Education (Group Owner)	Milwaukee	Educational
31		WJJA-TV	49	IND	TV 49 Inc. (Group Owner)	Racine	Shopping
31		WWRS-TV	52	TBN	National Minority TV Inc. (Group Owner)	Mayville	Religious
31		WPXE-TV	55	PAX	Paxson Communications Corp. (Group Owner)	Kenosha	Network - PAX
31		WDJT-TV	58	CBS	Weigel Broadcasting Co. (Group Owner)	Milwaukee	Network - CBS
32		Cincinnati, OH	WLWT-TV	5	NBC	Hearst-Argyle Television Inc. (Group Owner)	Cincinnati
32	WCPO-TV		9	ABC	E.W. Scripps Co. (Group Owner)	Cincinnati	Network - ABC
32	WKRC-TV		12	CBS	Clear Channel Broadcasting (Group Owner)	Cincinnati	Network - CBS
32	WXIX-TV		19	FOX	Raycom Media Inc. (Group Owner)	Newport, KY	Network - FOX
32	WCET-TV		48	PBS	Greater Cincinnati TV Educational Foundation (Group Owner)	Cincinnati	Donor Supported - PBS
32	WKON-TV		52	PBS	Kentucky Authority for ETV (Group Owner)	Owenton	Educational
32	WSTR-TV		64	WBN	Sinclair Broadcast Group Inc. (Group Owner)	Cincinnati	Network - WBN
33	Kansas City, MO	WDAF-TV	4	FOX	Fox Television Stations, Inc. (Group Owner)	Kansas City	Network - FOX
33		KCTV	5	CBS	Meredith Corp. (Group Owner)	Kansas City	Network - CBS
33		KMBC-TV	9	ABC	Hearst-Argyle Television Inc. (Group Owner)	Kansas City	Network - ABC
33		KCPT	19	PBS	Public TV 19 Inc.	Kansas City	Donor Supported - PBS
33		KCWE	29	UPN	KCWE TV Inc. (Group Owner)	Kansas City	Network - UPN
33		KSHB-TV	41	NBC	E.W. Scripps Co. (Group Owner)	Kansas City	Network - NBC
33		KPXE	50	PAX	Paxson Communications Corp. (Group Owner)	Kansas City	Network - PAX
33		KSMO-TV	62	WBN	Sinclair Broadcast Group Inc. (Group Owner)	Kansas City	Network - WBN
34	Columbus, OH	WCMH-TV	4	NBC	National Broadcasting Co. (Group Owner)	Columbus	Network - NBC
34		WSYX	6	ABC	Sinclair Broadcast Group Inc. (Group Owner)	Columbus	Network - ABC
34		WBNS-TV	10	CBS	Dispatch Broadcast Group (Group Owner)	Columbus	Network - CBS
34		WTTE	28	FOX	Cunningham Broadcasting Corp. (Group Owner)	Columbus	Network - FOX
34		WOSU-TV	34	PBS	Ohio State University	Columbus	Donor Supported - PBS

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35	Greenville-Asheville, NC	WYFF	4	NBC	Hearst-Argyle Television Inc. (Group Owner)	Greenville	Network - NBC
35		WSPA-TV	7	CBS	Media General Inc. (Group Owner)	Spartanburg	Network - CBS
35		WLOS	13	ABC	Sinclair Broadcast Group Inc. (Group Owner)	Asheville	Network - ABC
35		WGGG-TV	16	IND	Carolina Christian Broadcasting Co. (Group Owner)	Greenville	Religious
35		WHNS	21	FOX	Meredith Corp. (Group Owner)	Asheville	Network - FOX
35		WNTV	29	PBS	South Carolina ETV Commission (Group Owner)	Greenville	Donor Supported - PBS
35		WNEG-TV	32	CBS	Media General Inc. (Group Owner)	Toccoa	Network - CBS
35		WNEH	38	PBS	South Carolina ETV Commission (Group Owner)	Greenwood	Donor Supported - PBS
35		WBSC-TV	40	WBN	Cunningham Broadcasting Corp. (Group Owner)	Anderson	Network - WBN
35		WRET-TV	49	PBS	South Carolina ETV Commission (Group Owner)	Spartanburg	Donor Supported - PBS
35		WASV-TV	62	UPN	Media General Inc. (Group Owner)	Asheville	Network - UPN
37		San Antonio, TX	WOAI-TV	4	NBC	Clear Channel Broadcasting (Group Owner)	San Antonio
37	KENS-TV		5	CBS	Belo Corp (Group Owner)	San Antonio	Network - CBS
37	KLRN-TV		9	PBS	Alamo Public Telecommunications Council (Group Owner)	San Antonio	Donor Supported - PBS
37	KTRG-TV		10	WBN	Ortiz Broadcasting Corp. (Group Owner)	Del Rio	Network - WBN
37	KSAT-TV		12	ABC	Post-NewsweekStations Inc. (Group Owner)	San Antonio	Network - ABC
37	KHCE-TV		23	ETV	San Antonio Educational TV Inc. (Group Owner)	San Antonio	Educational
37	KPXL-TV		26	PAX	Paxson Communications Corp. (Group Owner)	Uvalde	Network - PAX
37	KABB-TV		29	FOX	Sinclair Broadcast Group Inc. (Group Owner)	San Antonio	Network - FOX
37	KRRT-TV		35	WBN	Sinclair Broadcast Group Inc. (Group Owner)	Kerrville	Network - WBN
37	KWEX-TV		41	UNV	Univision Communications Inc. (Group Owner)	San Antonio	Spanish
37	KVDA-TV		60	TMO	National Broadcasting Co. (Group Owner)	San Antonio	Spanish
38	Grand Rapids-Kalamazoo-Battle Creek, MI		WWMT	3	CBS	Freedom Broadcasting Inc. (Group Owner)	Kalamazoo
38		WOOD-TV	8	NBC	LIN TV Corp. (Group Owner)	Grand Rapids	Network - NBC
38		WZZM-TV	13	ABC	Gannett Broadcasting Group (Group Owner)	Grand Rapids	Network - ABC
38		WXMI	17	FOX	Tribune Broadcasting Co. (Group Owner)	Grand Rapids	Network - FOX
38		WGVU-TV	35	PBS	Grand Valley State U. (Group Owner)	Grand Rapids	Donor Supported - PBS
38		WOTV	41	ABC	LIN TV Corp. (Group Owner)	Battle Creek	Network - ABC
38		WZPX	43	PAX	Paxson Communications Corp. (Group Owner)	Battle Creek	Network - PAX
38		WGVK	52	PBS	Grand Valley State U. (Group Owner)	Kalamazoo	Donor Supported - PBS
38		WTLJ	54	TBN	Tri-State Christian TV Inc. (Group Owner)	Muskegon	Religious
38		WLLA	64	WBN	Christian Faith Broadcast Inc. (Group Owner)	Kalamazoo	Network - WBN

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39	West Palm Beach-Ft. Pierce, FL	WPTV	5	NBC	E.W. Scripps Co. (Group Owner)	West Palm Beach	Network - NBC
39		WPEC	12	CBS	Freedom Broadcasting Inc. (Group Owner)	West Palm Beach	Network - CBS
39		WTCE	21	ETV	Jacksonville Educators Broadcasting Inc. (Group Owner)	Fort Pierce	Educational
39		WPBF	25	ABC	Hearst Broadcasting (Group Owner)	Tequesta	Network - ABC
39		WFLX	29	FOX	Raycom Media Inc. (Group Owner)	West Palm Beach	Network - FOX
39		WTVX	34	UPN	Viacom Inc. (Group Owner)	Fort Pierce	Network - UPN
39		WXEL-TV	42	PBS	Barry Telecommunications Inc. (Group Owner)	West Palm Beach	Donor Supported - PBS
39		WFGC	61	IND	Christian Television of Palm Beach County Inc.	Palm Beach	Religious
39		WPPB-TV	63	ETV	The Christian Network Inc. (Group Owner)	Boca Raton	Educational
39		WPXP	67	PAX	Paxson Communications Corp. (Group Owner)	Lake Worth	Network - PAX
40	Birmingham (Anniston & Tuscaloosa) AL	WBRC	6	FOX	Fox Television Stations, Inc. (Group Owner)	Birmingham	Network - FOX
40		WBIQ	10	PBS	Alabama Educational Television Commission (Group Owner)	Birmingham	Donor Supported - PBS
40		WVTM-TV	13	NBC	National Broadcasting Co. (Group Owner)	Birmingham	Network - NBC
40		WTTO	21	WBN	Sinclair Broadcast Group Inc. (Group Owner)	Birmingham	Network - WBN
40		WIAT	42	CBS	Media General Inc. (Group Owner)	Birmingham	Network - CBS
40		WABM	68	UPN	Sinclair Broadcast Group Inc. (Group Owner)	Birmingham	Network - UPN
44	Buffalo, NY	WGRZ-TV	2	NBC	Gannett Broadcasting Group (Group Owner)	Buffalo	Network - NBC
44		WIVB-TV	4	CBS	LIN TV Corp. (Group Owner)	Buffalo	Network - CBS
44		WKBW-TV	7	ABC	Granite Broadcasting Corp. (Group Owner)	Buffalo	Network - ABC
44		WNED-TV	17	PBS	Western New York Public Broadcasting Assn.	Buffalo	Donor Supported - PBS
44		WNLO	23	UPN	LIN TV Corp. (Group Owner)	Buffalo	Network - UPN
44		WUTV	29	FOX	Sinclair Broadcast Group Inc. (Group Owner)	Buffalo	Network - FOX
44		WNYO-TV	49	WBN	Sinclair Broadcast Group Inc. (Group Owner)	Buffalo	Network - WBN
44		WNGS	67	UPN	Caroline K. Powley (Group Owner)	Springville	Network - UPN
45	Oklahoma City, OK	KFOR-TV	4	NBC	The New York Times Company (Group Owner)	Oklahoma City	Network - NBC
45		KOCO-TV	5	ABC	Hearst-Argyle Television Inc. (Group Owner)	Oklahoma City	Network - ABC
45		KWTV	9	CBS	Griffin Television LLC (Group Owner)	Oklahoma City	Network - CBS
45		KETA	13	PBS	Oklahoma Educational Television Authority (Group Owner)	Oklahoma City	Donor Supported - PBS
45		KTBO-TV	14	TBN	Trinity Broadcasting Network Inc. (Group Owner)	Oklahoma City	Religious
45		KOKH-TV	25	FOX	Sinclair Broadcast Group Inc. (Group Owner)	Oklahoma City	Network - FOX
45		KOCB	34	WBN	Sinclair Broadcast Group Inc. (Group Owner)	Oklahoma City	Network - WBN
45		KAUT-TV	43	UPN	Viacom Inc. (Group Owner)	Oklahoma City	Network - UPN
45		KSBI	52	IND	Locke Supply Co. (Group Owner)	Oklahoma City	Religious/Family Programming
45		KOPX	62	PAX	Paxson Communications Corp. (Group Owner)	Oklahoma City	Network - PAX

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48	Providence, RI-New Bedford, MA	WLNE-TV	6	ABC	Freedom Broadcasting Inc. (Group Owner)	New Bedford	Network - ABC
48		WJAR	10	NBC	National Broadcasting Co. (Group Owner)	Providence	Network - NBC
48		WPRI-TV	12	CBS	LIN TV Corp. (Group Owner)	Providence	Network - CBS
48		WLWC	28	UPN	Viacom Inc. (Group Owner)	New Bedford	Network - UPN
48		WSBE-TV	36	PBS	Rhode Island Public Telecommunications Auth. (Group Owner)	Providence	Donor Supported - PBS
48		WNAC-TV	64	FOX	Timothy G. Sheehan (Group Owner)	Providence	Network - FOX
48		WPXQ	69	PAX	Paxson Communications Corp. (Group Owner)	Block Island	Network - PAX
50	Louisville, KY	WAVE	3	NBC	Cosmos Broadcasting Corp. (Group Owner)	Louisville	Network - NBC
50		WHAS-TV	11	ABC	Belo Corp (Group Owner)	Louisville	Network - ABC
50		WKPC-TV	15	PBS	Kentucky Authority for ETV (Group Owner)	Louisville	Donor Supported - PBS
50		WBNA	21	PAX	Word Broadcasting Network Inc. (Group Owner)	Louisville	Network - PAX
50		WLKY-TV	32	CBS	Hearst-Argyle Television Inc. (Group Owner)	Louisville	Network - CBS
50		WDRB	41	FOX	Block Communications Inc. (Group Owner)	Louisville	Network - FOX
50		WKMJ-TV	68	PBS	Kentucky Authority for ETV (Group Owner)	Louisville	Donor Supported - PBS
53	Wilkes Barre-Scranton, PA	WNEP-TV	16	ABC	The New York Times Company (Group Owner)	Scranton	Network - ABC
53		WYOU	22	CBS	Mission Broadcasting Inc. (Group Owner)	Scranton	Network - CBS
53		WBRE-TV	28	NBC	Nexstar Broadcasting Group LLC (Group Owner)	Wilkes Barre	Network - NBC
53		WSWB	38	WBN	KB Prime Media LLC (Group Owner)	Scranton	Network - WBNN
53		WVIA-TV	44	PBS	Northeastern Pennsylvania ETV Association (Group Owner)	Scranton	Donor Supported - PBS
53		WILF	53	FOX	Pegasus Communications Corp. (Group Owner)	Williamsport	Network - FOX
53		WOLF-TV	56	FOX	Pegasus Communications Corp. (Group Owner)	Hazleton	Network - FOX
53	WQPX	64	PAX	Paxson Communications Corp. (Group Owner)	Scranton	Network - PAX	
54	Austin, TX	KTBC	7	FOX	Fox Television Stations, Inc. (Group Owner)	Austin	Network - FOX
54		KLRU	18	PBS	Capital of Texas Public Telecommunications Council (Group Owner)	Austin	Donor Supported - PBS
54		KVUE	24	ABC	Belo Corp (Group Owner)	Austin	Network - ABC
54		KXAN-TV	36	NBC	LIN TV Corp. (Group Owner)	Austin	Network - NBC
54		KEYE-TV	42	CBS	Viacom Inc. (Group Owner)	Austin	Network - CBS
54		KNVA	54	WBN	Balcones Broadcasting Ltd. (Group Owner)	Austin	Network - WBNN
59	Richmond-Petersburg, VA	WTVR-TV	6	CBS	Raycom Media Inc. (Group Owner)	Richmond	Network - CBS
59		WRIC-TV	8	ABC	Young Broadcasting Inc. (Group Owner)	Petersburg	Network - ABC
59		WWBT	12	NBC	Jefferson-Pilot Communications Co. (Group Owner)	Richmond	Network - NBC
59		WCVE-TV	23	PBS	Commonwealth Public Broadcasting Corp. (Group Owner)	Richmond	Donor Supported - PBS
59		WRLH-TV	35	FOX	Sinclair Broadcast Group Inc. (Group Owner)	Richmond	Network - FOX
59		WUPV	65	UPN	Lockwood Broadcasting Inc. (Group Owner)	Ashland	Network - UPN

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65	Lexington, KY	WLEX-TV	18	NBC	Evening Post Publishing Co. (Group Owner)	Lexington	Network - NBC
65		WKYT-TV	27	CBS	Gray Television Inc. (Group Owner)	Lexington	Network - CBS
65		WKSO-TV	29	PBS	Kentucky Authority for ETV (Group Owner)	Somerset	Donor Supported - PBS
65		WKHA	35	PBS	Kentucky Authority for ETV (Group Owner)	Hazard	Donor Supported - PBS
65		WTVQ-TV	36	ABC	Media General Inc. (Group Owner)	Lexington	Network - ABC
65		WKMR	38	PBS	Kentucky Authority for ETV (Group Owner)	Morehead	Donor Supported - PBS
65		WKLE	46	PBS	Kentucky Authority for ETV (Group Owner)	Lexington	Donor Supported - PBS
65		WDKY-TV	56	FOX	Sinclair Broadcast Group Inc. (Group Owner)	Danville	Network - FOX
65		WYMT-TV	57	CBS	Gray Television Inc. (Group Owner)	Hazard	Network - CBS
65		WLJC-TV	65	TBN	Hour of the Harvest Inc. (Group Owner)	Beattyville	Religious
65		WUPX-TV	67	PAX	Paxson Communications Corp. (Group Owner)	Morehead	Network - PAX
68		Toledo, OH	WTOL-TV	11	CBS	Cosmos Broadcasting Corp. (Group Owner)	Toledo
68	WTVG		13	ABC	Disney Enterprises Inc. (Group Owner)	Toledo	Network - ABC
68	WNWO-TV		24	NBC	Raycom Media Inc. (Group Owner)	Toledo	Network - NBC
	WBGU-TV		27	PBS	Bowling Green State U. (Group Owner)	Bowling Green	Donor Supported - PBS
68	WGTE-TV		30	PBS	Public Broadcasting Foundation of Northwest Ohio (Group Owner)	Toledo	Donor Supported - PBS
68	WUPW		36	FOX	LIN TV Corp. (Group Owner)	Toledo	Network - FOX
68	WLMB		40	IND	Dominion Broadcasting Inc. (Group Owner)	Toledo	Religious
69	Green Bay-Appleton, WI	WBAY-TV	2	ABC	Young Broadcasting Inc. (Group Owner)	Green Bay	Network - ABC
69		WFRV-TV	5	CBS	Viacom Inc. (Group Owner)	Green Bay	Network - CBS
69		WLUK-TV	11	FOX	Emmis Communications Corp (Group Owner)	Green Bay	Network - FOX
69		WIWB	14	WBN	ACME Communications Inc. (Group Owner)	Suring	Network - WBNN
69		WGBA	26	NBC	DP & K Inc. (Group Owner)	Green Bay	Network - NBC
69		WACY	32	UPN	Ace TV Inc. (Group Owner)	Appleton	Network - UPN
69		WPNE	38	PBS	Wisconsin Educational Communications Board (Goup Owner)	Green Bay	Donor Supported - PBS
69		WFXS	55	FOX	Davis Television Inc. (Group Owner)	Wittenberg	Network - FOX
69		WMMF-TV	68	IND	Pappas Telecasting Companies (Group Owner)	Fond du Lac	Family/Religious
77	Rochester, NY	WROC-TV	8	CBS	Nexstar Broadcasting Group LLC (Group Owner)	Rochester	Network - CBS
77		WHEC-TV	10	NBC	Hubbard Broadcasting Inc.	Rochester	Network - NBC
77		WORK	13	ABC	Clear Channel Broadcasting (Group Owner)	Rochester	Network - ABC
77		WXXI-TV	21	PBS	WXXI Public Broadcasting Council (Group Owner)	Rochester	Donor Supported - PBS
77		WUHF	31	FOX	Sinclair Broadcast Group Inc. (Group Owner)	Rochester	Network - FOX
80	Syracuse, NY	WSTM-TV	3	NBC	Raycom Media Inc. (Group Owner)	Syracuse	Network - NBC
80		WTVH	5	CBS	Granite Broadcasting Corp. (Group Owner)	Syracuse	Network - CBS
80		WIXT-TV	9	ABC	Clear Channel Broadcasting (Group Owner)	Syracuse	Network - ABC
80		WCNY-TV	24	PBS	The Public Broadcasting Council of Central New York Inc. (Group Owner)	Syracuse	Donor Supported - PBS
80		WNYS-TV	43	WBN	RKM Media Inc. (Group Owner)	Syracuse	Network - WBNN
80		WSPX-TV	56	PAX	Paxson Communications Corp. (Group Owner)	Syracuse	Network - PAX
80	WSYT	68	FOX	Sinclair Broadcast Group Inc. (Group Owner)	Syracuse	Network - FOX	

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
84	Columbia, SC	WIS	10	NBC	Cosmos Broadcasting Corp. (Group Owner)	Columbia	Network - NBC
84		WLTX	19	CBS	Gannett Broadcasting Group (Group Owner)	Columbia	Network - CBS
84		WOLO-TV	25	ABC	Bahakel Communications Ltd. (Group Owner)	Columbia	Network - ABC
84		WRJA-TV	27	PBS	South Carolina ETV Commission (Group Owner)	Sumter	Donor Supported - PBS
84		WRLK-TV	35	PBS	South Carolina ETV Commission (Group Owner)	Columbia	Donor Supported - PBS
84		WACH	57	FOX	Raycom Media Inc. (Group Owner)	Columbia	Network - FOX
84		WBHQ	63	UPN	Dove Broadcasting Inc. (Group Owner)	Sumter	Network - UPN
85	Madison, WI	WISC-TV	3	CBS	Morgan Murphy Stations (Group Owner)	Madison	Network - CBS
85		WMTV	15	NBC	Gray Television Inc. (Group Owner)	Madison	Network - NBC
85		WHA-TV	21	PBS	Regents of the U. of Wisconsin System Board (Group Owner)	Madison	Donor Supported - PBS
85		WKOW-TV	27	ABC	Quincy Broadcasting Co. (Group Owner)	Madison	Network - ABC
85		WMSN-TV	47	FOX	Sinclair Broadcast Group Inc. (Group Owner)	Madison	Network - FOX
85		WBUW	57	UPN	ACME Communications Inc. (Group Owner)	Janesville	Network - UPN
90	Tri-Cities (Bristol, VA-Kingsport-Johnson City, TN)	WCYB-TV	5	NBC	Lamco Communications Inc. (Group Owner)	Bristol	Network - NBC
90		WJHL-TV	11	CBS	Media General Inc. (Group Owner)	Johnson City	Network - CBS
90		WKPT-TV	19	ABC	Glenwood Communications Corp. (Group Owner)	Kingsport	Network - ABC
90		WEMT	39	FOX	Sinclair Broadcast Group Inc. (Group Owner)	Greeneville	Network - FOX
90		WSBN-TV	47	PBS	Blue Ridge Public Television Inc. (Group Owner)	Norton	Donor Supported - PBS
90		WMSY-TV	52	PBS	Blue Ridge Public Television Inc. (Group Owner)	Marion	Donor Supported - PBS
90		WLFG	68	IND	Living Faith Ministries Inc. (Group Owner)	Grundy	Religious
93	Waco-Temple-Bryan, TX	KBTX-TV	3	CBS	Gray Television Inc. (Group Owner)	Bryan	Network - CBS
93		KCEN-TV	6	NBC	Channel 6 Inc. (Group Owner)	Temple	Network - NBC
93		KWTX-TV	10	CBS	Gray Television Inc. (Group Owner)	Waco	Network - CBS
93		KAMU-TV	15	PBS	Texas A & M U. (Group Owner)	College Station	Donor Supported - PBS
93		KXXV	25	ABC	Drewry Communications (Group Owner)	Waco	Network - ABC
93		KYLE	28	WBN	Communications Corp. of America (Group Owner)	Bryan	Network - WBNN
93		KWBU-TV	34	PBS	Brazos Valley Public Broadcasting Foundation (Group Owner)	Waco	Donor Supported - PBS
93		KWKT	44	FOX	Communications Corp. of America (Group Owner)	Waco	Network - FOX
93		KNCT	46	PBS	Central Texas College (Group Owner)	Belton	Donor Supported - PBS
93		KAKW	62	UPN	Univision Communications Inc. (Group Owner)	Killeen	Network - UPN
101	El Paso, TX	XEPM-TV	2	IND	XEPM-TV Television Inc. (Group Owner)	El Paso	Spanish
101		KDBC-TV	4	CBS	Imes Communications (Group Owner)	El Paso	Network - CBS
101		XEJ-TV	5	IND	Television de la Frontera SA (Group Owner)	El Paso	Spanish
101		KVIA-TV	7	ABC	News Press & Gazette Co. (Group Owner)	El Paso	Network - ABC
101		KTSM-TV	9	NBC	Communications Corp. of America (Group Owner)	El Paso	Network - NBC
101		KCOS	13	PBS	El Paso Public Television Foundation (Group Owner)	El Paso	Donor Supported - PBS
101		KFOX-TV	14	FOX	Cox Enterprises Inc. (Group Owner)	El Paso	Network - FOX
101		KINT-TV	26	UNV	Entravision Communications (Group Owner)	El Paso	Spanish
101		KSCE	38	ETV	Channel 38 Christian TV (Group Owner)	El Paso	Religious
101		XHIJ-TV	44	TMO	Intermedia (Group Owner)	El Paso	Spanish
101		KTFN	65	TEL	Entravision Communications (Group Owner)	El Paso	Spanish

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
105	Fort Wayne, IN	WANE-TV	15	CBS	LIN TV Corp. (Group Owner)	Fort Wayne	Network - CBS
105		WPTA	21	ABC	Granite Broadcasting Corp. (Group Owner)	Fort Wayne	Network - ABC
105		WISE-TV	33	NBC	New Vision Group LLC (Group Owner)	Fort Wayne	Network - NBC
105		WFWA	39	PBS	Fort Wayne Public Television Inc. (Group Owner)	Fort Wayne	Donor Supported - PBS
105		WFFT-TV	55	FOX	Quorum Broadcast Holdings Inc. (Group Owner)	Fort Wayne	Network - FOX
105		WINM	63	TBN	Tri-State Christian TV Inc. (Group Owner)	Angola	Religious
116	Montgomery (Selma), AL	WDIQ	2	PBS	Alabama Educational Television Commission (Group Owner)	Dozier	Donor Supported - PBS
116		WAKA	8	CBS	Bahakel Communications Ltd. (Group Owner)	Selma	Network - CBS
116		WSFA	12	NBC	Cosmos Broadcasting Corp. (Group Owner)	Montgomery	Network - NBC
116		WCOV-TV	20	FOX	Woods Communications Corp. (Group Owner)	Montgomery	Network - FOX
116		WBMM	22	PAX	Equity Broadcasting Corp. (Group Owner)	Tuskegee	Network - PAX
116		WAIQ	26	PBS	Alabama Educational Television Commission (Group Owner)	Montgomery	Donor Supported - PBS
116		WBIH	29	IND	Flinn Broadcasting Corp. (Group Owner)	Selma	Religious
116		WNCF	32	ABC	Broadcast Media Group LLC (Group Owner)	Montgomery	Network - ABC
116		WIIQ	41	PBS	Alabama Educational Television Commission (Group Owner)	Demopolis	Donor Supported - PBS
116		WMCF-TV	45	TBN	Trinity Broadcasting Network Inc. (Group Owner)	Montgomery	Religious
116		WRJM-TV	67	UPN	Josie Park Broadcasting Inc. (Group Owner)	Troy	Network - UPN
120	Monterey-Salinas, CA	KSBW	8	NBC	Hearst-Argyle Television Inc. (Group Owner)	Salinas	Network - NBC
120		KCAH	25	ETV	KTEH-TV Foundation (Group Owner)	Watsonville	Educational
120		KCBA	35	FOX	Seal Rock Broadcasters LLC (Group Owner)	Salinas	Network - FOX
120		KION-TV	46	CBS	Clear Channel Broadcasting (Group Owner)	Monterey	Network - CBS
120		KSMS-TV	67	UNV	Entravision Communications (Group Owner)	Monterey	Spanish
122	Macon, GA	WMAZ-TV	13	CBS	Gannett Broadcasting Group (Group Owner)	Macon	Network - CBS
122		WGXA	24	FOX	GOCOM Holdings LLC (Group Owner)	Macon	Network - FOX
122		WDCO-TV	29	PBS	Georgia Public Telecommunications Commission (Group Owner)	Cochran	Donor Supported - PBS
122		WMGT-TV	41	NBC	Morris Network Inc. (Group Owner)	Macon	Network - NBC
122		WPGA-TV	58	ABC	Radio Perry Inc. (Group Owner)	Perry	Network - ABC
122		WGNM	64	UPN	Macon Urban Ministries (Group Owner)	Macon	Network - UPN
130	Bakersfield, CA	KGET	17	NBC	Clear Channel Broadcasting (Group Owner)	Bakersfield	Network - NBC
130		KERO-TV	23	ABC	McGraw-Hill Broadcasting Co. (Group Owner)	Bakersfield	Network - ABC
130		KBAK-TV	29	CBS	Westwind Communications LLC (Group Owner)	Bakersfield	Network - CBS
130		KUVI	45	UNV	Univision Communications Inc. (Group Owner)	Bakersfield	Network - UPN
151	Salisbury, MD	WBOC-TV	16	CBS	Draper Communications Inc. (Group Owner)	Salisbury	Network - CBS
151		WCPB-TV	28	PBS	Maryland Public Television (Group Owner)	Salisbury	Donor Supported - PBS
151		WMDT	47	ABC	Delmarva Broadcast Service GP (Group Owner)	Salisbury	Network - ABC
151		WDPB	64	PBS	WHYY Inc. (Group Owner)	Seaford	Donor Supported - PBS
152	Rochester, MN	KIMT-TV	3	CBS	Media General Inc. (Group Owner)	Mason City, IA	Network - CBS
152		KAAL-TV	6	ABC	Hubbard Broadcasting Inc. (Group Owner)	Austin, MN	Network - ABC
152		KTTC-TV	10	NBC	Quincy Broadcasting Co. (Group Owner)	Rochester	Network - NBC
152		KSMQ-TV	15	PBS	Independent School District No. 492 (Group Owner)	Austin, MN	Educational
152		KXLT-TV	47	FOX	Shockley Communications Corp. (Group Owner)	Rochester	Network - FOX

DMA Rank	Market Name	Call Letters	Channel	Network Service	Ownership	City of License	Programming
PR	Puerto Rico	WKAQ-TV	2	TMO	National Broadcasting Co. (Group Owner)	San Juan	Spanish
PR		WIPM-TV	3	PBS	Commonwealth of Puerto Rico (Group Owner)	Mayaguez	Donor Supported - PBS
PR		WAPA-TV	4	IND	LIN TV Corp. (Group Owner)	San Juan	Gen'l Entertainment
PR		WIPR-TV	6	PBS	Commonwealth of Puerto Rico (Group Owner)	San Juan	Donor Supported - PBS
PR		WSTE	7	IND	Siete Grande Television Inc. (Group Owner)	Ponce	Not Available
PR		WSUR-TV	9	IND	Raycom Media Inc. (Group Owner)	Ponce	Not Available
PR		WLII	11	IND	Raycom Media Inc. (Group Owner)	Caguas	Not Available
PR		WOLE-TV	12	TMO	Western Broadcasting Corp. of Puerto Rico (Group Owner)	Aguadilla	Not Available
PR		WPRV-TV	13	IND	WPRV-TV Inc. (Group Owner)	Fajardo	Not Available
PR		WTIN	14	IND	Laura Nicolau (Group Owner)	Ponce	Not Available
PR		WTCV	18	NBC	Pedro Roman Callazo (Group Owner)	San Juan	Network - NBC
PR		WKPV	20	PAX	LIN TV Corp. (Group Owner)	Ponce	Network - PAX
PR		WNJX-TV	22	IND	LIN TV Corp. (Group Owner)	Mayaguez	Not Available
PR		WJPX	24	PAX	LIN TV Corp. (Group Owner)	San Juan	Network - PAX
PR		WQTO	26	PBS	Ana G. Mendez Educational Foundation (Group Owner)	Ponce	Not Available
PR		WSJU-TV	30	IND	Aerco Broadcasting Corp. (Group Owner)	San Juan	Not Available
PR		WELU	32	ETV	Pabellon Educational Broadcasting (Group Owner)	Aguadilla	Not Available
PR		WRUA	34	IND	Eastern Television Corp. (Group Owner)	Fajardo	Not Available
PR		WDWL	36	IND	Iglesia Christiana Amor y Verdad Inc. (Group Owner)	Bayamon	Not Available
PR		WJWN-TV	38	PAX	LIN TV Corp. (Group Owner)	San Sebastian	Network - PAX
PR		WMTJ	40	PBS	Ana G. Mendez Educational Foundation (Group Owner)	Fajardo	Not Available
PR		WIRS	42	IND	Marantha Christian Network (Group Owner)	Yauco	Not Available
PR		WVEO	44	IND	Pedro Roman Callazo (Group Owner)	Aguadilla	Not Available
PR		WVOZ-TV	48	IND	Pedro Roman Callazo (Group Owner)	Ponce	Not Available
PR		WQHA	50	IND	Concilio Mision Christiana Fuente de Agua Viva Inc. (Group Owner)	Aguada	Not Available
PR		WRFB	52	IND	R & F Broadcasting (Group Owner)	Carolina	Not Available
PR		WCCV-TV	54	IND	Asociacion Evangelistica Cristo Viene Inc. (Group Owner)	Arecibo	Not Available
PR		WUJA	58	ETV	Caguas Educational TV Inc. (Group Owner)	Caguas	Educational
PR		WQHA-DT	62	IND	Concilio Mision Christiana Fuente de Agua Viva Inc. (Group Owner)	Aguada	Not Available
PR		WECN	64	IND	Encuentro Christian Network Corp. (Group Owner)	Naranjito	Not Available
PR	WECN-DT	65	IND	Encuentro Christian Network Corp. (Group Owner)	Naranjito	Not Available	
PR	WVSN	68	IND	La Cadena del Milagro Inc.	Humacao	Not Available	
PR	WOLE-DT	69	IND	Western Broadcasting Corp. of Puerto Rico (Group Owner)	Aguadilla	Not Available	

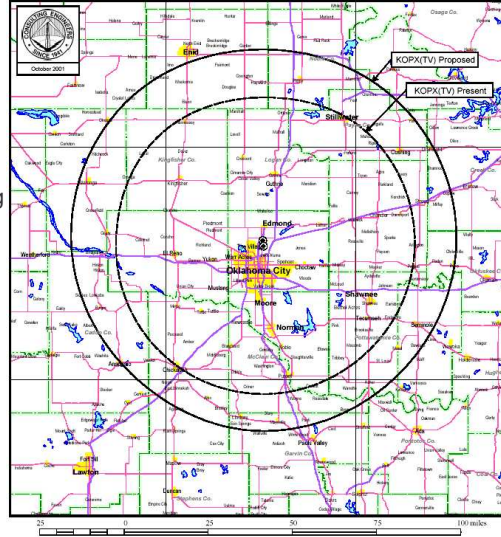
Appendix F

Waivers filed at the Commission

KOPX (Oklahoma City, OK)

File No. BPCT20011106AAA, Accepted 11/19/2001

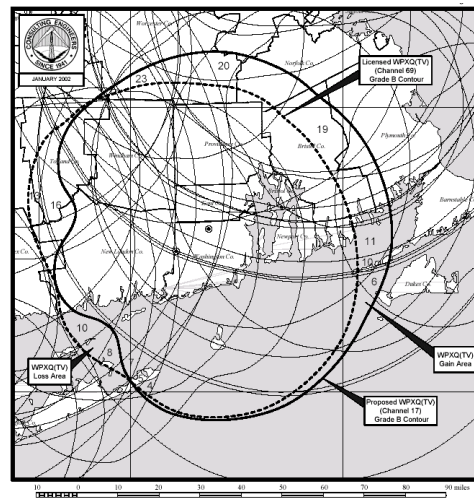
- Analog Operation in Channel 62
- Propose moving to DTV allotment in Channel 50
- Waiver for short spacing issues
 - 3 short spacing channels, engineering analysis indicates no interference issues
- FCC GRANTED APPLICATION on March 26, 2002



WPXQ (Block Island, RI)

File No. BPCT20020213AAG, Accepted 3/5/2002

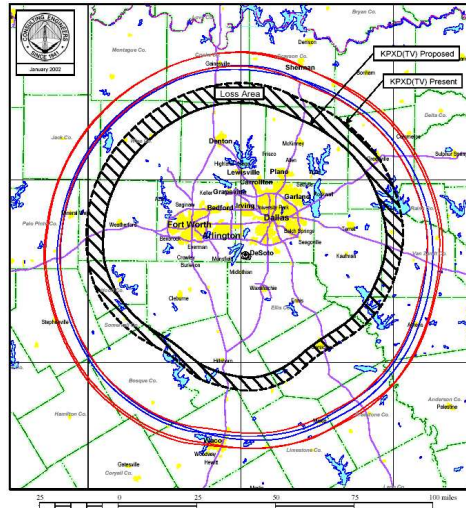
- Analog Operation in Channel 69
- Propose moving to DTV allotment in Channel 17
- To avoid potential for interference Coverage is modified
 - Increase 27.7%, decrease 3.6%
 - Loss areas still have OTA from at least 5 other stations
- Waiver for short spacing issues
 - 1 short spacing channels, engineering analysis indicates interference issues below *de minimis* levels (0.448%)
- 3 potential interference issues with Class A TV facilities
 - Engineering analysis indicates no interference
- Commits to protection of land mobile systems in channel 16 by inserting lower side -band filtering



KPXD (Arlington, TX)

File no. BPCT20020131ABM, Accepted 2/19/2002

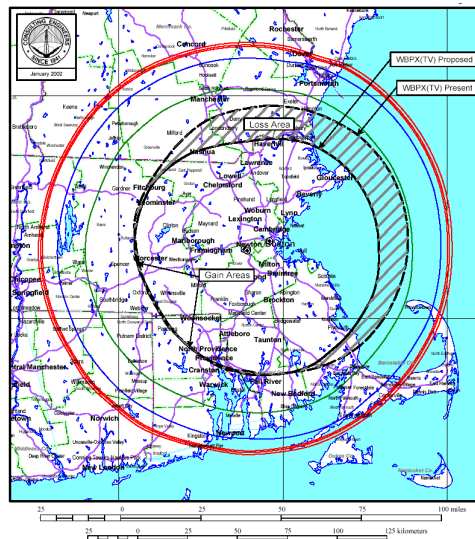
- Analog Operation in Channel
- Propose moving to DTV allotment in Channel 42
- To avoid potential for interference is reduced (~2.8%)
 - Loss areas still have OTA from at least 5 other stations
- Waiver for short spacing issues
 - Channel 27: *de minimis* levels (less than 0.5% reduction in coverage)
 - 3 other stations with no interference
- Waiver on City Grade
 - 13 other stations still provide city grade service



WBPX (Boston, MA)

File No. BPCT20020213AAH, Accepted 3/5/2002

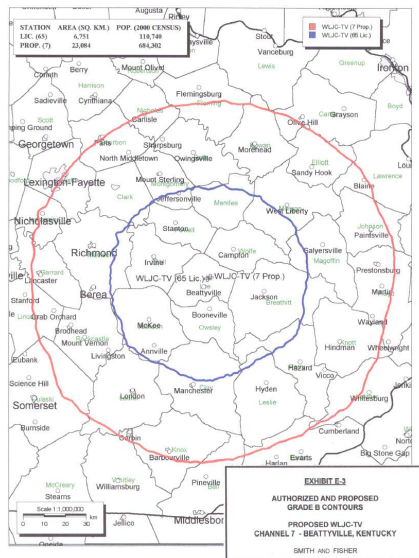
- Analog Operation in Channel 68
- Propose moving to DTV allotment in Channel 32
- To avoid potential for interference Coverage is modified
 - Increase ~0.1%, decrease 5.5%
 - Loss areas still have OTA from at least 5 other stations
- Waiver for short spacing issues
 - 2 short spacing channels, engineering analysis indicates no interference issues
- Waiver on City Grade Coverage
 - 9 other stations still provide city grade service



WLJC (Beattyville, KY)

File No. BPCT20011119AAT, Accepted 11/23/2001

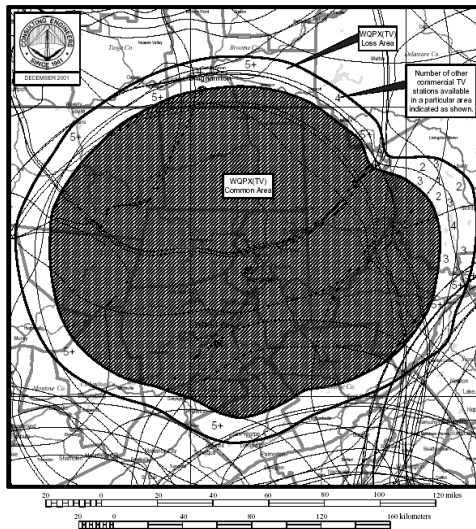
- Analog Operation in Channel 7
- Propose moving to DTV allotment in Channel 7
- Coverage is modified
 - Increase in coverage by 618%
- Waiver for short spacing issues
 - 2 short spacing channels
 - Interference to one below *de minimis* (<0.1%)
 - Interference to other above *de minimis* (1.9%) for analog operations but below *de minimis* for digital operations



WQPX (Scranton, PA)

File No. BPCT-20020111AAJ, Accepted 1/28/2002

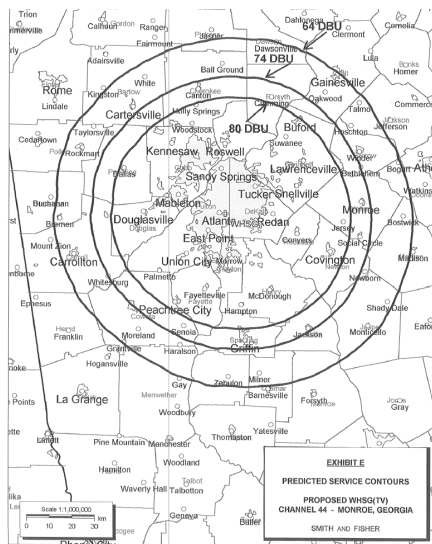
- Analog Operation in Channel 64
- Propose moving to DTV allotment in Channel 32
- To avoid potential for interference Coverage is modified
 - Decrease by 32.7%
 - Loss areas still have OTA from at least 1 and as many as 15 other stations
 - Grey area of 357 persons is created
- Waiver for short spacing issues
 - 2 short spacing channels
 - one with no interference issues
 - the other below *de minimis* levels (0.211%)
- 2 potential interference issues with Class A TV facilities
 - Engineering analysis indicates no interference



WHSG (Monroe, GA)

File No. BPCF20020220ABL, Accepted 3/22/2002

- Analog Operation in Channel 63
- Propose moving to DTV allotment in Channel 44
- No Comparison to gain/loss of service area from current operations
- Waiver for short spacing issues
 - 5 short spacing channels
 - one with no interference
 - 2 below *de minimis* interference for analog operations (<0.1%)
 - Two stations with 1% interference, which is above analog *de minimis* requirement but below *de minimis* level for WHSG -DT potential operations
- Waiver for city grade coverage



WRJM (Troy, AL)

File No. BPCT-20020606AAC, Accepted 7/11/2002

- Analog Operation in Channel 67
- Propose moving to DTV allotment in Channel 48
- Proposed increase power
 - Current DTV is authorized 50 kW
 - Proposed Analog of 2800 kW
 - Proposed DTV of 1000 kW
- FCC DENIED APPLICATION on June 13, 2003