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## **“We Need This Television Just Like Any Other American Citizen”: The Battle Over Western TV Boosters, 1952-1961**

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**“WE NEED THIS TELEVISION JUST LIKE ANY OTHER AMERICAN CITIZEN”:**

**THE BATTLE OVER WESTERN TV BOOSTERS, 1952-1961**

Thanksgiving Day, 1957, was cold and blustery in the small mining enclave of Breckinridge, Colorado. A dusting of snow had fallen the night before, but by the afternoon the town was in the throes of a full-fledged blizzard and roads were soon impassable. Mayor Frank Brown gave up trying to keep pace with shoveling his driveway and instead settled in to watch college football on Denver’s KOA-TV. He ended up spending the rest of the day in his living room with his feet hoisted up, watching KOA until it signed off for the evening.

“[I] lived the life of Riley,” Brown maintained, “just like the other 160 million Americans do when the weather is bad.” His enthusiasm was based in no small part on the fact that this was the first year that he and the other 400 or so Breckinridge residents could receive television, despite the fact that many parts of the country had been enjoying it for more than a decade.

Brown was even more enthusiastic about what television would bring to Breckinridge in the future:

Our children will be educated and entertained just like they are everywhere else now. The people will not frequent the Bars and Taverns like they used to do. Home life will begin to get better here now. . . . I am looking forward to a better informed community. A kinder more respectable community because no matter how little they watch television some of the education and culture will rub off.

But despite the mayor’s newfound enjoyment of television and his observation that “the children do not run the streets night and day like they used to,” Brown and other Breckenridge residents feared they may not have television much longer. “Please Mr. Craven,” Brown implored Federal Communications Commission (FCC) member T.A.M. Craven, “do what you can to try to convince the commission that we need this Television just like any other American citizen does.”<sup>1</sup>

Brown had reason to be concerned. Like thousands of others in mountainous western states, he was able to watch television only because of so-called “booster” stations, which

picked up very high frequency (VHF) signals from distant television stations and then re-broadcast them. The boosters normally consisted of an antenna located on a mountaintop or other elevated location, a receiver, an amplifier, and a small transmitter to send the strengthened signal back out over the air. The problem was that the FCC had never authorized the booster stations, and by 1957 it was actively taking steps to shut them down. Viewers like Brown, his fellow townspeople in Breckinridge, and thousands of others risked losing a connection to the outside world that they had come to enjoy and rely on. “One would have to be present to realize what the arrival of television really meant to this Valley,” wrote a viewer from another isolated Colorado mountain town. “The morale of listeners is boosted as they feel more on an even basis with the outside world.”<sup>2</sup>

Arising in the wake of the FCC’s 1952 Sixth Report and Order, which established licensing procedures and an allocation plan for providing nationwide television service, boosters were one of several new technologies designed to bring television to isolated and lightly populated areas of the country that could not support their own local stations. Boosters were inexpensive and relatively easy to build for someone with electronic knowhow, and thus they proliferated almost organically in areas that lacked television service. “They were cheap to install and maintain, requiring almost no operational oversight,” Parsons points out. “You turned them on and left.” Wyoming Senator Gale McGee was oversimplifying things only a bit when he cited one case where through “the genius of western initiative” a booster was constructed “with a little baling wire and a home-made aerial and a pile of rocks on top of a mountain.” Booster projects, which Le Duc notes brought “discernable if not studio-quality pictures” to home viewers, were initiated and supported by enterprising tinkerers, informal television “clubs,” appliance dealers, groups of ranchers, and even local governments. In nearly all cases, the motive for building a booster station was not direct financial gain but rather the desire to bring television service to others in a community.<sup>3</sup>

But boosters ran afoul of the FCC because of their potential to create interference with other radio and television services and their disruption of the commission's overall allocation plans as embodied in the Sixth Report and carried out through subsequent licensing assignments. Boosters "constitute a serious interference threat," FCC Chairman George McConnaughey noted in 1956, "unless the equipment is carefully designed, properly installed and closely supervised when in operation. These requirements of course are incompatible with the remote, small community need for an inexpensive and reasonably simple system." But there was not agreement within the FCC on what to do about the boosters, and by the time the commission got around to actually taking action, the stations had proliferated throughout the West, creating an audience that had grown accustomed to television and was not about to give it up easily. "You can't take [television] service away from these people—they'd shoot you," Commissioner Robert E. Lee joked. The more immediate threat to the FCC, however, was Congress. Each time the FCC moved to shut down the boosters, viewers of booster signals and the governors of states where they lived were able to mobilize members of Congress—particularly members of the Senate's Committee on Interstate and Foreign Commerce, which oversaw operation of the FCC—to pressure the commission to back off. Ultimately, the FCC approved the operation of boosters—with some technical stipulations—in 1960.<sup>4</sup>

Although a number of researchers have acknowledged the battle over boosters, most have done so only tangentially, providing a broad overview of the controversy against the backdrop of the development of cable television.<sup>5</sup> This study examines the battle over VHF boosters from the early 1950s to 1961. It shows that the FCC was passive and inconsistent in its public pronouncements on boosters throughout the 1950s, and that booster operators—although they had no corporate lobbying power behind them—were able to successfully marshal members of Congress to keep nearly continual pressure on the FCC to approve their

position. Western governors—especially Colorado’s Edwin Johnson—also played a key role both in facilitating the operation of the booster stations and in pressuring the FCC both directly and through members of their states’ congressional delegations. The study illustrates the power that individual, largely unorganized viewers were able to bring to bear on the policymaking process working through highly receptive state officials and congressional representatives. It also provides a demonstration of how allocations issues at the FCC were often resolved only after struggles between technocratic and nontechnocratic views on policymaking, as noted by Slotten and others. The technocratic view, according to Slotten, relied on “stubborn scientific facts” to determine policy, while the nontechnocratic position sought to consider social and economic implications of policymaking as well.<sup>6</sup>

### **Television in the Early 1950s**

The birth of commercial television in the United States is usually traced to the FCC’s 1945 allocation of 13 channels for the nascent technology in the VHF band. The allocation delighted radio and electronics manufacturers, who hoped to cash in on pent-up consumer demand for new products at the conclusion of World War II. RCA was in a particularly enviable position, as it owned many of the patents necessary for VHF television production, broadcasting and reception and—through its NBC network—also owned or had affiliations with a large number of VHF stations already on the air experimentally. But others, particularly CBS, had asked the commission to wait until broadcasting in the ultra-high frequency (UHF) band could be perfected. Although CBS had its own motives—seeing UHF as a way to promote its own color system that was incompatible with RCA’s standards—almost all observers agreed that a major shortcoming of the VHF band was that it did not offer enough channels for nationwide service. Even the FCC dropped hints that the VHF allocation might be temporary in nature, but that was not enough to stall commercial interest in VHF licenses.<sup>7</sup>

In fact, by 1948 the demand for licenses was outstripping the ability of the VHF band to accommodate them, and the commission's ongoing efforts to make room for additional stations led to interference problems. Thus, in September the FCC announced it would hold off processing any further television license applications for six to nine months as it determined how to proceed. What came to be known as the "freeze" ended up lasting for nearly four years, as the FCC held several lengthy hearings at which it gathered thousands of pages of testimony and engineering studies, faced congressional pressure and inquiries and a general public increasingly clamoring for television. Finally, the commission ended the freeze in April 1952 through its Sixth Report and Order, which continued television operation in the existing VHF band and expanded it to an additional 70 UHF channels as well. "[T]he effect was much like unplugging a pipe," Sterling and Kittross note, as the television industry "exploded," growing to more than 500 stations by 1960. The Sixth Report and Order "provided the last piece of a social and technical jigsaw puzzle," Parsons contends. "By stabilizing technical standards and reopening the spigot of licensing, it helped coalesce decades of engineering, economic, and regulatory activity."<sup>8</sup>

Still, the Sixth Report had the effect of maintaining the privileged position of VHF stations at the expense of upstart UHF outlets. "[T]he FCC was unwilling to mount any course of action that would seriously threaten the interests of the entrenched VHF television industry," William Boddy points out, and thus existing VHF licensees would not lose their assignments, even if re-assigning VHF stations might have improved prospects for nationwide service. A number of broadcast history scholars have noted that early UHF stations lacked the range and picture quality of VHF stations, and early UHF receivers were poorly designed compared to their VHF counterparts. For example, Armstrong points out that FCC commissioner Frieda Henneck, in a partial dissent to the Sixth Report and Order, foresaw that UHF operators would likely have to wait years for their signals to match the

coverage of VHF stations’—if they ever did. The gap between VHF and UHF stations was most apparent in cities where FCC station assignments intermixed UHF and VHF stations. In these cities, UHF stations struggled to compete with their cross-town VHF counterparts, usually ending up at a disadvantage when it came to network affiliations and advertising revenue. Although the FCC had made provision for more than 1,300 UHF stations in the Sixth Report, by 1960 there were only 75 on the air—more than 50 UHF broadcasters actually returned their licenses during the 1950s.<sup>9</sup>

More broadly, the Sixth Report and ensuing licensing decisions failed to achieve the FCC’s goals of national coverage and wide dispersion of stations. There were not enough VHF channels available to provide national coverage, and the economic shortcomings of UHF stations limited their coverage utility. Thus, the Sixth Report, Armstrong contends, “helped lay the groundwork for a geography of local television signals . . . often poorly matched to organic communities.” Similarly, Sterne maintains that “[t]he national television infrastructure showed a distinct coastal and urban bias.” In the West, especially, the FCC allocated television stations to geographic areas with too little population to support them—thus, many were never built. These assignments were “empty gestures,” Le Duc notes, “offering service on paper which could never be provided.” Thus, there were many areas, especially in the West, that could not receive coverage directly from broadcast television stations, even though potential viewers were in some cases in “fringe areas”— tantalizingly close to places that could receive signals. It was in these fringe areas that so-called community antenna television (CATV) operators began to proliferate, picking up distant signals and then passing them to customers’ homes via cable. Boosters would come to perform a similar function.<sup>10</sup>

### **The Development of Boosters**

It is difficult to know exactly when the first boosters went on the air; at least some likely preceded the Sixth Report and Order. Indeed, the FCC had difficulty tracking down booster stations and could never be fully certain of how many were in operation at any given time. However, the commission had long maintained an interest in studying the potential of unattended stations that could extend the range of traditional television outlets. “I do not think television need stay in the millionaire class,” FCC Chairman Wayne Coy told the National Association of Broadcasters in 1949. “[O]ne can build up a network very similar to the network of a railroad system—major terminals, intermediate stations, short side spurs and secondary lines.” In the early 1950s, the commission authorized several experimental, low-power amplifier installations, and differing nomenclature developed depending on the how they operated. Stations that received a VHF signal and then retransmitted it on the same VHF frequency were referred to as boosters, while stations that received a VHF signal and then broadcast on a different VHF or UHF frequency were called translators or satellites. The earliest authorized experimental booster was installed by WSM in 1952; it picked up WSM-TV’s signal about 70 miles from its Nashville location, and rebroadcast it to the small town of Lawrenceburg, Tennessee. WSM’s president called the signals received in Lawrenceburg “remarkably stable” and noted that the advantage of such booster operations was that they did not use additional spectrum space since they operated on the same channel as the originating station.<sup>11</sup>

Based on its Lawrenceburg experiment, WSM asked the FCC to authorize commercial booster stations in 1953 with the understanding that they would be operated by the main station licensee. Its request was bolstered by a petition signed by 1300 residents who were enthusiastic about the television service WSM’s booster made possible. The FCC, however, demurred, taking a less optimistic view. “The ‘booster’ station . . . is a two-edged sword,” Chairman Rosel Hyde noted. “[W]hile it may result in improved reception in the

immediate vicinity of the ‘booster’ station, it can also be a source of destructive interference to normally satisfactory reception at other points.”<sup>12</sup>

Nonetheless, unauthorized boosters continued to proliferate throughout the 1950s. The lure of television was so great in the early part of the decade that many people who lived in areas that could not yet receive signals purchased televisions anyway, indicating the “eagerness and expectation” of potential viewers, according to Parsons. That same eagerness prompted residents of many small towns in the West without television to take matters into their own hands, establishing groups to plan, build and operate boosters so that fellow residents could receive television; it was “do-it-yourself on a massive scale,” observers noted. Although a handful of boosters were established by owners of appliance stores or other retailers who hoped to build a market for televisions, the majority were started by community members with no other desire than to bring television into their homes and the homes of their neighbors. Booster club members cleared paths through the brush and snow up the sides of mountains, dug post holes, ran power lines, and built antennas and enclosures. The boosters themselves were cobbled together by local electricians or tinkerers, and equipment was often donated; one group in Washington even purchased surplus cabling from a decommissioned Navy destroyer. The cost of these installations ranged from under a thousand dollars to a few thousand dollars; in many cases clearing a path to the booster site presented the largest expense. Once in operation, boosters cost as little as \$50 a year to operate and maintain.<sup>13</sup>

Booster operations were funded for the most part by “passing the hat” among community members. Groups placed newspaper ads, attended community meetings or trudged door-to-door to collect money, usually between five and twenty-five dollars for the initial installation, then a few dollars a year for operation and maintenance. In Utah, the state legislature authorized setting up tax districts to fund television retransmission stations, allowing some towns to fund boosters through their recreational programs. By 1959, there

were an estimated 1,000 VHF boosters in operation, serving an audience believed to be in excess of 675,000 people. Once these viewers actually *had* television, their attachment to it only grew, especially since there was often very little else to do for entertainment in their small and isolated towns. “Here normal, industrious, respectable citizens have invented a way to bring to their lives for the first time all of the marvels of the outside world which the urbanite has long taken for granted,” noted FCC commissioner Lee. A Wyoming booster operator more succinctly noted that other than television, the only thing to do in his town was hunt, fish, or “fight with the ‘missus’.”<sup>14</sup>

### **The Battle Begins**

Beginning in 1953, the FCC shut down a handful of boosters in western states without incident, but when it moved to shutter a booster in Bridgeport, Washington, it set in motion events that would demonstrate both viewers’ commitment to their booster stations and those viewers’ ability to mobilize political support. The booster, started by a local appliance store owner, was financed by a group of about 80 people who paid about five dollars each to pick up signals from two stations in Spokane. In October 1954, after receiving several complaints about interference, the FCC persuaded the owner to shut the booster down and lock it up, but soon after the owner reported that “persons unknown” had broken the lock and started the station back up. This would happen several times in ensuing months—viewers of the booster were apparently taking turns re-starting the booster each time it was shut down. Less mischievous viewers worked to activate governors and members of Congress to the defense of boosters more broadly.<sup>15</sup>

Within weeks of the FCC first shutting down the Bridgeport booster, Commissioner Lee was summoned to Capitol Hill to meet with Washington’s senators, Warren Magnuson and Henry Jackson. The senators listened to Lee’s concerns about interference, but were insistent that the commission do something to maintain and improve television service to

small towns. The senators' pressure was enough to make the FCC back off the Bridgeport operation, and in the meantime the commission authorized UHF translators as a means of serving isolated areas.<sup>16</sup> But the unauthorized boosters continued to proliferate, and they were currently clearly illegal, so in April the FCC issued show cause orders to 23 booster operators and held hearings in the towns where they operated. Based on the hearings, and visits to several installations, FCC examiner J.D. Bond recommended the FCC assert no authority over the boosters, contending they caused no objectionable interference to existing services and that they "afford[ed] a larger and more effective use of TV broadcast channels." Bond's report was greeted with immediate skepticism in the trade press, with *TV Digest* noting the commission was "bound to reverse the decision—with a vengeance," and quoting an unnamed broadcast attorney as saying, "He's simply repealing the Communications Act." The FCC's General Counsel and Field Monitoring divisions agreed, charging Bond with "arrogation to himself. . . of the policy making powers appropriate only in rule making proceedings undertaken by the Commission."<sup>17</sup>

Bond, however, was not the only one who questioned whether the FCC should even take jurisdiction over booster operations. Such a view was not without precedent, as at this time, the FCC had not yet asserted authority over CATV operations, noting that they were not involved in radiating any electromagnetic signals through the air. Booster operators argued that the signals radiated by their stations were so weak as to be insignificant and rarely if ever crossed state lines. Clarence Dill, former head of the Senate Interstate Commerce Committee and widely credited as the author of the Communications Acts of 1927 and 1934, also went to bat for the Bridgeport booster, buttonholing individual commissioners in their offices to urge them to withdraw their objections to the western installations. "They all insisted there was no rule to license these peanut booster stations," he said. "I told them to make a rule and that no license should be necessary."<sup>18</sup>

It is not surprising that tensions built between booster and CATV operators, as both sought to provide service to isolated rural areas. By 1958, in fact, as many as 700 CATV systems were operating, providing service to an estimated 400,000 television sets. Most CATV systems, however, were privately owned and driven by a profit motive. CATV service was also much more expensive than boosters, due to the necessity of running cabling and signal amplification to the home. CATV operators would come to represent the only organized opposition to the boosters, as Parsons notes that “the competitive threat of TV boosters. . . kept CATV industry owners and operators awake at night.” The CATV industry generally had no problem with UHF translators—as they would require most viewers to install expensive antennas and in some cases converters—but feared they would not be able to compete with VHF boosters. “CATV systems became as afraid of the illegal boosters as the broadcasters were of CATV,” noted E. Stratford Smith, general counsel for the National Cable Television Association (NCTA). “It was just a matter of whose ox was being gored.”<sup>19</sup> The majority of complaints about boosters to the FCC were lodged by CATV operators, and there were several instances of apparent sabotage of booster stations, which booster operators blamed on CATV interests. Some booster operators found jamming devices hidden near their stations, while Wyoming Senator Gale McGee recounted “real cloak and dagger” activities involving spying through windows, breaking locks and shooting booster connections with high-powered rifles. In most cases, the identities of the perpetrators could not be proven, but as one booster club president mused, “Who would benefit?” Milton Shapp, president of Jerrold Electronics, which manufactured equipment for CATV operators, urged the FCC to immediately shut down all boosters, contending that they were having a “chaotic effect upon the entire FCC allocation plan.”<sup>20</sup>

In February 1956 the FCC came around to issuing a cease and desist order against the Bridgeport booster. The commission’s decision expressed sympathy for booster viewers’

desire to receive television service, but noted that this “does not alter the fact that the method by which they have chosen to achieve their objective is illegal.” The booster’s operator appealed to the U.S. Court of Appeals for the D.C. circuit, which stayed the FCC’s order pending its consideration of the case. Although the FCC touted its recently approved UHF translators as a means of providing television service, western booster operators were resistant as the equipment was more expensive, most potential viewers had VHF-only televisions, and UHF signals, due to their location higher in the broadcasting spectrum, were far less effective at traveling over the rugged landscape. “It was difficult to make a translator that worked on those very high UHF channels with the technology of that time,” notes Byron St. Clair, former president of the National Translator Association (NTA). “The UHF TV receivers were also difficult to make work.”<sup>21</sup>

In the meantime, however, the FCC continued issuing orders against other boosters, first in Washington and then in other western states. In June, the FCC ordered Walter R. Webber of Steamboat Springs, Colorado, to shut down his booster. Webber, who owned a local appliance store, had operated the booster since 1953, picking up KOA-TV and beaming it to about 50 television homes in the small mining and ranching town. When he received the FCC’s order to shut down, he dutifully complied; the town’s local newspaper, however, railed against the “autocratic” FCC’s decision to “wield its bureaucratic power. . . to deprive Steamboat Springs of television reception.” The local Chamber of Congress sent telegrams to members of Colorado’s congressional delegation protesting the move, and also requested help from the state’s governor, Edwin Johnson.<sup>22</sup>

### **“Big Ed” Steps In**

“Big Ed” Johnson was no stranger to the FCC or to the broadcasting industry generally. From 1937 to 1955 he served as one of Colorado’s U.S. Senators, and from 1949 to 1952 he was chairman of the Interstate and Foreign Commerce Committee. That

committee was responsible for overseeing the activities of the FCC, and it was a responsibility Johnson took quite seriously and at times carried out almost belligerently. *Broadcasting* magazine observed that the Senate commerce committee “functioned as super FCC” with Johnson at the helm, while *TV Digest* noted that Johnson gave the FCC “many rough moments” as chair. His tenure coincided roughly with the span of the television freeze, and he adamantly pushed the FCC to end the freeze as quickly as possible while urging that it enact an allocation plan that would give UHF stations at least equal footing with VHF stations. His impatience with the FCC during the freeze was based at least in part on the fact that the state of Colorado at the time had no television stations; Denver, in fact, was the largest American city without a station. He was also perhaps the most vocal proponent (other than CBS itself) of Columbia’s color television system, which he saw as an antidote to the power RCA enjoyed due to its patents in VHF and monochrome broadcasting. “Whenever there’s a fire—or even a wisp of smoke—in broadcasting,” *Broadcasting* mused, “Sen. Big Ed responds to the first alarm.”<sup>23</sup>

Rather than leave Colorado’s booster operators to the whims of the FCC or the uncertainties of congressional pressure, Johnson decided to take matters into his own hands. On August 3, with KOA’s blessing, he issued an executive order appointing Webber to his “official Communications Staff” and granting his booster permission to operate. The order noted that KOA “takes the public-spirited position that spreading its signal is a public service obligation which it owes to the people,” and that the FCC, “without regard for the public interest and for the cultural and educational needs and rights” had ordered the booster to be shut down in an “unreasonable and unwarranted . . . abuse of federal authority.” Although the order conditioned permission to operate on the assumption that the booster would not interfere with any other electronic communication, in a *Denver Post* op-ed column, Johnson said that there was no interference being caused by Webber’s booster, or any others in the

state for that matter. “I have challenged the FCC and the whole cock-eyed world to show that the booster operations. . . have, in any degree affected any radio, television or other electronic signal any time, anywhere,” he wrote. “There will be no takers to that challenge! That is for sure!”<sup>24</sup>

The trade press and FCC representatives greeted Johnson’s action with a combination of bemusement and surprise at the governor’s chutzpah. *Broadcasting* noted that the former “unofficial boss of the FCC” was “up to his old tricks” and recounted that an FCC staffer “guffawed with unmitigated glee” when he was told of Johnson’s order. Noting that the FCC was still awaiting resolution of the Bridgeport booster challenge in court, a member of the commission’s legal team cautioned that “[u]ntil we know where we stand we certainly are not going to tangle with Gov. Johnson.” Meanwhile, Dill applauded Johnson’s action, noting that if he were still in the Senate he would propose a bill forcing the FCC to license boosters.<sup>25</sup>

In succeeding months, Johnson’s initial order was followed by several others, authorizing at least 12 booster stations throughout the state. In a letter to FCC chairman George McConnaughey, he urged the commission to be receptive to new methods of television transmission that may not have been provided for in the commission’s initial allocation plans:

The truth is that all methods short of the installation of TV stations, are still in the experimental stage. These mountain areas should be encouraged to do what they can to receive TV by means of the booster system. Such an experiment will prove valuable as a guide to the FCC. There is much to be learned about serving small communities.

McConnaughey’s reply noted that the commission was “deeply concerned” about areas lacking television service and that the FCC had been studying ways to provide service to such areas “in a manner which would not be destructive of the overall regulatory pattern. . . [and] consistent with the best interests of the country as a whole.” UHF translators, McConnaughey suggested, offered much greater potential for providing interference-free service, and the

FCC was eager to see them put into operation. Finally, he offered that government action on broadcasting spectrum “must be at the federal level” so that broadcasting would be “free of the difficulties which confronted radio prior to adoption of the Radio Act of 1927,” referring to the chaos in the AM band that had developed absent federal regulation in the 1920s.<sup>26</sup>

Similar sentiments were echoed by Commissioner Craven in response to a letter from Howard Yates of the Colorado Chamber of Commerce. He noted that many booster stations used equipment that was designed for CATV operations rather than terrestrial transmission and thus was “never intended to be used with a radiating system.” He also said that boosters were usually “left to run unattended, with apparently no thought having been given to the hazard presented to the functioning of other stations and services.” He, too, suggested UHF translators as a better solution. Yates apparently shared his correspondence with Johnson, as the governor responded with a blistering letter to Craven denouncing his fixation on a translators-only solution. “I’m disappointed that you seem stubbornly unwilling to try out the ‘booster’ system in the Rocky Mountain area,” he wrote. “What is wrong with two systems in this big United States?” Congress intended the FCC to “operate in the public interest” and “expected it to experiment and test and try to discover what system will give the best service in the mountains,” he wrote. “Please stop shouting, ‘Thou shalt not’ and begin saying ‘Let’s find out what is best.’” In a postscript to his letter, Johnson pointed out what he saw as the hypocrisy of the FCC “go[ing] out of its way to slap the booster system down” while it “was quiet as a little mouse” as CATV systems were “being installed everywhere.” “Why are you picking on us mountain folks?” Johnson closed. “We are people, too.”<sup>27</sup>

Craven had returned to the FCC in the summer of 1956 after having been a commissioner from 1937 to 1944. He came to be a commissioner by way of serving as the FCC’s chief engineer, and during his first stint as a commissioner had established himself as something of an “engineer’s engineer,” asserting, as Foust notes, “the primacy of technical

principles in making allocation decisions.” Indeed, before returning to the commission from a private engineering practice, Craven had given a presentation on the “Design, Construction and Operation of Boosters, Translators and Satellites” at the 1955 National Association of Radio and Television Broadcasters convention. Craven was also familiar with Johnson from the Coloradoan’s time on the Interstate and Foreign Commerce committee. The commissioner’s response to Johnson—unlike McConnaughey’s—presaged a greater willingness to consider alternate efforts to expand television service to mountain communities. “Personally, I shall take into consideration some of the very pertinent statements contained in your letter,” he replied to Johnson. “I have long realized that, from the standpoint of television, the Rocky Mountain area must be treated differently from other areas of the country and that the Commission should be open-minded.” He invited Johnson to come visit him the next time he was in Washington. “Perhaps a method can be worked out which is not only practical but which also complies with the law,” he noted.<sup>28</sup>

In a further response to Johnson, McConnaughey in November pointed out that the commission had issued several construction permits for UHF translator stations in the West, including one in Cortez, Colorado, a desert outpost in the southwest corner of the state. He noted that while currently UHF translators were “the only feasible method” for providing television service to remote areas, there was “no inclination to consider the problem as solved.” Indeed, he noted, further UHF installations were currently being tested in Nevada and Washington. Johnson’s reply noted that he was skeptical of the possibilities of using UHF, “but like a drowning man grasping at straws, I see great hope in the open minded attitude contained in these lines.”<sup>29</sup>

### **Mobilizing the Boosters**

The FCC took no action on boosters throughout the end of 1956 and the beginning of 1957 as it awaited resolution of the Bridgeport case. In the meantime, bills to authorize

boosters were introduced in Congress and the Washington state legislature. Montana's governor eventually signed a bill authorizing boosters as well. In May 1957, the court released its decision in the Bridgeport case, definitively acknowledging that boosters needed FCC licenses to operate, but asserting that the commission should not force them off the air in the absence of alternatives that would provide television service to isolated areas. Indeed, the court noted that it was the duty of the FCC under the Communications Act to make television signals available to all people of the United States. "The Commission might well have been better advised to ignore the existence of booster stations such as this until the time when it is prepared to deal with them on some basis more equitable than mere repression," noted one judge's concurring opinion. As far as the FCC was concerned, however, it had already established an alternative to boosters in its rulemaking authorizing UHF translators. "We firmly believe that translators offer an excellent means for bringing service to communities and areas without service," the FCC contended, and pointed out that translator applications were being processed "at a rapid rate." Thus the commission rejected proposals to authorize boosters at the end of June.<sup>30</sup>

After Johnson chose not to seek re-election, McNichols took over as Colorado governor in 1957 and picked up right where Johnson had left off, quickly rounding up fellow Western governors to oppose the FCC's move, and asking the commission to open a new rulemaking to consider authorization of boosters. Ed Craney, owner of a number of radio and television stations in Montana, made arrangements for McNichols to meet with members of the FCC in Washington. Craney was a close associate of Johnson and was also well known to the commission as a leader of groups opposing clear channel AM stations. At the July 12 meeting, McNichols pleaded his case before several FCC staff members, including general counsel and representatives of the broadcast bureau. Two weeks later, the FCC invited comments on a proposal to authorize VHF boosters, as long as they caused no interference

and were equipped to shut down automatically in the event of a malfunction. Industry observers saw the FCC's move as its final action toward eventually bringing the final curtain down on boosters. *TV Digest* called the proposal a "put-up-or-shut-up" move toward the boosters, while commission staff noted that the burden of proof would be entirely on booster operators to prove they could operate without creating interference.<sup>31</sup>

Meanwhile, McNichols invited Craven and new FCC Chairman John C. Doerfer, who had succeeded McConnaughey at the end of June, to visit Colorado so that they could see some "typical" television systems in the West. Craven accepted the invitation and traveled to Colorado in the fall of 1957, where he met with Johnson, McNichols, and representatives of several western broadcasters. Upon his return, he made an impassioned plea to his fellow commissioners to halt the booster inquiry and reverse what he called the commission's "precipitous, unduly rigorous, [and] unrealistic" stance against boosters. "The Commission has plagued outstanding residents of many Western states with legal action," he said, "instead of recognizing the dire necessity which has inspired them to use their ingenuity to bring television to outlying areas." Craven recommended that the commission reclassify boosters as "limited radiation devices," and devise a simplified application and "moderate" standards for equipment certification. The booster operator would be required to have a "qualified engineer" make "periodical inspections" of the booster installation, and the licensee of the station being re-transmitted by the booster would have to state that he or she was aware of the booster and was "of the opinion" that it would not cause objectionable interference.<sup>32</sup>

Nonetheless, the commission proceeded with its booster inquiry, folding the issue into a larger docket looking at television service to rural areas more generally. The commission collected testimony throughout 1958, while the Senate Interstate and Foreign Commerce Committee also held hearings on television service for smaller communities. In both venues, the only organized opposition to the boosters' cause came from CATV interests and a few

individual stations. The vast majority of stations either encouraged the operation of boosters or were ambivalent. The NCTA commissioned two technical studies citing the inadequacy of booster signal quality and the potential for interference to other services. CATV representatives also raised fears that boosters would create monopolies for large-market VHF stations by extending their signals exclusively to remote areas. In a staff report on the Senate committee's study of rural television released at the end of December, counsel Kenneth Cox urged the FCC to approve booster operation as part of an overall plan including CATV, translators and satellite stations to provide rural service.<sup>33</sup>

Less than a week later, however, the FCC again denied requests to approve booster operations, repeating its assertion that the role boosters played in providing remote television service could be duplicated by legal UHF translators. The commission cited the potential for interference to other television stations, as well as the possibility of interference with aircraft and public safety services located in the "very congested VHF band." Indeed, the FCC had received a report of a plane that had followed a spurious beacon signal from a booster station, and commissioners were afraid that a plane crash might be blamed on a booster "sooner or later." The decision carried a note of finality lacking in the commission's previous two findings against booster operations, as it gave existing operators 90 days to shut down, state their intention to convert to UHF or face "necessary legal proceedings to bring to a halt the unlicensed operations." "It's all over but the shouting," mused *TV Digest*, "but there will be some shouting."<sup>34</sup>

Indeed, the FCC's decision brought immediate reaction from Congress and western statehouses. Several western senators criticized the FCC's decision, noting its incongruence with the Cox Report and Commissioner Craven's earlier praise for boosters. Meanwhile, McNichols summoned Doerfer to Denver, where aggrieved booster operators and state officials vehemently protested the commission's decision in what *Broadcasting* called a

“turbulent rally.” Doerfer recounted the “chaos” created by the disorderly spread of booster operations, comparing it to the situation in the AM radio band before the Federal Radio Commission took over allocations in 1927. McNichols and booster operators contended that the FCC’s inaction in the early to mid-1950s gave “tacit approval” to boosters. Doerfer dutifully endured the grilling, but was eventually forced to admit “administrative failure,” noting that the commission needed more money and better salaries so that they could compete with the industry. Booster operators in attendance saw the chairman as weak and unwilling to stand up to staff members. By the end of the meeting, Doerfer was urging attendees to “get up steam and let Congress know” indicating that the Commission currently lacked the needed authority to approve boosters.<sup>35</sup>

Upon arriving back in Washington, Doerfer directed the commission to a unanimous decision extending the deadline for booster operators to comply with the FCC’s rules by another 90 days. Still, congressional pressure mounted; by the end of the first session of Congress, no fewer than 42 bills had been introduced urging approval of VHF booster stations.<sup>36</sup> Less than two weeks later, the FCC announced that it had instructed its staff to reconsider the legalization of boosters. Doerfer signaled to Senate Interstate and Foreign Commerce Committee chair Warren Magnuson that the commission was ready to approve boosters if the Communications Act could be revised to waive the requirement for a licensed operator and to allow the FCC to authorize pre-existing stations. The abrupt about-face took many industry observers by surprise, with *Broadcasting* noting that the “bedeviled” commission had “double-clutched, shifted gears and swung into a U-turn on the heated vhf, on-channel television booster road.” *TV Digest* called it “The Great Booster Rebellion of 1959.”<sup>37</sup>

But the booster proponents had seen enough about-faces by the commission to know that they were not yet out of the woods, figuratively speaking. Indeed, immediately after

Doerfer left the Denver meeting, booster operators re-convened in McNichols' chambers to discuss plans to organize and keep pressure on Congress and the commission. Urged on by Craney, booster operators from 14 western states formed the National Television Repeater Association, a non-profit entity with the goal of securing "the protection and improvement of all TV Booster systems in the United States." Although a number of state booster organizations had already formed, the new association would actually collect dues and marshal resources toward presenting the boosters' case. To that end, it levied an assessment of ten cents per television set on booster operators, and immediately made plans to send resolutions to western congressional delegations and governors. Emboldened by the "harmony and enthusiasm" booster operators displayed in Denver, state organizations became more organized and combative as well. Montana's repeater organization levied a fee of one dollar per television set on its members "so we have a war chest to go thru [sic] with this fight," and vowed "that all clubs would act in unison to defy any shutdown order," noting that "an attack on one club would constitute an attack on all." Johnson had encouraged booster operators to organize as well, noting that the CATV interests were well ahead in this regard. "These Community Antenna people have always had an inside relationship with the FCC staff and some of the FCC [commissioners]," the former governor contended. "From the very start they have fought by every means fair or foul [against] the booster stations."<sup>38</sup>

The FCC continued in a holding pattern on boosters throughout 1959 and early 1960, seemingly unwilling to stick its neck out without formal congressional backing. Commissioners delayed rulemaking proceedings five times throughout 1959 and early 1960 as various bills to amend the Communications Act worked their way through Congress. In the meantime, McNichols continued to pressure the commission to act. He acknowledged that the boosters had been installed without commission authorization, but said that the public interest would now be served by allowing them to continue operating. McNichols said that his office

had received nearly 500 letters in favor of boosters, and pro-booster petitions signed by nearly 6,000. "Television means a great deal to them," he contended, "more, I would venture to say, than to the people in cities who have other educational and recreational benefits readily available."<sup>39</sup>

Further hearings on boosters and CATV before the Senate Interstate and Foreign Commerce Committee throughout the summer and fall of 1959 were mostly a replay of the previous summer's proceedings, with booster and CATV operators offering conflicting technical studies on the effectiveness and interference potential of VHF boosters. Johnson, again the point person for the booster operators, called on the FCC to adopt regulations authorizing boosters as soon as possible so that the mountain communities depending on them for television "may have the ugly cloud of legal uncertainty removed." He blamed the "well-paid community antenna organization" for thwarting efforts to legalize boosters, noting that CATV interests had been "making life miserable" for nonprofit booster operators. In September 1959, the Senate approved a bill (S.1886) that would amend the Communications Act to provide for FCC approval of boosters. The bill was sent to the House, which took no action on it during the 1959 session. Meanwhile, Johnson maintained that the FCC did not need any changes to authorize the boosters, and Commissioner Lee, at his reappointment hearings in May 1960, faced the brunt of Senator McGee's frustration at the commission for making "second or third or fourth class tv citizens" of Western viewers. Following the hearings, Lee made a five-day trip through the West to inspect UHF translator and VHF booster operations. In a report to Magnuson, he noted that he found several effective VHF booster operations, and noted the enthusiasm of viewers for their TV signals. "As a practical matter nobody, in my judgment, is going to take this service away from the people who currently have it," he contended. However, Lee said he believed that existing VHF boosters should be authorized on a temporary basis with an eye toward converting to UHF.<sup>40</sup>

Finally, in July S.1886 was approved by the House and promptly signed by President Eisenhower. A week later, the FCC unanimously approved VHF booster operation, limiting their power to 1 watt, and requiring that operators secure permission to re-broadcast from the received station. The commission also required the boosters to avoid interference to full service stations and broadcast on a different channel than they received, in effect making them VHF translators under the commission's definition. This was not a problem for most booster operators, as the frequency change was relatively easy and inexpensive to make; in fact many boosters were already changing the re-broadcast frequency because it was easier to make the systems work using two different frequencies. The FCC did, however, find it difficult to reach many booster operators to tell them to submit applications. Thus, the commission sent a number of representatives to western states to gather booster operators together to tell them about the new rules and help them come into compliance. By 1967, more than a thousand formerly illegal booster stations had converted to translator operation under the new FCC rules.<sup>41</sup>

## **Conclusion**

The Senate Committee on Interstate and Foreign Commerce returned West for a series of hearings in early 1961, ostensibly to see how the new booster regulations were working. However, the proceedings also took on the aura of a "victory lap" for western senators eager to tout their role in getting boosters legalized. At one point, after a witness prompted applause by congratulating the FCC and Congress for "coming up with a workable set of rules," Senator McGee interrupted "to be sure the applause goes to the right place." "The FCC could have done that many years ago," he said. "We had to legislate for them, and they suddenly found it possible to go to work as soon as the law was passed." This was a sentiment that many booster enthusiasts—especially Dill and Johnson—believed to be true. In their view,

the FCC could have just authorized the boosters on its own in 1954 and saved a lot of trouble.<sup>42</sup>

But for the FCC, the issue was not as clear-cut, as demonstrated by its series of fits and starts throughout the mid to late 1950s. The commission's vacillation can be understood at least in part as a struggle between technocratic and nontechnocratic views on policymaking. FCC policymaking, according to Slotten, often becomes "a prolonged period of negotiation and compromise" between these competing views, with social and economic implications usually being subsumed by supposed engineering imperatives as the commission seeks to avoid controversy "by implementing decisions arrived at through the use of technical reason." The commission's broadcast bureau feared that boosters would cause interference to existing stations, further deteriorating a station assignment plan that had already shown numerous shortcomings, especially when it came to providing service to far-flung rural and mountainous regions. Most commissioners, at least early on, were persuaded by that fear and thus refused to approve boosters. Craven initially opposed boosters, but his trip west in 1957 convinced him that boosters could operate effectively within sound engineering standards and that they were providing a valuable service. He was the lone vote in favor of approving boosters at the end of 1958.<sup>43</sup>

Craven evangelized for boosters among his fellow commissioners, assuring them with his engineering expertise that booster technology had sufficiently developed to allow "safe" operation from a technical standpoint. "At the beginning, they were against me," he told the Senate Communications Subcommittee in 1959. I think now there is a great possibility that they have recognized what I saw in Colorado and. . . . I am not so pessimistic as to think that the Commission won't see daylight." Doerfer, for one, was convinced by Craven's arguments, although he was no longer on the commission by the time it rendered its final 1960 decision. "Craven's position is becoming sounder by the day," noted Nick Zapple,

counsel to the Senate commerce committee, in a January 1959 letter to Johnson. Indeed, the Commission's 1960 decision was unanimous, with Lee dissenting only on the issue of whether any new boosters should be authorized and newly appointed commissioner Charles King not participating. Thus Craven provided technocratic cover for other commissioners who may have been reluctant to take a chance on approving boosters.<sup>44</sup>

However, Governor Johnson's unilateral approval of boosters in his state must also be acknowledged, for it extended the conversation about the technology long enough for a technocratic defense to arise. Johnson's willingness to defy the commission brought broader attention to the issue, perhaps most importantly among his former colleagues in the Senate. His boldness in turn emboldened other western politicians and the booster operators themselves. Indeed, such an about-face on an issue by the FCC not precipitated by the actions of one or more well-heeled industry factions is exceedingly rare. But FCC commissioners, experiencing the public and Congressional outcry the mere *threat* of losing the boosters brought, had to imagine that the situation would be exponentially worse if it actually followed through and shut them down.<sup>45</sup>

Johnson encouraged and facilitated the organization of booster operators as a political force because he had seen—and at times envied—the ability of entrenched interests to get their way in the broadcasting industry during his tenure on the Senate Interstate and Foreign Commerce Committee. During hearings in 1949, for example, he called representatives of the clear channel AM stations “a well-entrenched, well financed, well staffed group who are determined to have radio control in the United States.” Similarly, Johnson often pointed out the power of CATV interests; “they are a powerful organization with millions invested and a huge income,” he noted. For his part in helping the booster operators, in 1967 Johnson was named the first honorary member of the Colorado Translator Association, which cited the

former governor for taking the boosters “under his wing” and telling the commission “it would have to sue the STATE before it could close any of these little boosters.”<sup>46</sup>

In ensuing years, the number of translators continued to grow and the FCC in fact raised power limits and lessened some of the restrictions on their operation. As technology continued to develop, VHF transmitting equipment became even more reliable and less likely to cause interference. Today, VHF and UHF translators continue to supply programming to isolated areas of the country, although informal clubs and other private operators have in most cases been supplanted by local governments and television station operators. “Once we overcame the initial problems in the late 1950s and early 1960s, the whole thing turned around and the FCC became quite enthusiastic with how much good was being done with translators,” notes St. Clair. “I absolutely give them credit for that.” There are no doubt many westerners who can put their feet up, watch some college football and live “the life of Riley” today due to the efforts of those who stepped up and fought during the nascent days of booster television.<sup>47</sup>

## NOTES

<sup>1</sup> Frank F. Brown to T.A.M. Craven, November 29, 1957, Volume 1, Box 6208, E120 Docketed Case Files, Docket 12116, RG 173, National Archives and Records Administration, College Park, MD (Hereafter NACP).

<sup>2</sup> Lloyd Bilsland to T.A.M. Craven, December 19, 1957, Volume 2, Box 6208, E120 Docketed Case Files, RG 173, NACP.

<sup>3</sup> See Patrick Parsons, *Blue Skies: A History of Cable Television* (Philadelphia: Temple University Press, 2008), 131; Committee on Interstate and Foreign Commerce, Communications Subcommittee, *Development of TV Boosters: Hearings Before the Communications Subcommittee of the Committee on Interstate and Foreign Commerce*, 87<sup>th</sup> Cong., 1<sup>st</sup> Sess. (1961), 1; and Don R. Le Duc, *Cable Television and the FCC: A Crisis in Media Control* (Philadelphia: Temple University Press, 1973), 83.

<sup>4</sup> See George McConaughy to Edwin Johnson, September 11, 1956, 92-6f Broadcast Services Other than Standard Broadcast—Television, December 1, 1955 to Sept. 30, 1956, Box 136, E100B General Correspondence, 1947-1956, RG 173, NACP; and *Report and Order*, 20 R.R. 1536 (1960).

<sup>5</sup> See, for example, Parsons, *Blue Skies*, 130-137; Don R. Le Duc, *Cable Television and the FCC*, 82-88; and Christopher H. Sterling and John Michael Kittross, *Stay Tuned: A History of American Broadcasting*, 3<sup>rd</sup> Ed (Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers, 2002), 330.

<sup>6</sup> Hugh R. Slotten, *Radio and Television Regulation: Broadcast Technology in the United States, 1920-1960* (Baltimore: The Johns Hopkins University Press, 2000), xiii.

<sup>7</sup> Edwin Armstrong to Edwin Johnson, July 3, 1951, A-TV, Box 36, Sen. 82A-F11, RG 46, National Archives and Records Administration, Washington, D.C. (hereafter NADC).

<sup>8</sup> See *Sixth Report and Order*, 41 FCC 148 (1952); Sterling and Kittross, *Stay Tuned*, 351; and Parsons, *Blue Skies*, 72.

<sup>9</sup> See William Boddy, *Fifties Television: The Industry and its Critics* (Urbana: University of Illinois Press, 1990), 55; Susan Brinson, "Missed Opportunities: FCC Commissioner Frieda Hennock and the UHF Debacle," *Journal of Broadcasting & Electronic Media* 44(2): 200, 248-267; John S. Armstrong, "Constructing Television Communities: The FCC, Signals, and Cities, 1948-1957," *Journal of Broadcasting & Electronic Media* 51(1): 2007, 134; and Parsons, *Blue Skies*, 130.

<sup>10</sup> See Armstrong, "Constructing Television Communities," 135; Jonathan Sterne, "Television Under Construction: American Television and the Problem of Distribution, 1926-62," *Media, Culture & Society* 21 (1999): 516; and Le Duc, *Cable Television and the FCC*, 65.

<sup>11</sup> See Rufus Crater, "TV Booster Outlets," *Broadcasting*, April 18, 1949, 25; and "WSM-TV Reports Success in its Booster Test," *Broadcasting*, January 19, 1953, 58.

<sup>12</sup> See *TV Digest*, May 2, 1953, 5; and Hyde to Johnson, February 12, 1954.

<sup>13</sup> See Parsons, *Blue Skies*, 50; Committee on Interstate and Foreign Commerce, Communications Subcommittee, *VHF Booster and Community Antenna Legislation: Hearings Before the Subcommittee of the Committee on Interstate and Foreign Commerce*, 86<sup>th</sup> Cong., 1<sup>st</sup> Sess. (1959), 1065, 214; and Robert E. Lee to Warren Magnuson, May 17, 1960, Boosters and Translators 1 of 2, Box 2, Sen. 86A-F11, NADC. For cost estimates, see, for example, *VHF Booster and Community Antenna Legislation*, 851, 866, 922, 924, 971 and 975; *Development of TV Boosters*, 104-108; and Dorothy Spannagel (Howard TV Club) to FCC, January 7, 1960, Volume 15, Box 6203, Docket 12116, A1-E120 Docketed Case Files, RG 173, NACP.

<sup>14</sup> For dues estimates, see *VHF Booster and Community Antenna Legislation*, 851, 866, 922, 924, 971 and 975; and *Development of TV Boosters*, 89, 93, 110. See National Television Repeater Association to John Pastore, March 7, 1961, A-TV, Box 36, Sen. 82A-F11, RG 46, NADC; *VHF Booster and Community Antenna Legislation*, 1024-1026, 25, 119; Lee to Magnuson, May 17, 1960; and *VHF Booster and Community Antenna Legislation*, 1216.

<sup>15</sup> See *Cease and Desist Order to be Directed against C.J. Community Services, Inc.*, 20 FCC 860 (1956); *TV Digest*, November 13, 1954, 10; and "Wash. State Tv Boosters Cause Concern at Commission," *Broadcasting*, March 21, 1955, 104.

<sup>16</sup> See "Boosters and Fee Near FCC Agenda," *TV Digest*, November 20, 1954, 3; and *Report and Order* 13 RR 1570 (1956).

<sup>17</sup> See *Cease and Desist Order*, 867; and “No Harm in Illegal Boosters, Says Examiner,” *TV Digest*, October 22, 1955, 4.

<sup>18</sup> Clarence Dill to Edwin C. Johnson, August 10, 1956, Box 66073, Governor’s Office Files, Colorado State Archives, Denver, CO.

<sup>19</sup> See *The Television Inquiry: The Problem of Television Service for Smaller Communities*,” Staff Report (U.S. Government Printing Office, 1959), 6-7; “Booster Argument Heard before FCC,” *Broadcasting*, December 26, 1955, 60; Parsons, *Blue Skies*, 131; and E. Stratford Smith, Oral History, 1986, The Cable Center, <http://cablecenter.org/s-listings/e-stratford-smith.html>.

<sup>20</sup> See *VHF Booster and Community Antenna Legislation*, 238; *Development of TV Boosters*, 104; “FCC Regulation of CATV Urged,” *Broadcasting*, July 6, 1959, 67; and “Illegal Boosters Rapped by Shapp,” *Broadcasting*, September 5, 1955, 84-5.

<sup>21</sup> See *Cease and Desist Order*, 872; *TV Digest*, February 25, 1956, 5; “FCC Opens Gates on TV Translators,” *Broadcasting*, May 28, 1956, 75; and Byron St. Clair, telephone interview with author, September 12, 2016.

<sup>22</sup> See *VHF Booster and Community Antenna Legislation*, 1103; and “Arbitrary Order of FCC Cuts off Television Reception in Steamboat,” *Steamboat Pilot*, June 14, 1956.

<sup>23</sup> See “Closed Circuit,” *Broadcasting*, October 27, 1952, 6; *TV Digest*, August 11, 1956, 4; and “‘Big Ed’ Chases a New Fire . . .,” *Broadcasting*, February 15, 1954, 130.

<sup>24</sup> See An Executive Order by Edwin C. Johnson, August 3, 1956, 92-6f Broadcast Services Other than Standard Broadcast—Television, December 1, 1955 to Sept. 30, 1956, Box 136, E100B General Correspondence, 1947-1956, RG 173, NACP; and Ed C. Johnson, “Johnson Explains TV Booster Order,” *Denver Post*, August 19, 1956.

<sup>25</sup> See “Communications Act Author Approves Colo. Gov.’s Action,” *Broadcasting*, August 27, 1956; and Dill to Johnson, August 10, 1956.

<sup>26</sup> See Edwin Johnson to George McConnaughey, August 21, 1956; and George McConnaughey to Edwin Johnson, September 11, 1956, both in 92-6f Broadcast Services Other than Standard Broadcast—Television, December 1, 1955 to Sept. 30, 1956, Box 136, A1-E100B General Correspondence, 1947-1956, RG 173, NACP.

<sup>27</sup> See T.A.M. Craven to Howard Yates, August 21, 1956; and Edwin Johnson to T.A.M. Craven, September 11, 1956; both in 92-6f Broadcast Services Other than Standard Broadcast—Television, December 1, 1955 to Sept. 30, 1956, Box 136, A1-E100B General Correspondence, 1947-1956, RG 173, NACP.

<sup>28</sup> See James C. Foust, “‘So Vivid a Crossroads’: The FCC and Broadcast Allocation, 1934-1939,” *Journal of Radio & Audio Media* 20(1), 2013, 93; Convention Program, *Broadcasting*, April 25, 1955, 60; and T.A.M. Craven to Edwin Johnson, September 28, 1956, 92-6f Broadcast Services Other than Standard Broadcast—Television, December 1, 1955 to Sept. 30, 1956, Box 136, A1-E100B General Correspondence, 1947-1956, RG 173, NACP.

<sup>29</sup> See George McConnaughey to Edwin Johnson, November 1, 1956; and Edwin Johnson to George McConnaughey, November 7, 1956, both in 92-6f Broadcast Services

Other than Standard Broadcast—Television, December 1, 1955 to Sept. 30, 1956, Box 136, A1-E100B General Correspondence, 1947-1956, RG 173, NACP.

<sup>30</sup> See *C.J. Community Services v. Federal Communications Commission*, 246 F.2d. 660 (1957), 7; FCC, *Report No. 3053*, June 28, 1957, Television (S&S), Jan. 1, 1957 to Mar. 31, 1958, Box 110, A1-E100C General Correspondence, 1957-1966, RG 173, NACP; and “Experimental and Auxiliary Broadcast Stations,” *Federal Register*, July 6, 1957, 4758.

<sup>31</sup> See Ed Craney to Mike Mansfield, August 7, 1957, Volume 1, Box 6208, A1-E120 Docketed Case Files, RG 173, NACP; “Experimental, Auxiliary, and Special Services,” *Federal Register*, August 2, 1957, 6114; “FCC Proposes VHF Boosters in Surprise Move,” *TV Digest*, August 3, 1957, 1; and “FCC Proposes Boosters, If Free of Interference,” *Broadcasting*, August 5, 1957, 89.

<sup>32</sup> See Stephen McNichols to John Doerfer, October 8, 1957, Volume 3, Box 51, A1-E120 Docketed Case Files, Docket 12443, RG 173, NACP; and T.A.M. Craven to Commission, November 4, 1957, VHF Booster #12116, Box 2, A1-E149 Records Relating to the Development of CATV, Translators and UHF Boosters, 1960-1964, RG 173, NACP.

<sup>33</sup> See “On-Channel Boosters Favored,” *Broadcasting*, January 20, 1958, 90; National Community Television Association, Comments, January 14, 1958, Volume 15, Box 6203, Docket 12116, A1-E120 Docketed Case Files, RG 173, NACP; and *The Television Inquiry*, 30.

<sup>34</sup> See *Report and Order*, 44 FCC 1469 (1958); FCC, “Operation of Unlicensed Boosters,” December 30, 1958, VHF Booster #12116, Box 2, A1-E149M Records Relating to the Development of CATV, Translators and UHF Boosters, 1950-1964, RG 173, NACP; “Sharpening Horns of FCC’s Booster Dilemma,” *TV Digest*, February 7, 1959, 2; and “Illegal Boosters Get FCC Coup de Grace,” *TV Digest*, January 3, 1959, 3.

<sup>35</sup> See “Booster Ban Delayed as Congress Presses,” *Broadcasting*, February 2, 1959, 54; Notes on TV Meeting, January 23, 1959, Box 66073, Governor’s Office Files, Colorado State Archives, Denver, CO.

<sup>36</sup> See *FCC to Further Study TV “Booster” Problem*, 44 FCC 1456 (1959); and Comments of National Community Television Association, January 11, 1960, 15, n. 10, Volume 15, Box 6203, Docket 12116, E-120 Docketed Case Files, RG 173, NACP.

<sup>37</sup> See *Status Quo of VHF “Boosters” Extended to December 31, 1959*, 44 FCC 1457 (1959); John C. Doerfer to Warren Magnuson, April 13, 1959, Volume 15, Box 6203, A1-E120 Docketed Case Files, RG 173; “FCC on Booster Bandwagon,” *Broadcasting*, February 16, 1959, 70; and “The Great Booster Rebellion of 1959,” *TV Digest*, January 31, 1959, 1.

<sup>38</sup> See National Television Repeater Association, Minutes, January 23, 1959; Tri-State T.V. Repeater Association, Memorandum, May 16, 1959; Tri-State T.V. Repeater Association, Memorandum, April 18, 1959; and Edwin Johnson to Steve McNichols, January 25, 1959; all in Box 66073, Governor’s Office Files, Colorado State Archives, Denver, CO.

<sup>39</sup> Stephen McNichols to Commission, February 26, 1959, TV Booster File, Box 66073, Governor’s Office Files, Colorado State Archives, Denver, CO.

<sup>40</sup> See *VHF Booster and Community Antenna Legislation*, 308; “FCC Taken to Task for ‘Failures’,” *Broadcasting*, May 2, 1960, 78; and Lee to Magnuson, May 17, 1960.

<sup>41</sup> See *Report and Order* 20 RR 1536 (1960); “FCC Legalizes VHF Boosters,” *Broadcasting*, August 1, 1960, 84; “Under its Wing,” *Broadcasting*, August 15, 1960, 86; and FCC, “Further Notice of Proposed Rule Making and Notice of Inquiry,” June 14, 1967, ff2 Broadcasting 1967, Box 1, Edwin C. Johnson Papers, Penrose Library, University of Denver, Denver, CO.

<sup>42</sup> U.S. Senate, Committee on Interstate and Foreign Commerce, *Development of TV Boosters*, 87<sup>th</sup> Cong., 1<sup>st</sup> Session, February 21 and 22, 1961, p. 78.

<sup>43</sup> See Slotten, *Radio and Television Regulation*, 56, 111, 55; Harold Cowgill to Commission, July 23, 1957, VHF Booster #12116, Box 2, A1-E149 Records Relating to the Development of CATV, Translators and UHF Boosters, 1960-1964, RG 173, NACP; *Report and Order*, 44 FCC 1469 (1958).

<sup>44</sup> See *VHF Booster and Community Antenna Legislation*, 709-710; Nicholas Zapple to Edwin Johnson, January 22, 1959, Box 66073, Governor’s Office Files, Colorado State Archives, Denver, CO; and *Report and Order* 20 RR 1536 (1960).

<sup>45</sup> Le Duc, *Cable Television and the FCC*, 26.

<sup>46</sup> See James C. Foust, *Big Voices of the Air: The Battle over Clear Channel Radio* (Ames: Iowa State University Press, 2000), 147; and Al Smith to Edwin Johnson, July 19, 1967, ff2 Broadcasting 1967, Edwin C. Johnson Papers, M062, Special Collections and Archives, Penrose Library, University of Denver, Denver, CO.

<sup>47</sup> St. Clair, telephone interview.