

JOINT APPLICATION OF UNITED CABLE : CONNECTICUT SITING
TELEVISION SERVICES CORPORATION AND : COUNCIL
UNITED CABLE TELEVISION CORPORATION OF
CONNECTICUT FOR A CERTIFICATE OF
ENVIRONMENTAL COMPATIBILITY AND PUBLIC :
NEED TO ESTABLISH A COMMUNITY ANTENNA
TELEVISION HEAD-END FACILITY IN THE
TOWN OF FARMINGTON, CONNECTICUT. : February 19, 1986

F I N D I N G S O F F A C T

1. United Cable Television Services (United Services) and United Cable Television Corporation of Connecticut (United of Connecticut), collectively the Companies, in accordance with provisions of sections 16-50g to 16-50z of the Connecticut General Statutes (CGS), applied to the Connecticut Siting Council (Council) on October 25, 1985, for a certificate of environmental compatibility and public need (certificate) to modify an existing television broadcast tower site to establish a Community Antenna Television (CATV) head-end facility, in the Town of Farmington, Connecticut. (Record)
2. The fee as prescribed by section 16-50v-1a of the RSA accompanied the application. (Record)
3. The application was accompanied by proof of service as required by section 16-501 of the CGS.
4. Affidavits of newspaper notice as required by statute and section 16-501-1 of the RSA were also filed with the application. (Record)
5. The Council and its staff made an inspection of the proposed head-end site on November 18, 1985. An inspection of the neighborhoods and roads surrounding the proposed facility was made on December 12, 1985. (Record)

6. Pursuant to section 16-50m of the CGS, the Council, after giving due notice thereof, held public hearings on December 4, 1985, at 7:00 P.M., December 12, 1985, at 10:00 A.M. and December 30, 1985, at 10:00 A.M. in the Council Chambers of the Farmington Town Hall in Farmington, Connecticut. (Record)
7. The parties to the proceeding are the applicant and those persons and organizations whose names are listed in the Decision and Order which accompanies these findings. (Record)
8. The following state agency filed written comments with the Council pursuant to section 16-50j of the CGS: Department of Environmental Protection (DEP). (Record)
9. Exhibits submitted by the Companies are as follows: United 1, application of October 25, 1985; United 2, responses to set one of pre-hearing questions, November 25, 1985; United 3, responses to set two of pre-hearing questions, December 4, 1985; United Late File 4, map of proposed site with tree trimming; United Late File 5, drawing of tower with proposed facilities; United Late File 6, map of all residences within 2500' radius of proposed site; United 7, responses to set three of pre-hearing questions, December 11, 1985; United Late File 8, cost of proposed 20' fence and total cost to implement proposed system; Late File 9, (withdrawn); United 10, pre-filed testimony of Robert Sobczak; United 11, Eastern Microwave letter of December 26, 1985; United 12, U.S.G.S. survey map, revised 1984. (Record)
10. Exhibits submitted by the town of Farmington are as follows:
Farmington 1, pre-filed testimony of John B. Delaney; Farmington 2, map of the Companies' service area. (Record)

11. United Services is a public service company and a community antenna television company within the meaning of Sections 16-1 and 16-331 of the Connecticut General Statutes, as amended by PA 85-509. It is a holder of a Certificate of Public Convenience and Necessity issued by the Connecticut Department of Public Utility Control to operate a community antenna television system in the towns of Hartford, West Hartford, East Hartford, Bloomfield, Simsbury and Windsor (the "Hartford Franchise Area"). (United 1, pp. 1-2)
12. United of Connecticut is a public service company and a community antenna television company within the meanings of Sections 16-1 and 16-331 of the Connecticut General Statutes, as amended by PA 85-509. It is a holder of a Certificate of Public Convenience and Necessity issued by the Connecticut Department of Public Utility Control to operate a community antenna television system in the towns of Bristol, Plainville, New Britain, Berlin, Farmington, Avon, Burlington, and Canton (the "New Britain Franchise Area"). (United 1, p. 2)
13. United Services and United of Connecticut filed an application with the Department of Public Utility Control on October 18, 1985, seeking approval for a merger. (United 1, pp. 4-5)
14. The proposal would modify an existing tower site on Rattlesnake Mountain in Farmington, containing an existing 1292' television broadcast tower and an existing electronics building, which is

owned by Chase Family Limited Partnership 7 and operated by Arch Communication Corporation. (United 1, p. 6; United 7, Q. 1)

15. The proposed equipment would constitute a head-end facility to provide CATV service to the Hartford and New Britain CATV franchise areas. The Hartford franchise area consists of the towns of Hartford, West Hartford, East Hartford, Bloomfield, Simsbury, and Windsor. The New Britain franchise area consists of the towns of Bristol, Plainville, New Britain, Berlin, Farmington, Avon, Burlington, and Canton. (United 1, p. 2)
16. United Services recently acquired the Hartford franchise area. The Company's existing Hartford CATV facilities are in a state of disrepair and are in danger of failure due to severe storm conditions and the possibility of physical damage from the failure of facility equipment. (United 1, p. 4)
17. Existing facilities within the Hartford CATV system have problems such as damaged microwave dishes in West Hartford and Hartford, improperly mounted and guyed antennas in West Hartford, and an improperly installed and mounted earth station in East Hartford. (United 3, Q. 4)
18. The existing New Britain franchise facilities, operated by United of Connecticut, consist of the following equipment and facilities: a tower, microwave relay equipment, and head-end at South Mountain in Bristol; three earth stations and a head-end in Bristol (Bristol East); and an earth station and main head-end on Cooke Street in Plainville. (United 1, p. 12)
19. The existing Hartford franchise consists of the following equipment and facilities: an earth station, microwave relay equipment,

and head-end on Shield Street in West Hartford; an earth station, microwave relay equipment, and head-end in East Hartford; a microwave relay point on top of Connecticut National Bank (CNB) in Hartford; and a microwave relay station on a tower in Wolcott.

(United 1, p. 12)

20. The application originally proposed the installation of 11 microwave antennas to the existing Channel 61 tower. Three 10' diameter dishes would be located at the 500' level of this tower, one 6' dish at the 480' level, two 6' dishes and one 8' dish at the 100' level, one 10' dish at the 30' level, one log-periodic antenna at the 90' level, one log-periodic antenna at the 80' level, and one log-periodic antenna at the 70' level. (United 1, p. 7; United 1, Exhibit 4, p. 2; United 2, Exhibit A, p. 3)
21. On December 4, 1985, in response to Council questions, the Companies revised the application (hereinafter, proposal or proposed consolidation). The Companies had not been able to obtain from the prospective landlord the space originally requested on the existing Farmington tower. Because less space would be available on the Channel 61 tower than originally proposed, the Companies made revisions in the configuration and number of dishes proposed for placement on this tower. The revised proposal is for six dishes on the Channel 61 tower and two on the waveguide bridge adjacent to the tower. (United 3, Q. 3)
22. Under the revised proposal, the equipment to be placed on the tower is as follows: one 10' dish at the 500' level, to receive signals from Provin Mountain, Massachusetts; one 6' dish at the 480' level, to receive and transmit with South Mountain, Bristol;

one 6' dish to transmit to Somers at the 100' level; one 8' dish to transmit to East Hampton at the 100' level; one 6' dish to transmit to East Hartford at the 100' level; and one 10' dish to transmit to Bolton at the 30' level. The three log-periodic antennas are as originally proposed. (United 3, Q. 3, Exhibit P)

23. Two ice shields would be added to the Channel 61 tower to protect the proposed dishes from ice falling from upper levels of the tower. There would be one ice shield at the 510' level and one ice shield at the 120' level of the tower. (United 1, pp. 7-8; United 3, Exhibit P)
24. Two dishes are proposed for the existing waveguide bridge which links the Channel 61 tower to the electronics building. One 6' dish would receive signals from Hartford at the 20' level of the waveguide bridge. One 6' dish would transmit signals to Manchester at the 20' level of the waveguide bridge. (United 1, p. 8; United 3, Exhibit P)
25. An extension to be added to the waveguide bridge would carry cables from the proposed dishes to the electronics building. (United 3, Q. 2)
26. Six off-air antennas would be added to the existing electronics building at the proposed site. These are a QCA-7 VHF antenna, a QCA-3 UHF antenna, a General Instrument antenna, a 75 OhmJ-Series search antenna, a QCA UHF antenna, and a T FM-1 omnidirectional FM antenna. (United 1, p. 8; United 1, Exhibit 11)
27. The proposal also seeks approval for five earth stations at the Farmington site. Four of these earth stations would be 6.1 meter

Harris Antennas. One earth station would be a 7 meter Scientific Atlantic antenna. (United 1, p. 7)

28. The proposed consolidation would allow the elimination of the following facilities and equipment: at Bristol East, three earth stations and a head-end; at Plainville, the main head-end; in West Hartford, an earth station and head-end; in East Hartford, an earth station and head-end; and in Hartford, the microwave relay equipment atop the CNB building in Hartford. (United 1, p. 15)
29. The five earth stations at the proposed site would enable the Companies to receive signals from all CATV satellites now in orbit. (United 1, p. 7)
30. The five earth stations would be located approximately 50'-250' southeast of the existing electronics building. (United 1, p. 9)
31. The Companies also propose to utilize a portion of the second floor of the existing transmitter building for electronic signal processing, receiving and transmission equipment. (United 1, pp. 8-9)
32. There are 19 antennas on the existing Channel 61 tower. This tower, which is lighted and guyed, was designed and built to accommodate a variety of microwave and off-air television and radio antennas and is structurally capable of supporting the proposed equipment. (United 1, p. 6; United 2, Q. 4, 9; United 1, Exhibit 41; United 3, Q. 11; United 7, Exhibit U; Tr. 12/12/85, p. 149)

33. The applicants do not own the existing tower. However, the Companies have a licensing agreement with the tower's owner to place dish and other antennas on it. The Companies have operational jurisdiction over other equipment which might interfere with their equipment if placed on the tower. (Tr. 12/12/85, pp. 183-184)
34. The proposed site is zoned R. 80 under town of Farmington regulations, and is owned by the Chase Family Limited Partnership No. 6. (United 1, pp. 20, 25; United 2, Q. 13)
35. The existing tower and building were erected in the summer of 1984 with the approval of the Farmington Plan and Zoning Commission. (United 3, Q. 1, Q. 10; Tr. 12/12/85, p. 149)
36. Residents owning property abutting the site of the existing tower have filed suit challenging the Farmington Plan and Zoning Commission's approval of the existing tower and building. (Tr. 12/30/85, p. 196)
37. The Companies' existing South Mountain facility would be used to bring New York channels 5, 9, 11, and 38 from Boston into the United System. These signals would be sent from South Mountain by microwave to Rattlesnake Mountain for distribution to the Companies' CATV system. Trunk cable now runs from South Mountain to the Plainville head-end. (United 2, Q. 12; United 3, Q. 3; Tr. 12/12/85, pp. 185-186)
38. Electromagnetic radiofrequency power densities were measured at the proposed Farmington site. The highest reading obtained was .04 mW/cm². The maximum additional power density as a result of

the currently proposed facilities would be $.037 \text{ mW/cm}^2$. The maximum combined power density of the proposed facility would therefore be $.077 \text{ mW/cm}^2$. (United 2, Q. 3; United 3, Q. 3, Exhibit R; United, Exhibit 10, Q. 9)

39. The expected power density at the nearest residence would be a total of $.040035 \text{ mW/cm}^2$, assuming all antennas would radiate in the same direction at the same time, which would not be the case. (United 2, Q. 3; United 3, Exhibit R; United 10, p. 9; Tr. 12/12/85, p. 155)
40. The proposed facilities would receive and relay microwave signals using frequencies in the range of 12 GHz to 13.9 GHz. The American National Standards Institute Safety Standards for exposure to this frequency range is 5.0 mW/cm^2 . (United 1, pp. 29-30)
41. The maximum combined power density of the proposed facility would be at least an order of magnitude below accepted standards for non-ionizing radiation, and therefore the proposed facility would pose no danger to public health from microwave radiation. (DEP Comments, 12/18/85)
42. The proposed facility would not interfere with any present facilities in the area or with television or radio reception in the area. (United 2, Q. 2; Tr. 12/12/85, p. 232)
43. An existing 10' chain link fence is in place around the Channel 61 tower and electronics building. The Companies propose to add to the existing fence to enclose completely the entire proposed site. If necessary, the fence on the northeast side of the earth stations would be 20' high and fully woven with aluminum slats to prevent terrestrial interference originating from common carrier

microwave signals based in Glastonbury and Durham. (United 1, pp. 9-10; United 1, Exhibit 22; United 2, Q. 8; United 3, Q. 5; Tr. 12/12/85, p. 222)

44. The applicants would wait until the proposed earth stations were in place to determine if a 20' fence with slats is actually needed to shield the proposed dishes from interference. Notch filters might be installed in the receiver circuitry to shield interference and eliminate the need for the shield fence. (Tr. 12/12/85, pp. 221-223)
45. The proposed 20' fence may be visible from nearby Route 6. The applicants would agree to screen the proposed fence with evergreens and paint it gray or brown to blend in with the surroundings. The proposed fence is not expected to generate any additional noise. If additional noise did occur, the Companies would initiate measures to find and eliminate the noise source. (Tr. 12/4/85, p. 94; Tr. 12/12/85, pp. 150-151; pp. 219-220)
46. The proposed site is located on Rattlesnake Mountain in Farmington at an elevation of 710', within a heavily wooded area. A quarry operation is located to the east, two television broadcast towers are 1100' to the southeast, and Route 6 is located to the north. The nearest residential area is to the west on Pinnacle Road. (United 1, pp. 19-20; United 1, Exhibit 41)
47. A ridge along the western boundary of the proposed site and the heavily wooded terrain in the area would shield views of the proposed earth stations from residential areas. The proposed earth stations would not be visible from any nearby roads, even

after any required tree trimming. (United 1, p. 20; Tr. 12/4/85, pp. 93-94)

48. Some of the proposed dishes to be added to the Channel 61 tower could be seen at distant points from which the tower is presently visible. The proposed dish antennas would be no wider than the face of the tower and would extend out approximately five feet. These dishes would be visible from Pinnacle Road, Pinnacle Ridge Road, Old Pinnacle Road, Suncrest Road, and Route 6. (United 1, p. 21; Tr. 12/4/85, pp. 90-93)
49. The proposed dish to be located at the 30' level of the tower and the two dishes proposed for the waveguide bridge would not be visible from surrounding areas. (United 3, Q. 6)
50. Some tree clearing and trimming would be necessary in the portion of the property adjacent to the proposed earth stations. In the area within 80' of the earth stations, all brush and trees would have to be removed. Eighty to 110' from the earth stations, 15'-30' would be trimmed from the tops of trees, and at 110' to 130' from the earth stations trees would require 10'-15' of trimming. This would allow the earth stations a clear line of sight to satellites in the southwestern sky 12.5° or more above the horizon. (United 2, Q. 10; Tr. 12/12/85, pp. 226-229; United Late File 4)
51. The existing tower occasionally emits noise audible at some adjacent residences. The tower would emit noise even with no antennas on it. The proposed earth stations, dishes, and other antennas would not be expected to generate any incrementally noticeable noise in the area. (Tr. 12/4/85, pp. 96-97; United 3, Q. 9, p. 19)

52. Full compliance with national engineering safety standards would minimize the risk of any tower collapse. Any overstresses in the legs of the tower as a result of the addition of the proposed equipment to the tower would be eliminated by changing the guy wire tensions. The worst-case drop zone radius of the tower in the event of collapse is 50% of its height, or 669'. The closest home is located some 1350' from the Channel 61 tower. The wind load rating of the tower is 65 psf. (United 1, p. 29; United 1, Exhibit 41; United 2, Q. 6, Q. 9)
53. No portion of the proposed site consists of inland wetlands or a watercourse. (United 1, p. 22)
54. Access to the proposed site would be from Route 6 along an existing paved access road. The Companies would construct an access road of processed stone approximately 130' in length to permit access to the proposed earth station facilities. (United 1, p. 10; United 1, Exhibit 22; Tr. 12/4/85, p. 96)
55. Full industrial electric service is currently available on the proposed site as is a standby twin diesel generator. (United 1, p. 10; Tr. 12/12/85, pp. 147-148)
56. The DEP has determined there are no known populations of rare, endangered, or threatened species in the area of the proposed site. (United 1, p. 26, Exhibit 39)
57. The nearby Metacomet Trail, located below the ridge on the western boundary of the proposed site, was moved in early 1985 in accordance with the original Town of Farmington Plan and Zoning Commission approval for the Channel 61 tower. No further movement of the trail would be necessary as a result of the proposed facilities.

The proposed earth stations would not be visible from the trail.
(United 1, p. 21; United 2, Q. 11; Tr. 12/12/85, pp. 161-162)

58. The closest parcel of property managed by the DEP is the Shade Swamp Wildlife Sanctuary, some 4000' west of the proposed site. The proposed facility should not result in any adverse effects on this property. (DEP Comments, 12/18/85)
59. The applicants considered one potential alternate site. It is a parcel of land adjacent to the proposed site owned by ViaCom Broadcasting Inc. This site presently is used for broadcasting WVIT Channel 30 television signals. It contains two towers, neither of which are of sufficient construction design for the proposed use. An existing electronics building on the alternate site is of insufficient size to serve as a head-end for the proposed equipment; therefore, a new building would have to be constructed. (United 1, pp. 28-29; United 2, Q. 14, Exhibit H)
60. The New Britain and Hartford CATV franchises serve 117,000 subscribers. (Tr. 12/12/85, p. 182)
61. The proposed facility will allow the Companies to implement their proposal to cablecast gavel-to-gavel coverage of the proceedings in the Connecticut General Assembly. This program is known as Connecticut C-SPAN. The proposed facility will allow for microwave reception of Connecticut C-SPAN signals and relay of those signals to other cable systems. (United 1, pp. 9, 17-18)
62. By combining the two franchises the Companies would avoid having to pay an additional 3.7 percent of gross copyright fee for placing WOR Channel 9 into the Hartford franchise system. This would save approximately \$600,000 per year. This savings would occur

- regardless of the location of the consolidated head-end. (United 1, p. 17, Exhibit 28; Tr. 12/12/85, pp. 132-133, 163-164)
63. With the proposed consolidation, all of the Companies' existing transmitting and receiving facilities would be dismantled except for the one on South Mountain, although the East Hartford facility would remain in place until an adequate hardline were constructed to East Hartford. (United 2, Q. 12; United 3, Q. 3; Tr. 12/12/85, p. 130)
64. The consolidation of the United Hartford and New Britain area franchises could save at least \$60,000 in annual maintenance costs and \$36,000 in annual rental fees and utility costs. (United 1, p. 17; United 8)
65. The proposed facility will reduce the number of amplifiers required to be cascaded to many areas of the Hartford Franchise system and to all areas in the New Britain Franchise system. (United 1, p. 16; United 10, pp. 2-3, 7)
66. The existing equipment problems would be remedied and service would be improved by the consolidation of the Hartford and New Britain facilities at a common head-end site. (United 1, pp. 4-5)
67. The Companies did not anticipate any subscriber rate increases attributable to the cost of constructing the proposed facility. (United 2, Q. 15)
68. Microwave signals to and from towers located in other franchises are part of the statewide cable television interconnect system. This sharing of signals is done on a non-profit basis, with only maintenance costs incurred. (Tr. 12/12/85, pp. 123-124; United 7, Exhibit V)

69. If the Channel 61 tower were not present, the site would still be appropriate for the proposed earth stations. (Tr. 12/12/85, p. 143)
70. Reception by satellite earth stations at Rattlesnake Mountain would be as good as or better than reception at the existing Bristol earth stations. (Tr. 12/30/85, p. 69)
71. United Cablevision has experienced physical difficulties with the seven-meter Simulsat antenna in use at its Bolton facility; therefore, a Simulsat antenna was rejected for use at the Rattlesnake Mountain site. (Tr. 12/12/85, pp. 162-163)
72. The microwave pathway as designed for the proposal from Provin Mountain to Rattlesnake Mountain would require antenna location on the Channel 61 tower at the 500 foot level. The clearance along this pathway in Connecticut was 166 feet. The clearance along the Massachusetts terrain was unavailable. (Tr. 12/12/85, p. 125)
73. The 10' microwave dish at the 500' level would be at the lowest height possible to receive the Sports Channel signal from Provin Mountain, Massachusetts. If the South Mountain tower were structurally capable of supporting additional antennas and if an FCC license were obtainable, the Sports Channel signal could be sent from Provin Mountain to South Mountain. (Tr. 12/12/85, p. 125; Tr. 12/30/85, pp. 64, 69; United 2, Exhibit D)
74. The transmitting antenna on Provin Mountain is at the tower's highest point. (Tr. 12/12/85, p. 126)
75. One microwave dish proposed for the Rattlesnake Mountain tower, aimed towards South Mountain, would have simultaneous transmitting and receiving capability. This dish could have clearance to South

Mountain if placed as low as 50' above ground on the Rattlesnake Mountain structure; however, the structural analysis requires location at the 480' level. If additional structural analysis so indicated, the dish could be placed as low as 50' on the tower. (United 1, Exhibit 4; Tr. 12/12/85, pp. 141-143; United 3, Q. 3; United 2, Q. 21)

76. The Companies plan to secure permission from the appropriate governmental agencies to run cable across the Connecticut River on one of the Hartford-East Hartford bridges. (Tr. 12/12/85, pp. 134-137)
77. The existing Hartford system requires 59 amplifiers to serve Windsor. The proposed consolidation would require a cascade of 61 amplifiers to Windsor, which would not degrade service noticeably. Not more than 50 amplifiers should be used to assure adequate signal and if the companies were to reconstruct this trunk line they would not use 59 amplifiers. (Tr. 12/12/85, p. 178; Tr. 12/30/85, pp. 16-20)
78. The spacing between cable amplifiers in the existing system is approximately one per 2400' or 2.2 per mile. The newer high gain amplifiers can be spaced 3400'-3500' apart. (Tr. 12/30/85, pp. 22-23)
79. The Companies could provide a signal sufficient to meet FCC minimum quality specifications at the furthest cabling point in the East Hartford area from the Bolton tower site or from the Hartford system. (Tr. 12/12/85, pp. 136, 172, 188-189)

80. The cabling distance from Rattlesnake Mountain to West Hartford is 6.3 miles and would require 9 amplifiers. (Tr. 12/30/85, pp. 27-28)
81. The maximum number of amplifiers that could be used to provide an acceptable signal to all subscribers using the present system and existing amplifiers would vary but would be approximately in the low 40's. (Tr. 12/12/85, p. 178; Tr. 12/30/85, p. 16)
82. Providing a signal to the East Hartford area via a trunkline from the Bolton facility would require 30 cascaded amplifiers of the power doubling type, well within the distance limits for that type of amplifier. (Tr. 12/12/85, Tr. 138-139)
83. An alternative method to provide a signal to the east side of the Connecticut River could be microwaving the signal from Rattlesnake Mountain to the East Hartford facility. (Tr. 12/12/85, p. 138)
84. Erecting the facility at an alternative Rattlesnake Mountain site at the present location of WVIT's 500' tower would involve expenses for site acquisition, existing tower removal, and building, tower, and earth station construction, which would total an estimated \$525,000. (United 1, p. 29)
85. As an alternative, signal coverage to the combined New Britain-Hartford franchise areas could use the facilities at Plainville, Bristol, and South Mountain and would not require a new tower to distribute the signals to subscribers. (Tr. 12/4/85, pp. 64-65; Farmington 1,2)
86. The alternative Plainville, Bristol, and South Mountain facility would decrease signal quality due to the number of amplifiers and the higher bandwidth trunk needed to accommodate additional

signals. (United 10, pp. 7-8)

87. The Plainville, Bristol, and South Mountain alternative would require 83 cascaded amplifiers to serve the Windsor area. (United 10, p. 3)
88. The Plainville, Bristol, and South Mountain alternative would eliminate fewer of the existing facilities and require more electronic equipment than the proposal; it would not reduce maintenance problems as much as the proposal; and it would require additional microwave relay facilities to accommodate C-SPAN and receive Sports Channel. (United 10, pp. 4-8)
89. Providing an acceptable signal to all of the service area under the Plainville, Bristol, and South Mountain alternative would require extensive retrunking using different routes and replacing existing amplifiers with state-of-the-art amplifiers at a cost of several million dollars. (United 10, pp. 2-3)
90. Consolidation of the New Britain-Hartford franchises using either a South Mountain or Plainville head-end facility would require the use of AML microwave technology, which could cost at least \$500,000, plus the costs of the towers. Estimated total costs could approach a million dollars. (Tr. 12/12/85, pp. 140, 141, 175)
91. An alternative consolidated facility at South Mountain would require a rebuilding of the present tower in order to accept an AML distribution system, which would require six receiving locations and six towers elsewhere in the franchise system. (Tr. 12/12/85, p. 140)

92. The Companies did not consider an alternative tower site at Cook Street, Plainville, because of the height needed to clear Rattlesnake Mountain with a microwave signal. (Tr. 12/12/85, p. 140)
93. The Council rejected a proposal in 1984 by Hartford CATV (now United Cable Services Corporation) for a consolidation of its facilities with a head-end including a 260' tower at Shield Street, West Hartford. (Docket 42, Administratively Noticed)
94. An acceptable quality signal could not be provided by trunk cable to East Hartford from the present Plainville facility because of the distance and number of amplifiers involved. (Tr. 12/12/85, p. 136, 177-178; United 10, p. 1)
95. The road distance from South Mountain to the Plainville facility is approximately eight miles. (Tr. 12/12/85, p. 173)
96. The number of amplifiers needed to bring a signal from South Mountain to Plainville on the present trunking system is twelve. Under a consolidation plan, the number required would change to 20. (Tr. 12/12/85, p. 179-180; Tr. 12/30/86, pp. 21-22)
97. The cabling distance from Rattlesnake Mountain to East Hartford without going through West Hartford is approximately 13-14 miles. (Tr. 12/12/85, pp. 173-174)
98. The approximate total construction cost for the proposed Rattlesnake Mountain facility, as revised, would be \$294,000. Costs would include
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| lease acquisition and site approval | \$ 30,000; |
| electrical equipment and building improvements | 95,000; and |
| earth station, fencing, and site improvements | 169,000. |

(United 1, pp. 5, 24; Tr. 12/12/85, p. 128)

99. The construction costs for new trunk cable associated with the proposal were estimated as follows:

a. Plainville to Rattlesnake Mountain	\$14,400;
b. Rattlesnake to West Hartford	37,200; and
c. West Hartford trunk extension to East Hartford	<u>37,200.</u>
Total	\$88,800

(United Exhibit 8)

100. The cost to purchase and install the five earth station antennas was estimated at \$40,000. The cost to purchase a Simulsat 7 meter antenna, as an alternative to the five earth station antennas, was estimated at \$75,000. Installation cost was estimated at \$25,000. The combined costs to use a Simulsat would increase total expenses by an estimated \$60,000. (United 2, Q. 20)

101. The cost of the ten foot fence around the earth station perimeter was estimated at \$15,750. The cost of 140' of twenty foot fence with slats was estimated at \$9,100, for a total of \$24,850. (United 8)

102. The annual leasing fee for use of site would be as follows:

<u>Year</u>	<u>Annual Rate</u>
1	\$24,000;
2-4	\$36,000;
5-15	\$48,000; and
additional period	90% of "Market Rate"

(United 7, Exhibit U; Tr. 12/12/85, p. 213)

103. The project would be financed through the companies' \$200 million revolving credit agreement with the Mellon Bank of Pittsburgh, Pennsylvania. (United 2, Q. 15)

104. The estimated salvage value from dismantled equipment and real estate sale as a result of the consolidation of facilities are as follows:

a. Equipment salvage	\$ 189,000; and
b. Real estate resale	818,000.
Total	\$1,007,000

(United Exhibit 8)

105. Projected operating and capital expenses for the Connecticut C-SPAN channel would be \$327,000 for the first year; \$156,000 the second year, and \$162,900 the third year. These expenses would be shared by subscribing CATV systems. (United 2, Exhibit I)

106. The Companies do not presently have plans to add channels to the present service that would require additional equipment or antennas at Rattlesnake Mountain or elsewhere in the system. (Tr. 12/12/85, p. 131-132)

107. The Companies' franchises are allocated 35 channels each on the cable systems. All channel capacity is presently used. (Tr. 12/12/85, p. 131)

108. The Companies had not been approached by any municipal or state fire, medical, emergency, or police agencies for the purpose of sharing tower antenna space. (Tr. 12/12/85, p. 145)