

Section A

Industry Overview

Television Markets Ranked by Number of TV Homes	A-2
Top 25 TV Station Groups.....	A-6
Top 25 TV Station Groups Ranked by FCC	A-7
Top 25 Cable/Satellite Operators	A-8
Top 100 Cable Systems	A-9
U.S. Sales of Television Receivers 1983-2002.....	A-11
Television Sets in Use	A-12
50 Years of Station Transactions	A-13
Record of Television Station Growth Since Television Began	A-14
Top 10 Cable Networks	A-15
Top 100 Television Programs.....	A-16
Top 10 Cable Programs	A-18
Television Advertising Shares.....	A-19
Top 25 TV Advertisers	A-20
Top 25 TV Advertising Categories	A-21
A Brief History of Broadcasting and Cable	A-22
A Chronology of the Electronic Media	A-24
The FCC and the Rules of Broadcasting	A-29

Television Markets Ranked by Number of TV Homes

Listed below are the Nielsen Media Research Designated Market Areas (DMAs) ranked by the number of television households. The estimates are from September 2003. (Copyright 2003 Nielsen Media Research)

Rank	Designated Market Area	TV Households
1	New York	7,376,330
2	Los Angeles	5,402,260
3	Chicago	3,399,460
4	Philadelphia	2,874,330
5	San Francisco-Oakland-San Jose	2,440,920
6	Boston (Manchester)	2,391,830
7	Dallas-Ft. Worth	2,255,970
8	Washington, DC (Hagerstown)	2,224,070
9	Atlanta	2,035,060
10	Detroit	1,923,230
11	Houston	1,848,770
12	Seattle-Tacoma	1,685,480
13	Tampa-St. Petersburg (Sarasota)	1,644,270
14	Minneapolis-St. Paul	1,635,650
15	Phoenix	1,561,760
16	Cleveland-Akron (Canton)	1,542,970
17	Miami-Ft. Lauderdale	1,510,740
18	Denver	1,399,100
19	Sacramento-Stockton-Modesto	1,278,430
20	Orlando-Daytona Beach-Melbourne	1,263,900
21	St. Louis	1,202,170
22	Pittsburgh	1,175,410
23	Baltimore	1,083,030
24	Portland, OR	1,073,210
25	Indianapolis	1,038,370
26	San Diego	1,029,210
27	Hartford & New Haven	1,001,320
28	Charlotte	986,830
29	Raleigh-Durham (Fayetteville)	947,750
30	Nashville	904,380
31	Kansas City	875,090
32	Cincinnati	872,330
33	Milwaukee	871,490
34	Columbus, OH	854,040
35	Greenville-Spartanburg-Asheville-Anderson	806,930
36	Salt Lake City	786,030
37	San Antonio	736,240
38	Grand Rapids-Kalamazoo-Battle Creek	724,290
39	West Palm Beach-Ft. Pierce	709,290
40	Birmingham (Anniston, Tuscaloosa)	697,570
41	Norfolk-Portsmouth-Newport News	693,660
42	New Orleans	665,190
43	Memphis	662,280
44	Buffalo	647,920
45	Oklahoma City	647,390
46	Greensboro-High Point-Winston Salem	645,430
47	Harrisburg-Lancaster-Lebanon-York	637,240
48	Providence-New Bedford	635,610
49	Albuquerque-Santa Fe	633,500
50	Louisville	624,470
51	Las Vegas	601,700
52	Jacksonville, Brunswick	598,070
53	Wilkes Barre-Scranton	590,100

Rank	Designated Market Area	TV Households
54	Austin	577,740
55	Albany-Schenectady-Troy	542,670
56	Little Rock-Pine Bluff	524,090
57	Fresno-Visalia	521,160
58	Richmond-Petersburg	512,310
59	Dayton	511,770
60	Tulsa	505,000
61	Knoxville	499,040
62	Mobile-Pensacola (Fort Walton Beach)	497,570
63	Charleston-Huntington	495,190
64	Flint-Saginaw-Bay City	473,910
65	Lexington	466,980
66	Roanoke-Lynchburg	450,090
67	Wichita-Hutchinson Plus	447,710
68	Green Bay-Appleton	426,820
69	Toledo	425,770
70	Ft. Myers-Naples	421,130
71	Tucson (Sierra Vista)	413,460
72	Honolulu	412,190
73	Des Moines-Ames	404,580
74	Portland-Auburn	398,500
75	Rochester, NY	395,350
76	Paducah-Cape Girardeau-Harrisburg-Mount Vernon	391,080
77	Omaha	389,270
78	Springfield, MO	389,150
79	Syracuse	384,290
80	Spokane	381,820
81	Shreveport	379,880
82	Champaign & Springfield-Decatur	378,560
83	Huntsville-Decatur (Florence)	364,340
84	Columbia, SC	363,750
85	Madison	355,010
86	Chattanooga	349,260
87	South Bend-Elkhart	330,200
88	Cedar Rapids-Waterloo-Iowa City & Dubuque	328,060
89	Burlington-Plattsburgh	323,070
90	Jackson, MS	322,480
91	Tri-Cities, TN-VA	322,130
92	Waco-Temple-Bryan	310,280
93	Colorado Springs-Pueblo	309,960
94	Davenport-Rhode Island-Moline	308,460
95	Baton Rouge	299,980
96	Johnstown-Altoona	297,460
97	Harlingen-Weslaco-Brownsville-McAllen	297,390
98	Savannah	288,830
99	Evansville	284,000
100	El Paso	283,870
101	Youngstown	279,260
102	Lincoln & Hastings-Kearney	274,480
103	Greenville-New Bern-Washington	270,560
104	Charleston, SC	269,880
105	Ft. Wayne	268,610
106	Springfield-Holyoke	260,880
107	Tyler-Longview (Lufkin & Nacogdoches)	260,080
108	Ft. Smith-Fayetteville-Springdale-Rogers	259,680
109	Florence-Myrtle Beach	258,430
110	Lansing	252,040
111	Tallahassee-Thomasville	250,300

Television Markets Ranked by Number of TV Homes

Rank	Designated Market Area	TV Households
112	Traverse City-Cadillac	248,930
113	Sioux Falls (Mitchell)	247,210
114	Augusta	244,490
115	Montgomery (Selma)	243,000
116	Reno	242,080
117	Peoria-Bloomington	241,200
118	Fargo-Valley City	232,850
119	Santa Barbara-Santa Maria-San Luis Obispo	230,400
120	Eugene	226,870
121	Monterey-Salinas	226,380
122	Macon	225,190
123	Boise	222,490
124	Lafayette, LA	215,830
125	Columbus, GA	207,820
126	La Crosse-Eau Claire	207,370
127	Yakima-Pasco-Richland-Kennewick	200,950
128	Corpus Christi	194,040
129	Amarillo	191,330
130	Bakersfield	189,650
131	Columbus-Tupelo-West Point	187,780
132	Chico-Redding	185,920
133	Rockford	178,930
134	Wausau-Rhineland	178,910
135	Monroe-El Dorado	174,000
136	Duluth-Superior	172,360
137	Topeka	171,660
138	Beaumont-Port Arthur	171,310
139	Columbia-Jefferson City	166,500
140	Medford-Klamath Falls	160,910
141	Erie	159,140
142	Wilmington	159,060
143	Wichita Falls & Lawton	158,290
144	Sioux City	157,970
145	Albany, GA	156,610
146	Joplin-Pittsburg	153,130
147	Lubbock	152,090
148	Terre Haute	146,260
149	Salisbury	145,280
150	Bluefield-Beckley-Oak Hill	144,210
151	Wheeling-Steubenville	142,450
152	Rochester-Mason City-Austin	141,300
153	Bangor	139,550
154	Binghamton	139,190
155	Anchorage	135,950
156	Biloxi-Gulfport	133,530
157	Odessa-Midland	133,170
158	Panama City	132,860
159	Minot-Bismarck-Dickinson	132,070
160	Palm Springs	122,000
161	Sherman, TX-Ada, OK	120,770
162	Gainesville	117,310
163	Abilene-Sweetwater	115,410
164	Idaho Falls-Pocatello	109,820
165	Quincy-Hannibal-Keokuk	106,110
166	Clarksburg-Weston	105,640
167	Utica	105,300
168	Hattiesburg-Laurel	101,810
169	Missoula	100,180

Rank	Designated Market Area	TV Households
170	Billings	99,470
171	Dothan	99,350
172	Yuma-El Centro	99,290
173	Elmira	97,690
174	Rapid City	93,610
175	Lake Charles	93,030
176	Alexandria, LA	92,440
177	Watertown	91,280
178	Marquette	89,600
179	Jonesboro	87,690
180	Harrisonburg	85,850
181	Bowling Green	80,200
182	Greenwood-Greenville	79,080
183	Jackson, TN	75,280
184	Meridian	71,090
185	Lima	70,850
186	Charlottesville	69,670
187	Parkersburg	64,560
188	Great Falls	64,000
189	Lafayette, IN	63,130
190	Grand Junction-Montrose	62,380
191	Laredo	60,210
192	Twin Falls	58,840
193	Eureka	57,520
194	Butte-Bozeman, MT	57,310
195	San Angelo	53,980
196	Cheyenne, WY-Scottsbluff	52,950
197	Ottumwa-Kirksville	51,470
198	Mankato	51,460
199	Bend, OR	50,980
200	Casper-Riverton	50,720
201	St. Joseph	50,400
202	Zanesville	32,570
203	Fairbanks	31,840
204	Victoria	30,830
205	Presque Isle	29,930
206	Juneau, AK	25,840
207	Helena	24,910
208	Alpena	18,220
209	North Platte	15,670
210	Glendive	4,980

Top 25 TV Station Groups

In this list, the Top 25 TV Station Groups are ranked according to the percentage of the 108.4 million U.S. TV homes that they reach. If a group owns or manages other stations in a market, those stations are not counted in its total, nor are low-power and satellite stations and translators.

Ranked by Total Coverage*

Rank	Group	% of U.S. TV Homes
1	Paxson	64.73
2	Viacom	44.78
3	Fox	44.55
4	Univision	42.87
5	Tribune	40.21
6	NBC	38.30
7	Trinity	31.29
8	ABC	23.72
9	Sinclair	22.61
10	Entravision	19.14
11	Gannett	17.79
12	Hearst-Argyle	17.69
13	Belo	13.77
14	Summit America	13.56
15	Pappas	12.67
16	Clear Channel	12.55
17	Cox	10.21
18	Raycom	10.05
19	Scripps	9.89
20	Meredith	8.90
21	Media General	7.94
22	Post-Newsweek	7.27
23	LIN	7.10
24	Emmis	6.88
25	Young	6.02

*As of April 2004

Source: *Broadcasting & Cable*, company reports, Nielsen Media Research.

Top 25 TV Station Groups

Ranked by FCC Coverage*

In this list, the Top 25 TV Station Groups are ranked according to the percentage of the 108.4 million U.S. TV homes they reach as calculated by the FCC, which discounts the reach of UHF stations (chs. 14-83) by half. If a group owns or manages other stations in a market, those stations are not counted in its total, nor are low-power and satellite stations and translators.

Rank	Group	% of U.S. TV Homes
1	Viacom	38.92
2	Fox	37.72
3	NBC	33.56
4	Paxson	32.36
5	Tribune	30.02
6	ABC	23.48
7	Univision	22.34
8	Gannett	17.63
9	Hearst-Argyle	16.05
10	Trinity	15.67
11	Sinclair	13.46
12	Belo	13.05
13	Entravision	10.09
14	Cox	10.08
15	Scripps	8.00
16	Clear Channel	7.96
17	Raycom	7.71
18	Meredith	7.56
19	Post Newsweek	7.56
20	Media General	7.08
21	Pappas	6.82
22	Summit America	6.78
23	Emmis	6.02
24	LIN	5.98
25	Young	5.94

*As of April 2004

Sources: *Broadcasting & Cable*, media companies, Nielsen Media Research, Television Bureau of Advertising.

Top 25 Cable/Satellite Operators

Ranked by Basic Subscribers*

Rank	Company	Subscribers
1	Comcast	21,477,000
2	DirecTV	12,640,000
3	Time Warner Cable	10,909,000
4	Echostar	10,000,000
5	Cox Cable	6,262,523
6	Charter	6,192,000
7	Adelphia	5,380,729
8	Cablevision	2,941,180
9	Bright House	2,136,000
10	Mediacom	1,533,000
11	Insight	1,282,400
12	Cable One	711,900
13	Cebridge	440,000
14	RCN	370,187
15	Bresnan	311,000
16	Service Electric TV	293,000
17	WOW	288,000
18	Atlantic Broadband	255,000
19	Susquehanna	234,051
20	Armstrong	216,530
21	Midcontinent	200,000
22	Northland	198,466
23	Blue Ridge	178,233
24	Knology Holdings	174,957
25	Buckeye Cablevision	149,640

*As of August 9, 2004

Top 100 Cable Systems

Ranked by Basic Subscribers

Rank	System	Owner	Subscribers
1	Eastern Division	Comcast	5,200,000
2	Atlantic Division	Comcast	3,800,000
3	Greater New York	Cablevision	2,954,956
4	Northeast Region	Adelphia	2,000,000
5	Bay Area	Comcast	1,700,000
6	Greater Chicago Region	Comcast	1,600,000
7	New York & New Jersey	Time Warner	1,410,544
8	Southern California	Adelphia	1,200,000
9	Washington	Comcast	1,095,000
10	Greater Detroit Region	Comcast	1,005,282
11	Bright House, Tampa	Advance/Newhouse	1,002,000
12	Middle America	Cox	805,000
13	Houston	Time Warner	785,000
14	Arizona	Cox	770,954
15	Bright House, Central Fla.	Advance/Newhouse	750,000
16	South Florida Region	Comcast	700,000
17	Denver	Comcast	675,000
18	Pittsburgh	Comcast	651,000
19	Oregon/SW Washington	Comcast	551,000
20	Southern California Region	Comcast	540,000
21	San Diego	Cox	535,541
22	Oklahoma	Cox	517,000
23	Dallas	Comcast	515,000
24	Southeast Region	Adelphia	495,000
25	St. Louis	Charter	490,000
26	Raleigh	Time Warner	478,000
27	New England	Cox	451,689
28	Northeast Ohio Division	Time Warner	427,549
29	Hampton Roads	Cox	420,000
29	Milwaukee	Time Warner	420,000
29	Western Ohio Division	Time Warner	420,000
32	Las Vegas	Cox	397,000
33	Charlotte	Time Warner	392,000
34	Sacramento	Comcast	390,000
34	Hawaii	Time Warner	390,000
36	Cincinnati	Time Warner	350,000
36	Los Angeles	Time Warner	350,000
38	Greensboro	Time Warner	349,000
39	Syracuse	Time Warner	345,000
40	St. Paul	Comcast	339,000
40	San Antonio	Time Warner	339,000
42	South Carolina	Time Warner	336,000
43	Middle Tennessee	Comcast	330,000
44	Columbus	Time Warner	327,000
44	Rochester	Time Warner	327,000
46	Albany	Time Warner	320,000
46	Austin	Time Warner	320,000
48	Western Michigan	Comcast	319,789
49	Kansas	Cox	319,000
50	New Mexico	Comcast	311,800
51	Kansas City	Time Warner	303,000
52	Los Angeles Metro	Charter	295,000
53	Orange County	Cox	272,000
54	Atlanta North	Comcast	271,547
55	New Orleans	Cox	267,278

Top 100 Cable Systems

Rank	System	Owner	Subscribers
56	Northern Virginia	Cox	253,000
57	Jacksonville	Comcast	250,000
58	Salt Lake City	Comcast	246,870
59	West Texas	Cox	239,976
60	Richmond	Comcast	235,000
61	Madison	Charter	233,000
62	Louisville	Insight	227,189
63	Worcester	Charter	220,000
63	West Florida	Comcast	220,000
65	Atlanta Central	Comcast	217,547
66	Greenville/Spartanburg	Charter	212,000
67	Memphis	Time Warner	210,000
68	Minneapolis Division	Time Warner	208,000
69	Fresno	Comcast	206,000
70	San Diego	Time Warner	205,000
71	Naples/Ft. Myers	Comcast	200,000
71	Binghamton	Time Warner	200,000
73	Omaha	Cox	192,300
74	Indiana	Comcast	191,000
75	Baton Rouge	Cox	178,000
76	Ft. Worth	Charter	173,000
77	Birmingham	Charter	171,000
78	Gulf Coast	Cox	167,800
79	Suburban Atlanta	Charter	165,000
80	Reno/Tahoe	Charter	156,000
81	Green Bay	Time Warner	150,000
82	Western N.C./Va.	Charter	142,000
83	Greater Des Moines	Mediacom	135,400
84	Toledo Buckeye Cable	Block Comm.	132,487
85	Peoria/ Bloomington	Insight	125,000
86	Bright House Networks Indiana	Advance/Newhouse	120,100
87	El Paso	Time Warner	118,000
87	Jackson/Monroe	Time Warner	118,000
89	Northeast Indiana	Insight	117,600
90	Springfield	Insight	116,988
91	Rio Grande Valley	Time Warner	116,288
92	Waco	Time Warner	114,000
93	Colorado Springs	Adelphia	113,000
94	Lincoln	Time Warner	111,000
95	Maine	Time Warner	110,000
96	Charleston	Charter	106,000
97	Greater Quad Cities Area	Mediacom	101,900
98	North Carolina	Cox	98,120
99	Central Florida	Cox	95,649
100	Fond du Lac	Charter	90,000

U.S. Sales of Television Receivers 1983-2002

Data compiled by Consumer Electronics Association

Year	Analog Color TV		Digital TV		LCD Color TV		TV/VCR Combinations		Projection TV	
	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars
1983	11,179	3,443	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1984	13,092	3,875	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1985	13,993	4,114	n/a	n/a	n/a	n/a	n/a	n/a	266	488
1986	15,399	4,481	n/a	n/a	n/a	n/a	n/a	n/a	304	530
1987	16,805	4,890	n/a	n/a	n/a	n/a	n/a	n/a	293	527
1988	17,768	4,691	n/a	n/a	n/a	n/a	n/a	n/a	302	529
1989	19,557	5,359	n/a	n/a	n/a	n/a	n/a	n/a	265	478
1990	18,453	5,148	n/a	n/a	n/a	n/a	424	178	351	626
1991	17,951	5,134	n/a	n/a	n/a	n/a	662	265	380	683
1992	21,056	6,591	n/a	n/a	300	51	936	375	404	714
1993	23,005	7,316	n/a	n/a	300	45	1,629	599	465	841
1994	24,715	7,225	n/a	n/a	310	42	2,017	710	636	1,117
1995	23,231	6,798	n/a	n/a	335	44	2,205	723	820	1,417
1996	22,384	6,492	n/a	n/a	350	39	2,199	697	887	1,426
1997	21,293	6,036	n/a	n/a	360	38	2,311	684	917	1,361
1998	22,204	6,122	14	43	366	39	3,147	832	1,070	1,577
1999	23,218	6,199	121	295	367	36	4,148	1,014	1,232	1,632
2000	24,175	6,503	625	1,426	425	43	4,964	969	1,216	1,481
2001	21,167	5,130	1,460	2,648	445	42	4,630	790	933	1,060
2002	22,469	5,782	2,536	4,281	n/a	n/a	4,870	733	681	733

Dollar figure in millions and represent factory sales price multiplied by unit sales to dealers.

Unit figures include distributor sales and factory direct sales to dealers. All unit figures are in thousands (add 000).

n/a=not available

Television Sets in Use

	In Home (000)	Avg. Sets Per HH
1970	81,040	1.39
1971	85,290	1.42
1972	89,770	1.45
1973	95,330	1.47
1974	100,020	1.51
1975	105,460	1.54
1976	108,890	1.56
1977	113,440	1.59
1978	118,630	1.63
1979	124,570	1.67
1980	128,190	1.68
1981	132,260	1.70
1982	142,460	1.75
1983	148,910	1.79
1984	149,180	1.78
1985	155,410	1.83
1986	157,500	1.83
1987	162,750	1.86
1988	168,260	1.90
1989	175,580	1.94
1990	193,320	2.10
1991	193,200	2.08
1992*	192,480	2.09
1993	200,565	2.15
1994	211,443	2.24
1995	217,067	2.28
1996	222,753	2.32
1997	228,740	2.36
1998	235,010	2.40
1999	240,320	2.42
2000	244,990	2.43
2001	248,160	2.43
2002	254,360	2.41
2003	260,230	2.44
2004	268,260	2.47

* Reflects adjustments to conform to the 1990 census; 1970-79, as of September of prior year; 1980 to date as of January of calendar year; excludes Alaska and Hawaii prior to 1989.

Source: Television Bureau of Advertising, Nielsen Media Research.

50 Years of Station Transactions

Dollar volume of transactions (number of stations changing hands)

YEAR	RADIO ONLY*	GROUPS*	TV ONLY	TOTAL
1954	\$10,224,047 (187)	\$26,213,323 (18)	\$23,906,760 (27)	\$60,344,130
1955	27,333,104 (242)	22,351,602 (11)	23,394,660 (29)	73,079,366
1956	32,563,378 (316)	65,212,055 (24)	17,830,395 (21)	115,605,828
1957	48,207,470 (357)	47,490,884 (28)	28,489,206 (38)	124,187,660
1958	49,868,123 (407)	60,872,618 (17)	16,796,285 (23)	127,537,026
1959	65,544,653 (436)	42,724,727 (15)	15,227,201 (21)	123,496,581
1960	51,763,285 (345)	24,648,400 (10)	22,930,225 (21)	99,341,910
1961	55,532,516 (282)	42,103,708 (13)	31,167,943 (24)	128,804,167
1962	59,912,520 (306)	18,822,745 (8)	23,007,638 (16)	101,742,903
1963	43,457,584 (305)	25,045,726 (3)	36,799,768 (16)	105,303,078
1964	52,296,480 (430)	67,185,762 (20)	86,274,494 (36)	205,756,736
1965	55,933,300 (389)	49,756,993 (15)	29,433,473 (32)	135,123,766
1966	76,633,762 (367)	28,510,500 (11)	30,574,054 (31)	135,718,316
1967	59,670,053 (316)	32,086,297 (9)	80,316,223 (30)	172,072,573
1968	71,310,709 (316)	47,556,634 (9)	33,588,069 (20)	152,455,412
1969	108,866,538 (343)	35,037,000 (5)	87,794,032 (32)	231,697,570
1970	86,292,899 (268)	1,038,465 (3)	87,454,078 (19)	174,785,442
1971	125,501,514 (270)	750,000 (2)	267,296,410 (27)	393,547,924
1972	114,424,673 (239)	0 (0)	156,905,864 (37)	271,330,537
1973	160,933,557 (352)	2,812,444 (4)	66,635,144 (25)	230,381,145
1974	168,998,012 (369)	19,800,000 (5)	118,983,462 (24)	307,781,474
1975	131,065,860 (363)	0 (0)	128,420,101 (22)	259,485,961
1976	180,663,820 (413)	1,800,000 (3)	108,459,657 (32)	290,923,477
1977	161,236,169 (344)	0 (0)	128,635,435 (25)	289,871,604
1978	331,557,239 (586)	30,450,000 (5)	289,721,159 (51)	651,728,398
1979	335,597,000 (546)	463,500,000 (52)	317,581,000 (47)	1,116,648,000
1980	339,634,000 (424)	27,000,000 (3)	534,150,000 (35)	876,084,000
1981	447,838,060 (625)	78,400,000 (6)	227,950,000 (24)	754,188,067
1982	470,722,833 (597)	0 (0)	527,675,411 (30)	998,398,244
1983	621,077,876 (669)	332,000,000 (10)	1,902,701,830 (61)	2,854,895,356
1984	977,024,266 (782)	234,500,000 (2)	1,252,023,787 (82)	2,118,056,053
1985	1,414,816,073 (1,558)	962,450,000 (218)	3,290,995,000 (99)	5,668,261,073
1986	1,490,131,426 (959)	1,993,021,955 (192)	2,709,516,490 (128)	6,192,669,871
1987	1,236,355,748 (775)	4,610,965,000 (132)	1,661,832,724 (59)	7,509,154,473
1988	1,841,630,156 (845)	1,326,250,000 (106)	1,779,958,042 (70)	4,947,838,198
1989	1,148,524,765 (663)	533,599,078 (40)	1,541,055,033 (84)	3,235,436,376
1990	868,636,700 (1,045)	411,037,150 (60)	696,952,350 (75)	1,976,626,100
1991	534,694,500 (793)	206,995,500 (61)	273,365,000 (38)	1,014,579,000
1992	603,192,980 (667)	318,176,050 (24)	124,004,000 (41)	1,045,373,000
1993	815,450,000 (633)	756,722,000 (NA)	1,728,711,000 (101)	3,300,883,000
1994	970,400,000 (494)	1,800,000,000(154)	2,200,000,000 (89)	4,970,400,000
1995	792,440,000 (524)	2,790,000,000(213)	4,740,000,000 (112)	8,322,440,000
1996	2,840,820,000 (671)	12,034,000,000 (345)	10,488,000,000 (99)	25,362,820,000
1997	2,461,570,000 (630)	14,580,000,000 (329)	6,400,000,000 (108)	23,441,570,000
1998	1,596,210,000 (589)	14,080,000,000 (271)	7,120,000,000 (90)	22,796,210,000
1999	1,718,000,000 (382)	26,880,000,000 (196)	4,720,000,000 (86)	33,318,000,000
2000	24,900,000,000 (1,794)	0 (0)	8,800,000,000 (154)	33,700,000,000
2001	3,800,000,000 (1,000)	0 (0)	4,900,000,000 (108)	8,700,000,000
2002	5,594,141,000 (836)	0 (0)	2,529,039,000 (249)	
2003	2,400,000,000 (950)	0 (0)	520,000,000 (97)	
TOTAL	\$60,810,811,175	\$84,585,715,066	\$72,528,183,153	\$217,924,709,394

Note: Dollar volume figures represent total considerations reported for all transactions with exception of minority interest transfers in which control of stations did not change hands and stations sold as part of larger company transactions. Although all states have been approved by the FCC, they may not necessarily have reached final closing. Prior to 1978, combined AM-FM facilities were counted as one station in computing total number of stations traded. Now AM-FM combinations are counted as two stations.

*Starting in 1993, the Radio only column includes only stand alone AM and FM deals and the Groups column contains AM-FM combos and all other multiple station deals. In previous years the AM-FM combos were included under Radio only.

**Figures for 2000, 2001, 2002, and 2003 courtesy of BIA Financial Network.

Record of Television Station Growth Since Television Began

	TV Authorized	On Air
Jan. 1, 1946*	9	6
Jan. 1, 1947*	52	
Jan. 1, 1948*	73	17
Jan. 1, 1949	124	50
Jan. 1, 1950	111	97
Jan. 1, 1951	109	107
Jan. 1, 1952	108	108
Jan. 1, 1953*	273	129
Jan. 1, 1954	567	356
Jan. 1, 1955	576	439 ¹
Jan. 1, 1956	590	482 ²
Jan. 1, 1957	631	511
Jan. 1, 1958	657	544 ³
Jan. 1, 1959	666	562 ⁴
Jan. 1, 1960	673	573 ⁵
Jan. 1, 1961	634	583
Jan. 1, 1962	654	563
Jan. 1, 1963	662	579
Jan. 1, 1964	661	582
Jan. 1, 1965	676	586
Jan. 1, 1966	702	596
Jan. 1, 1967	769	623
Jan. 1, 1968	818	644
Jan. 1, 1969	834	672
Jan. 1, 1970	1,038	872
Jan. 1, 1971	1,025	892
Jan. 1, 1972	1,004	905
Jan. 1, 1973	1,001	922
Jan. 1, 1974	1,002	938
Jan. 1, 1975	1,010	952
Jan. 1, 1976	1,030	962
Jan. 1, 1977	1,029	984
Jan. 1, 1978	1,045	986
Jan. 1, 1979	1,059	992
Jan. 1, 1980	1,094	1,013
Jan. 1, 1981	1,143	1,019
Jan. 1, 1982	1,168	1,020
Jan. 1, 1983	1,276	1,090
Jan. 1, 1984	1,318	1,149
Jan. 1, 1985	1,505	1,194
Oct. 30, 1986	1,493	1,220
Oct. 31, 1987	1,558	1,285
Jan. 1, 1988	1,615	1,342
Jan. 1, 1989	1,683	1,395
Jan. 1, 1990	1,684	1,436
Jan. 1, 1991	1,690	1,469
Jan. 1, 1992	1,688	1,488
Jan. 1, 1993	1,688	1,505
Jan. 1, 1994		1,518
Jan. 1, 1995		1,520
Jan. 1, 1996		1,544
Jan. 1, 1997		1,554
Jan. 1, 1998		1,564
Jan. 1, 1999		1,589
Jan. 1, 2000		1,616
Jan. 1, 2001		1,663
Jan. 1, 2002		1,686
Jan. 1, 2003		1,719
Jan. 1, 2004		1,733

*Comparable figures for all services not available at this date.

¹Includes stations with Special Temporary Authorizations (STAs), which either had not started operations as of this date, had started but had gone dark, or had received authorizations but turned them back with or without operating.

²Includes 2 licenses that had suspended operation and 37 stations with STAs in same category as footnote 1.

³Includes 7 licenses that had suspended operation and 40 stations with STAs in same category as footnote 1.

⁴Includes 6 licenses that had suspended operation and 38 stations with STAs in same category as footnote 1.

⁵Includes 10 licenses that had suspended operation and 38 stations with STAs in same category as footnote 1.

Top 10 Cable Networks

Primetime*

	Rating**	Total homes (000)
TNT	2.4	2,101
USA	1.8	1,604
Nike at Nite	1.7	1,456
Cartoon	1.5	1,278
TBS	1.4	1,231
Lifetime	1.4	1,218
ESPN	1.3	1,176
Fox News	1.3	1,096
MTV	1.1	991
History	1.1	922

Total day*

	Rating**	Total homes (000)
Nickelodeon	1.8	1,610
TNT	1.2	1,092
Cartoon	1.1	964
Lifetime	0.9	782
USA	0.9	780
TBS	0.8	718
Fox News	0.8	687
ESPN	0.7	605
MTV	0.6	544
History	0.6	505

*Three months ending June 27, 2004.

**The rating here is the percentage of the homes in which the network is available.

Source: Nielsen Media Research.

Top 100 Television Programs

Full Season: 9/22/03-5/26/04

Rank	Program	Network	% U.S. Households
1	Super Bowl XXXVIII	CBS	41.43
2	Friends Finale	NBC	29.80
3	Academy Awards	ABC	26.03
4	NFC Championship	FOX	23.17
5	Friends Clipshow (S)	NBC	22.01
6	Survivor: All-Stars Premiere	CBS	17.91
7	Countdown to Oscars 2004	ABC	17.28
8	MLB ALCS Game 7	FOX	17.15
9	MLB NLCS Game 7	FOX	16.94
10	Golden Globe Awards	NBC	16.93
11	American Idol - Finale	FOX	16.39
12	Frasier Finale	NBC	16.32
13	AFC Divisional Playoff - Sat	CBS	15.93
14	CSI	CBS	15.88
15	American Idol - Prm. Special	FOX	15.88
16	Grammy Awards	CBS	15.69
17	AFC/NFC Playoff Game 2	ABC	15.36
18	American Idol - Tuesday	FOX	14.91
19	Sugar Bowl	ABC	14.80
20	World Series Game 6	FOX	13.90
21	American Idol - Wed. Perf. Show	FOX	13.88
22	American Idol - Wednesday	FOX	13.68
23	World Series Game 4	FOX	13.57
24	Andy Griffith Show Reunion	CBS	13.46
25	World Series Game 5	FOX	13.21
26	Friends - 1/22	NBC	13.12
27	Survivor: All-Stars Reunion	CBS	13.08
28	Survivor: Pearl Islands Finale	CBS	13.08
29	Friends - 4/29	NBC	13.08
30	Apprentice	NBC	13.01
31	Survivor: All-Stars Finale	CBS	13.00
32	Friends - 4/22	NBC	12.94
33	E.R.	NBC	12.88
34	CMA Awards	CBS	12.85
35	Friends - 11/20	NBC	12.80
36	MLB NLCS Game 6	FOX	12.62
37	World Series Game 2	FOX	12.60
38	Friends	NBC	12.55
39	World Series Game 3	FOX	12.52
40	Survivor: All-Stars	CBS	12.41
41	American Idol (S)	FOX	12.21
42	NBC Movie of the Week - Monday	NBC	12.17
43	Survivor: Pearl Islands	CBS	12.07
44	Friends - 11/6	NBC	12.02
45	MLB LCS: Games 1 & 2	FOX	11.98
46	Friends - 11/13	NBC	11.94
47	CBS at 75	CBS	11.91
48	CSI: Miami	CBS	11.88
49	Princess Diana: Secret Tape 1	NBC	11.86
50	NFC Championship - Post Game	FOX	11.82
51	Frasier Clipshow (S)	NBC	11.81
52	Trista & Ryan's Wedding - 3	ABC	11.79
53	MLB ALCS Game 4	FOX	11.58
54	Survivor: Pearl Islands Reunion	CBS	11.55

Rank	Program	Network	% U.S. Households
55	NFL Monday Night Football	ABC	11.23
56	Primetime Special Edition - 2/16	ABC	11.20
57	Everybody Loves Raymond	CBS	11.16
58	Survivor: Pearl Islands - W	CBS	11.12
59	Without a Trace	CBS	11.09
60	Friends - 4/15	NBC	11.04
61	NCAA Basketball Championships	CBS	10.97
62	World Series Game 1	FOX	10.91
63	Survivor: All-Stars - Wed.	CBS	10.89
64	Law & Order	NBC	10.80
65	World Series Game 6 - Post Game	FOX	10.68
66	Primetime Special Edition - 11/11	ABC	10.64
67	CSI 8 PM - 1/8	CBS	10.60
68	Super Millionaire - 2/22	ABC	10.57
69	NCAA Basketball Champ. - Sat. 2	CBS	10.47
70	CSI 8 PM - 1/15	CBS	10.40
71	Sugar Bowl - Pre-Game	ABC	10.38
72	Will & Grace	NBC	10.35
73	Dateline NBC Special - 5/5	NBC	10.27
74	CSI (S)	CBS	10.22
75	Princess Diana: Secret Tape 2	NBC	10.19
76	MLB NLCS Game 1	FOX	10.13
77	CSI - Thanksgiving	CBS	10.02
78	Two and a Half Men	CBS	9.95
79	Dick Van Dyke Show Revisited	CBS	9.92
80	Primetime Special Edition - 12/17	ABC	9.85
81	My Big Fat Obnoxious Fiance	FOX	9.85
82	MLB Div.: NL Game 5	FOX	9.78
83	Law & Order: SVU - 5/18	NBC	9.78
84	Survivor: All-Stars - 3/24	CBS	9.76
85	CSI (S)	CBS	9.73
86	60 Minutes	CBS	9.39
87	American Idol - Thurs. Result Show	FOX	9.38
88	CSI - 5/5	CBS	9.30
89	Cold Case	CBS	9.30
90	MLB NLCS Game 3	FOX	9.30
91	CSI - Sunday (S)	CBS	9.19
92	The Swan - Premiere Special	FOX	9.19
93	Trista & Ryan's Wedding - 2	ABC	9.11
94	Orange Bowl	ABC	9.08
95	Carol Burnett: Bump Up the Lights	CBS	9.07
96	NBC Movie of the Week - Sunday	NBC	9.03
97	People's Choice Awards	CBS	9.01
98	Barbara Walters Presents	ABC	8.98
99	Scrubs - 4/22	NBC	8.96
100	NFL Monday Showcase	ABC	8.95

Source: Television Bureau of Advertising, based on data from Nielsen Media Research and Galaxy Explorer. A household rating is the percentage of the 108.4 million homes in the U.S. with TV sets.

Note: Shows identified by date or as specials were one-time programs, programs that aired outside the regular time slot, or episodes that extended beyond regularly scheduled time periods.

Top 10 Cable Programs

Rank	Program	Network	% U.S. Households
298	NFL Regular Season	ESPN	6.06
342	Trading Spaces: 100 Grand	TLC	5.61
390	2004 NBA All-Star Game	TNT	5.10
510	NBA All-Star Pre-Game Show	TNT	4.23
524	MLB Divisional Series	ESPN	4.13
549	Holiday Bowl	ESPN	3.97
560	AFC/NFC Pro Bowl	ESPN	3.91
606	Budweiser Shootout	TNT	3.59
612	NCAA Women's Bsktbl Tour.	ESPN	3.51
621	Alamo Bowl	ESPN	3.44

Television Advertising Shares

	Network*	Spot	Local	Synd.*	Cable	Total (000)
1970	\$1,658	\$1,234	\$704	-	-	\$3,596
1971	1,593	1,145	796	-	-	3,534
1972	1,804	1,318	969	-	-	4,091
1973	1,968	1,377	1,115	-	-	4,460
1974	2,145	1,497	1,212	-	-	4,854
1975	2,306	1,623	1,334	-	-	5,263
1976	2,857	2,154	1,710	-	-	6,721
1977	3,460	2,204	1,948	-	-	7,612
1978	3,975	2,607	2,373	-	-	8,955
1979	4,599	2,873	2,682	-	-	10,154
1980	5,130	3,269	2,967	50	72	11,488
1981	5,540	3,746	3,368	75	160	12,889
1982	6,144	4,364	3,765	150	290	14,713
1983	6,955	4,827	4,345	300	452	16,879
1984	8,318	5,488	5,084	420	733	20,043
1985	8,060	6,004	5,714	520	989	21,287
1986	8,342	6,570	6,514	600	1,173	23,199
1987	8,500	6,846	6,833	762	1,321	24,262
1988	9,172	7,147	7,270	901	1,641	26,131
1989	9,110	7,354	7,612	1,288	2,095	27,459
1990	9,863	7,788	7,856	1,109	2,631	29,247
1991	9,533	7,110	7,565	1,253	3,145	28,606
1992	10,249	7,551	8,079	1,370	3,830	31,079
1993	10,209	7,800	8,435	1,576	4,451	32,471
1994	10,942	8,993	9,464	1,734	5,209	36,342
1995	11,600	9,119	9,985	2,016	6,166	38,886
1996	13,081	9,803	10,944	2,218	7,778	43,824
1997	13,020	9,999	11,436	2,438	8,750	45,643
1998	13,736	10,659	12,169	2,609	10,340	49,513
1999	13,961	10,500	12,680	2,870	12,570	52,581
2000	15,888	12,264	13,542	3,108	15,455	60,257
2001	14,300	9,223	12,256	3,102	15,736	54,617
2002	15,000	10,920	13,114	3,034	16,297	58,365

*Fox is included in syndication prior to 1990; it's included in network starting in 1990.
Source: Television Bureau of Advertising and Universal McCann.

Top 25 TV Advertisers

Jan. 1, 2003-Dec. 31, 2003

Procter & Gamble Co.	\$2,227,240,762
General Motors Corp.	1,565,094,386
Time Warner Inc.	1,063,519,627
Walt Disney Co.	1,008,309,566
DaimlerChrysler AG	941,338,863
Ford Motor Co.	927,984,779
Johnson & Johnson	904,649,720
General Motors Corp.-DA	826,990,438
Pfizer Inc.	815,428,962
Ford Motor Co.-DA	798,600,812
Pepsico Inc.	780,905,691
Nissan Motor Co Ltd.	765,618,956
Yum! Brands Inc.	758,562,026
Sony Corp.	744,484,535
General Mills Inc.	731,335,775
Altria Group Inc.	702,193,619
Toyota Motor Corp.	665,650,586
Honda Motor Co Ltd.	661,224,841
McDonalds Corp.	640,485,825
GlaxoSmithKline PLC	608,815,482
Verizon Communications Inc.	581,371,686
Sears Roebuck & Co.	580,498,127
Sbc Communications Inc.	534,776,947
US Government	513,563,585
General Electric Co.	499,206,598
TOTAL	\$20,847,852,194

Source: Nielsen Monitor-Plus.

Top 25 TV Advertising Categories

Jan. 1, 2003-Dec. 31, 2003

Restaurant-Quick Svc.	\$3,233,433,068
Trucks	2,908,690,266
Autos	2,896,368,826
Motion Picture	2,688,834,099
Prescription Drugs-Human	2,135,591,613
Store-Dept.	2,080,492,496
Telephone Svcs.-Wireless	1,546,015,787
Trucks-Dlr. Assn.	1,335,875,525
Autos-Dlr. Assn.	1,166,525,588
Credit Card Svcs.	1,095,391,024
Restaurant	977,694,688
Beer	894,998,201
Dir. Resp. Prod.	886,935,873
Auto Dlrshp.	844,140,946
Telephone Svcs.	795,073,750
Store-Furniture	773,075,121
Recordings-Video	766,757,349
Internet Svc. Provider	720,883,206
Cereal	676,979,575
Computer Sys.	647,508,475
Reg. Soft Drink	623,110,841
Store-Home Improvement	565,988,040
Financial-Investment Svcs.	523,769,800
Auto Insurance	491,947,678
Autos & Trucks	482,988,205
TOTAL	\$31,759,070,040

Source: Nielsen Monitor-Plus.

A Brief History of Broadcasting and Cable

Mark K. Miller

Freelance writer and former managing editor, *Broadcasting & Cable* magazine

We could start our history of the electronic media in many places. We chose November 2, 1920. On that day, in Pittsburgh, Westinghouse Electric and Manufacturing Co.'s KDKA, generally acknowledged as the first licensed commercial radio station in the United States, broadcast the results of the Harding-Cox presidential elections. The broadcast demonstrated that radio was more than a novelty, that it could have real impact on our culture and our politics. The broadcast touched off a revolution that continues to this day. To give you a clear sense of the history, our history takes it decade by decade, assigning a theme to each.

1920s: Radio Begins Finding its Way

Although we begin with that KDKA broadcast in 1920, there had been a lot of radio activity prior to that. Inventors and hobbyists had been filling the airwaves with signals, often on a very haphazard basis, for years. And government experiments during World War I contributed much to the growing volume of radio knowledge.

On August 20, 1920, WWJ(AM) Detroit—owned by the Detroit News—began what it claimed to be the first regular broadcasting schedule when it inaugurated daily broadcasts.

In 1922 the superheterodyne circuit as a broadcast receiver is demonstrated by its inventor, Edwin H. Armstrong, and will prove to become the industry standard. By May, there are 80 licensed radio stations in the United States; by year's end the number has grown to 569.

The rest of the decade is filled with examples of radio's surging growth and the unfettered vision of inventors around the world. In 1923 Dr. Vladimir K. Zworykin files for a U.S. patent for an all-electronic television system.

Stations begin to link themselves into "chains" or networks via telephone lines and numerous experiments test the feasibility of transmitting short-wave signals across the oceans, from airplanes and ships.

The 1924 Republican convention in Cleveland and the Democratic convention in New York are broadcast over networks, and in 1925 President Calvin Coolidge's inaugural ceremony is broadcast by 24 stations in a transcontinental network. The government was taking notice of the burgeoning industry; in 1926 the Federal Radio Commission is created in response to the chaos caused by the explosive growth of broadcasting.

But it was the launch of the National Broadcasting Co. on November 15, 1926, that marked the beginning of the network system of broadcasting that exists to this day. NBC was a joint venture of radio equipment manufacturers RCA (30 percent), General Electric (50 percent), and Westinghouse (20 percent). The initial broadcast was carried by 25 stations ranging from the East Coast to St. Louis and Kansas City, Missouri, and was estimated to have been heard by almost half of the nation's five million homes equipped with radios. In 1928 NBC would establish a permanent coast-to-coast radio network.

NBC's entry was followed in 1927 by that of the Columbia Broadcasting System, which debuted with a basic network of 16 stations. Two years later, William S. Paley, 27, purchases a controlling interest and is elected president.

There is also continuing activity on the television front. In 1927 Philo T. Farnsworth applies for a patent on his image dissector television camera tube and in 1929 Russian inventor Vladimir Zworykin demonstrates his kinescope, or cathode ray television receiver, before a meeting of the Institute of Radio Engineers.

1930s: The Rise of Radio Entertainment

It was in the 1930s that the "American Plan" of advertising-supported radio flourished, making it extremely unlikely that proponents (and there were many) of the

"European Plan" of a government-operated medium would prevail. The attractiveness of free, high-quality entertainment during the Great Depression resulted in larger and larger audiences for the networks, exactly what companies needed to advertise their products.

As listening skyrocketed (about 12 million U.S. homes had a radio in 1930, by 1940 the figure was 28.5 million and car radios were becoming standard equipment), so too did the fortunes of the major networks: NBC's Red and Blue, CBS and Mutual (plus numerous regional nets). With radio personalities such as Jack Benny, Charles Correll, and Freeman Gosden (Amos 'n' Andy), Eddie Cantor, Burns and Allen, and Major Bowes attracting larger and larger audiences, advertisers wanted more precise listening figures. So in 1936 A.C. Nielsen Co. proposed its Audimeter, which would be attached to a sampling of radio sets and measure audience size.

Work continued on television. By 1937 there were 17 experimental TV stations operating and President Franklin D. Roosevelt was seen on TV when he opened the 1939 New York World's Fair.

1940s: The Rise of Radio News

As Europe was engulfed in war and the United States appeared headed toward the conflict, Americans turned to their radios to stay informed. During 1940, the networks' typical weekly schedules contained 56 quarter hours during the day as opposed to only 33 in evening programming in 1939 and none during daytime hours. CBS had Edward R. Murrow in London and his team of correspondents across Europe, while NBC had Fred Bate, Max Jordan, William Kierker, and many others. When the United States was attacked by Japan on December 7, 1941, network news reporting preempted regular programming. And the audience for President Roosevelt's broadcast to the nation on December 9, the day after war was declared, attracted the largest audience to that time—about 90 million. By the end of the week, all the networks and most stations were operating around the clock. For the first time, a war was heard by the people back home.

In addition to war reporting, coverage of domestic news was on the rise. With a tremendous amount of public interest in the 1944 presidential campaign, the networks canceled all commercial programs that would have interfered with their coverage of the Republican and Democratic conventions and used more than 300 reporters, technicians, and officials at each.

When the war ended and the era of the atomic bomb and the cold war began, the networks put their news departments to work on radio documentaries. CBS established a documentary unit that later resulted in a separate series, Ed Murrow and Fred Friendly's *Hear It Now*.

1950s: The Rise of Television Entertainment

While television had been in development since the 1920s and there had been experimental broadcasts since the 1930s, it wasn't until after World War II that the networks were able to concentrate on developing programming, manufacturers were able to return to making sets, and the public was able to afford them. (At the beginning of 1952 about 19 million U.S. homes had a TV set, and by the end of the decade that number was about 46.5 million.) The post-war economy was booming and the country's optimism was reflected in many of those early TV shows. Some of radio's stars made the transition to TV, as did many of the radio show formats. Soap operas (*The Guiding Light* on CBS), comedies (*Life of Riley* on NBC), westerns (*Gunslinger* on CBS), dramas (*Kraft Television Theater* on NBC and ABC), variety (*Toast of the Town with Ed Sullivan* on CBS), and quiz shows (*Twenty = One* on NBC) emerged as early favorites. And the TV syndication business was born when Frederic W. Ziv began selling shows such as 1951's *Bold Venture* with Humphrey

Bogart and Lauren Bacall to local and regional advertisers and stations.

At the beginning of the decade RCA and CBS were in a battle: the companies each wanted FCC approval of a system for color TV. RCA eventually prevailed in 1953 because programs broadcast in its "compatible color" could still be watched on existing black and white sets. Another innovation that was to change television programming dramatically was unveiled in 1956 when Ampex Corp. demonstrated its videotape recorder at the National Association of Radio and Television Broadcasters convention and received \$4 million in orders.

1960s: The Rise of Television News

Television journalism came of age in the 1960s. As the decade began, the FCC suspended its equal-time requirement for presidential and vice presidential candidates (following the suggestion of CBS President Frank Stanton), paving the way for the four "Great Debates" between Vice President Richard Nixon and Senator John F. Kennedy. The first debate, broadcast from Chicago on September 26, was seen by 75 million viewers, a record at that time. It changed the course of political campaigning and, quite probably, the course of the election. In 1961, the newly elected President Kennedy, recognizing the influence of the medium, allowed television to cover his press conferences. In 1963 the networks expanded their evening newscasts from 15 minutes to a half-hour. The nation was stunned when President Kennedy was assassinated in November 1963 and it's been said that television news came of age with its coverage. For four days following, the networks suspended normal programming and commercials with NBC-TV on the air for more than 71 hours, CBS-TV for 55, and ABC-TV for 60. The network coverage cost an unprecedented \$32 million and CBS research showed that 93 percent of U.S. homes watched coverage of JFK's burial and that the average set was in use for more than 13 consecutive hours.

Americans were transfixed by coverage of the space race, beginning with Alan Shepard's suborbital flight in 1961 and culminating in live pictures of the moon landing in 1969. Americans were also presented with almost nightly images not so uplifting, with coverage of the civil rights movement and the Vietnam war (the networks established news bureaus in Saigon in 1965) becoming almost nightly subjects. The decade ended on two disappointing notes for broadcasters. Shortly after the election of Richard Nixon in 1968, Vice President Spiro Agnew began a series of speeches attacking the media and accusing the press of bias against the administration. And in 1969 the Supreme Court's decision in the *Red Lion* case upheld the FCC's fairness doctrine and personal attack rules, saying they "enhance rather than abridge the freedoms of speech and press protected by the First Amendment."

1970s: The Rise of FM and Satellites

While the technique of broadcasting using frequency modulation was patented by Edwin Armstrong in 1933, the first station built in 1939, and an FM band allocated by the FCC in 1940, growth of the new radio service was very slow. Delayed by World War II and a suspicion by many AM station owners that the new service would offer unwanted competition, it wasn't until the late 1960s that large numbers of consumers began buying FM receivers. Another handicap was beginning to be resolved in 1971 when car manufacturers began to include FM-equipped radios as standard equipment in about 20 percent of the new models (that number would rise to 50 percent within five years).

To differentiate FM stations from those on the AM band—and to take advantage of FM's higher fidelity—programmers developed new formats. One of the most innovative was the "underground" or "progressive" sound introduced by Tom Donahue at KMPX(FM) San Francisco in the late 1960s that

played album tracks not heard on the tightly formatted top 40 AM stations. But "underground" wasn't the only sound to be heard on FM or even the predominant one. There was also the very aboveground sound of carefully researched syndicated formats. Coupled with the increased use of automation equipment, services like Drake-Chenault's "Solid Gold" and Bonneville's easy listening formats turned many money-losing FM stations into profit centers. This success was translated into value as multimillion-dollar prices for FM stations became common. And for the first time industry observers began predicting that FM would overtake AM as the band for music, with AM becoming primarily a news and information medium.

The phenomenon of the 1970s was the development of international broadcasting live via satellites. RCA inaugurated the nation's first domestic satellite communications service in 1974, using a Canadian satellite, later launching its Satcom series of birds. But the breakthrough came in 1975 when Home Box Office—Time Inc.'s pay cable subsidiary—announced plans to extend its service from the Northeast to nationwide via satellite.

The next year, 1976, Ted Turner, owner of two TV stations, begins using the satellite to distribute the signal of his Atlanta UHF station, WTCC, to cable systems across the country, dubbing it the "superstation." Buoyed by his success, in 1978 Turner announced plans to sell his other station, WRET-TV Charlotte, North Carolina, and use the money to start CNN, a 24-hour cable news service to be distributed by satellite.

Later in 1978, the FCC moved to enhance the competitive environment of satellite-distributed TV superstations by endorsing an "open entry" policy for the resale carriers that wished to feed local stations to cable television systems. Then in April 1979, a former Nixon administration staffer and cable trade reporter, Brian Lamb, persuaded a critical mass of the cable industry to support the Cable Satellite Public Affairs Network (C-SPAN). The new service provided satellite gavel-to-gavel television coverage of the House of Representatives proceedings.

1980s: The Rise of Cable Television

Building on the innovation of satellite delivery pioneered by HBO, the cable industry began to be viewed as more than just a relay service for TV stations. Now it could offer alternative channels. (The strategy paid off in increased demand: in 1980 cable had 20 percent penetration of U.S. TV households and by the end of the decade it was seen in 60 percent.) Ted Turner launched his Cable News Network on June 1, 1980, sending 24-hour-a-day news to 172 cable systems from its Atlanta studios.

Innovations and new cable channels appeared in

almost every year of the decade. Most pay cable channels begin to scramble their satellite signals and in 1998 AT&T demonstrates laser-modulated fiber optics offering wider bandwidth and greater signal quality than coaxial cable.

1990s: The Rise of Mega-Media Companies

The modern media era really began in 1989 with the announcement that Time Inc. and Warner Communications Inc. had agreed to swap stock and merge into what would be the largest media and entertainment company in the world. The media landscape would only continue to change, and at an accelerating pace. A deregulatory wind was blowing through Washington in the 1990s.

In 1992 the FCC raised the cap on the number of radio stations a company could own from 12 AM and 12 FM to 18 of each and also permitted two of each service to be co-located in the same large market. A flurry of duopoly deals followed. The next year, the commission gave the big three TV networks a conditional OK to enter the lucrative network rerun business, when it lifts its financial interest and syndication rules (full repeal comes in 1995).

The year 1994 sees the radio caps raised again, to 20 AM and 20 FM. The FCC also said that it was time to acknowledge the dramatic changes in the video marketplace with equally dramatic deregulation of its TV ownership policies. The commission proposed new rules that would allow broadcasters to own as many stations as they want as long as they remain within the cap on total national audience reach. At the same time, the commission proposed raising that cap of 25 percent of the nation's TV households by 5 percent every three years to a maximum of 50 percent.

In another mega-merger, Viacom buys Paramount Communications. This is quickly followed in 1995 by announcements of Disney's \$18.5 billion purchase of ABC, Time Warner's purchase of Turner Broadcasting System in an \$8 billion stock swap, Westinghouse's \$5.4 billion purchase of CBS, and Comcast's \$1.6 billion purchase of the Scripps cable holdings. The big four TV networks get more competition in 1995 as The WB and United Paramount Network debut.

More deregulation appears with the Telecommunications Act of 1996, which eliminated cable rate regulation and the bar to telephone company-cable competition, resulting in AT&T and other phone companies offering packages that included cable, telephone, and Internet services and cable companies offering phone service. (This resulted in AT&T becoming the country's largest cable operator in 1999 when it bought TCI for \$50 billion.) The 1996 act

also eliminated the cap on radio station ownership and companies wasted no time in expanding their portfolios both through acquisitions and mergers (including Westinghouse/CBS-Infinity, which merged in 1996 in a \$4.9 billion deal).

In 1997, TV group owner Bud Paxson began the seventh broadcast TV network with his PAX TV. Radio deals continued to proliferate, with a huge upsurge in station sales in 1998 and the mega-merger of Clear Channel's \$6.35 billion purchase of Jacor.

The decade ends in a flurry of activity in 1999 with the FCC allowing ownership of two TV and up to six radio stations in top markets. AT&T bought Media One, Viacom spent \$36 billion for CBS and the two largest radio groups—Clear Channel and AMFM—combined, leaving the merged Clear Channel owning 830 stations.

2000s: The Rise of Digital

Digital technology began to make a major impact. Cable used it to increase significantly the number of channels it offered—to justify higher monthly fees and to meet the competition from channel-rich satellite technology. In contrast to cable, TV broadcasting has been slow to put digital technology to work. With digital, TV broadcasters could offer multiple channels of conventional TV, HDTV, or a little bit of both. But digital TV broadcasting has been mired in standards disputes and the resulting chicken-and-egg problem of receivers and programming: consumers are slow to replace their analog sets if there is little digital programming to watch and producers are hesitant to invest in new production equipment if few viewers are watching. But the transition continues.

The first digital TV station, WRAL-DT Raleigh, North Carolina, went on the air in 1996 and the FCC made digital channel assignments to all analog stations in 1997. All TV stations must be broadcasting digitally by 2006. There were 1,233 digital stations in 207 markets as of July 27, 2004, according to the National Association of Broadcasters.

The first push for digital audio (other than that delivered by DBS or digital cable) is satellite-delivered radio. Two players—XM Satellite Radio and Sirius Satellite Radio—offer nationwide subscription service to receivers in cars and homes. Terrestrial radio is just beginning to make the digital transition. In-band, on-channel (IBOC) technology developed by iBiquity Digital Corp. allows radio stations to overlay their analog service with a digital one. As of July 2004, just over 300 stations had been licensed by iBiquity to broadcast digitally. JVC, Kenwood, and Panasonic are among the companies offering consumer IBOC receivers.

A Chronology of the Electronic Media

From Isaac Newton to Janet Jackson: A Chronology of the Electronic Media

Mark K. Miller

freelance writer and former managing editor, *Broadcasting & Cable* magazine

- 1666**
Sir Isaac Newton performs basic experiments on the spectrum.
- 1794**
Alessandro Volta of Italy invents the voltaic cell, a primitive battery.
- 1827**
George Ohm of Germany shows the relationship between resistance, amperage and voltage. Sir Charles Wheatstone of England invents an acoustic device to amplify sounds that he calls a "microphone."
- 1844**
Samuel F.B. Morse tests the first telegraph with "What hath God wrought?" message sent on link between Washington and Baltimore.
- 1858**
First trans-Atlantic cable completed. President James Buchanan and Queen Victoria exchange greetings.
- 1867**
James Clerk Maxwell of Scotland develops the electromagnetic theory.
- 1875**
George R. Carey of Boston proposes a system that would transmit and receive moving visual images electrically.
- 1876**
Alexander Graham Bell invents the telephone.
- 1877**
Thomas A. Edison applies for a patent on a "phonograph or talking machine."
- 1878**
Sir William Cooke of England passes high voltage through a wire in a sealed glass tube, causing a pinkish glow—evidence of cathode rays. It's the first step toward the development of the vacuum tubes.
- 1884**
Paul Nipkow of Germany patents a mechanical, rotating facsimile scanning disk.
- 1886**
Heinrich Hertz of Germany proves that electromagnetic waves can be transmitted through space at the speed of light and can be reflected and refracted.
- 1895**
Wilhelm Conrad Roentgen of Germany discovers X-rays.
Guglielmo Marconi sends and receives his first wireless signals across his father's estate at Bologna, Italy.
- 1896**
Marconi applies for British patent for wireless telegraphy. He receives an American patent a year later.
- 1899**
Marconi flashes the first wireless signals across the English Channel.
- 1900**
Constantin Perskyi (France) coins the word television at the International Electricity Congress, part of the 1900 Paris Exhibition.
- 1901**
Marconi at Newfoundland, Canada, receives the first trans-Atlantic signal, the letter "S," transmitted from Poldhu, England.
- 1906**
Dr. Lee de Forest invents the audion, a three-element vacuum tube, having a filament, plate and grid, which leads to the amplification of radio signals.
- 1910**
Enrico Caruso and Emmy Destinn, singing backstage at the Metropolitan Opera House in New York, broadcast through the De Forest radiophone and are heard by an operator on the SS Avon at sea and by wireless amateurs in Connecticut.
United States approves an act requiring certain passenger ships to carry wireless equipment and operators.
- 1912**
The *Titanic* disaster proves the value of wireless at sea; 705 lives saved. Jack Phillips and Harold Bride are the ship's wireless operators.
- 1920**
On August 20, 8MK (later, WWJ) in Detroit, owned by the Detroit News, starts what is later claimed to be regular broadcasting.
The Westinghouse Co.'s KDKA(AM) Pittsburgh broadcasts the Harding-Cox election on returns November 2 as the country's first licensed commercial radio station.
- 1921**
The Dempsey-Carpentier fight is broadcast from Boyle's Thirty Acres in Jersey City through a temporarily installed transmitter at Hoboken, New Jersey. Major J. Andrew White was the announcer. This event gave radio a tremendous boost.
- 1922**
The superheterodyne circuit is demonstrated by its inventor, Edwin H. Armstrong. It dramatically improves AM radio reception.
WEAF(AM) New York broadcasts what is claimed to be the first commercially sponsored program on September 7. The advertiser is the Queensborough Corp., a real estate organization.
WOL(AM) Ames, Iowa, goes on air as the country's first licensed educational station.
- 1923**
Dr. Vladimir K. Zworykin files for a U.S. patent for an all-electronic television system.
A "chain" broadcast features a telephone tie-up between WEAF(AM) New York and WNAC(AM) Boston.
- 1924**
The Republican convention in Cleveland and the Democratic convention in New York are broadcast over networks.
- 1925**
President Calvin Coolidge's inaugural ceremony is broadcast by 24 stations in a transcontinental network.
- 1926**
President Coolidge signs the Dill-White Radio Bill creating the Federal Radio Commission and ending the chaos on the radio dial caused by the wild growth of broadcasting.
National Broadcasting Co. is organized on November 1 with WEAF(AM) and WJZ(AM) in New York as key stations and Merlin Hall Aylesworth as president. Headquarters are at 711 Fifth Ave., New York.
- 1927**
The Columbia Broadcasting System goes on the air with a basic network of 16 stations. Major J. Andrew White is president.
Philo T. Farnsworth applies for a patent on his image dissector television camera tube.
- 1928**
NBC establishes a permanent coast-to-coast radio network.
- 1929**
William S. Paley, 27, is elected president of the Columbia Broadcasting System.
Vladimir Zworykin demonstrates his kinescope or cathode ray television receiver before a meeting of the Institute of Radio Engineers on November 19.
- 1930**
Experimental TV station W2XBS is opened by National Broadcasting Co. in New York.
- 1931**
Experimental television station W2XAB is opened by Columbia Broadcasting System in New York.
The first issue of *Broadcasting* magazine appears on October 15.
The National Association of Broadcasters reports that more than half of the nation's radio stations are operating without a profit.
- 1932**
CBS, NBC, and New York area stations, notably WOR(AM), go into round-the-clock operations to cover the Lindbergh kidnapping, radio's biggest spot-news reporting job to date.
NBC lifts its ban on recorded programs for its owned-and-operated stations, but continues to bar them from network use.
NBC withdraws prohibitions against price mentions on the air during daytime hours; two months later, both NBC and CBS allow price mentions at nighttime as well.
- 1933**
Associated Press members vote to ban network broadcasts of AP news and to restrict local broadcasts to bulletins to stipulated times with air credit to member newspapers.
The American Newspaper Publishers Association

declares radio program schedules are advertising and should be published only if paid for.

CBS assigns publicity director Paul White to organize a nationwide staff to collect news for network broadcast. General Mills agrees to sponsor twice-daily newscasts.

1934

Congress passes the Communication Act, which, among other things, replaces the Federal Radio Commission with the Federal Communications Commission.

1935

RCA announces that it is taking television out of the laboratory for a \$1 million field-test program.

1936

A year of TV demonstrations begins in June with the Don Lee Broadcasting System's first public exhibition of cathode ray television in the U.S., using a system developed by Don Lee TV director Harry Lubcke. One month later, RCA demonstrates its system of TV with transmissions from the Empire State Building, and Philco follows with a seven-mile transmission in August.

FM (frequency modulation) broadcasting, a new radio system invented by Major Edwin H. Armstrong, is described at an FCC hearing as static-free, free from fading and cross-talk, having uniformity day and night in all seasons and greater fidelity of reproduction.

A.C. Nielsen, revealing his firm's acquisition of the MIT-developed "Audimeter," proposes a metered tuning method of measuring radio audience size.

1937

WLS(AM) Chicago recording team of Herb Morrison, announcer, and Charles Nehlsen, engineer, on a routine assignment at Lakehurst, New Jersey, records an on-the-spot account of the explosion of the German dirigible Hindenburg. NBC breaks its rigid rule against recordings to put it on the network.

1938

Broadcasting publishes the first facsimile newspaper in a demonstration at the National Association of Broadcasters convention.

1939

After 15 years of litigation, the patent for iconoscope-kinescope tubes, the basis for electronic television, is granted to Dr. Vladimir Zworykin.

A telecast of the opening ceremonies of the New York World's Fair marks the start of a regular daily television schedule by RCA-NBC in New York.

The first baseball game ever televised—Princeton vs. Columbia—appears on NBC.

1940

The FCC authorizes commercial operation of FM, but puts TV back into the laboratory until the industry reaches an agreement on technical standards.

CBS demonstrates a system of color TV developed by its chief TV engineer, Dr. Peter Goldmark.

1941

Bulova Watch Co., Sun Oil Co., Lever Bros. and Procter & Gamble sign as sponsors of the first commercial telecasts on July 1 over NBC's WNBT(TV) New York (until then W2XBS).

President Roosevelt's broadcast to the nation on December 9, the day after war is declared, has the largest audience in radio history—about 90 million listeners.

1942

The Advertising Council is organized by advertisers, agencies, and media to put the talents and techniques of advertising at the disposal of the government to inspire and instruct the public concerning the war effort.

1943

Edward J. Noble buys the Blue Network from RCA for \$8 million in cash. RCA had two networks, NBC Red and NBC Blue.

1944

With the FCC approval of the transfer of owned stations, the Blue Network assumes the name of its holding company, the American Broadcasting Co.

1945

Pooled coverage of the Nazi surrender in May brings the American people full details of the end of the war in Europe. Peace heralds a communications boom: Not only will programming restrictions end, but new station construction, frozen for the duration, will proceed at an explosive pace soon after V-J Day in August.

1946

A telecast of the Louis-Conn heavyweight title fight, sponsored by Gillette Safety Razor Co. on a four-city hookup, reaches an estimated 100,000 viewers and convinces skeptics that television is here to stay.

RCA demonstrates its all-electronic system of color TV.

Bristol-Myers is the first advertiser to sponsor a television network program—*Geographically Speaking*—which debuted October 27 on NBC TV's two-station network.

1947

Radio comedian Fred Allen uses a gag, which NBC had ruled out, about network vice presidents, and is cut off the air while he tells it. The story is front-page news across the country as the sponsor's ad agency demands a rebate for 35 seconds of dead air.

1948

Texaco puts an old-style vaudeville show on NBC TV; the hour-long series stars Milton Berle.

1949

The Academy of Television Arts & Sciences presents the first Emmy Awards at ceremonies televised by KTS(L) Los Angeles.

1950

General Foods drops actress Jean Muir, who denies any communist affiliations or sympathies, from the cast of *The Aldrich Family* (NBC TV) after protests against her appearance by "a number of groups." The Joint Committee Against Communism claims credit for her removal, announcing a drive to "cleanse" radio and television of pro-communist actors, directors, and writers.

The FCC approves CBS's color TV system, effective November 20. The network promises 20 hours of color programming a week within two months. TV set manufacturers are divided, however, over whether to make sets, since the CBS system is incompatible with black-and-white broadcasts. In the meantime, RCA continues work on its color system.

1951

Witness Frank Costello's hands provide TV's picture of the week as he refuses to expose his face to cameras covering New York hearings on organized crime of the Senate Crime Investigation Committee, chaired by Senator Estes Kefauver (D-Tenn.)

Sixteen advertisers sponsor the first commercial color telecast, an hour-long program on a five-station East Coast CBS TV hook-up.

Bing Crosby Enterprises announces the development of a system for recording video and audio programs on magnetic tape. The pictures shown at demonstrations are described as "hazy" but "viewable." A year later the images are described as improved "more than 20-fold."

1952

By rushing equipment across the country, from Bridgeport, Connecticut, to Portland, Oregon, KPTV(TV) Portland goes on the air as the first commercial UHF TV station.

1953

With the end of daylight-saving time, CBS TV and NBC TV inaugurate "hot kinescope" systems to put programs on the air on the West Coast at the same clock hour as in the East.

RCA demonstrates black-and-white and color TV programs recorded on magnetic tape. RCA-NBC Board Chairman David Sarnoff says two years of finishing touches are needed before the system is ready for market.

The FCC approves RCA's compatible (with black-and-white transmission) color TV standards. System supplants the incompatible CBS system.

1954

CBS President Frank Stanton broadcasts the first network editorial, urging that radio and TV be allowed to cover congressional hearings.

1955

A contract between the DuMont TV network and Jackie Gleason Enterprises calls for Gleason's *The Honeymooners* to be done as a filmed program for CBS TV on Saturday nights.

1956

Ampex Corp. unveils the first practical videotape recorder at the National Association of Radio and Television Broadcasters convention in Chicago. The company takes in \$4 million in orders.

1957

Videotape recorders are seen as the solution to the TV networks' daylight-saving time problems.

1958

Subliminal TV messages are put under the spotlight at hearings in Los Angeles and Washington.

The BBDO ad agency converts live commercials to videotape.

1959

Sixty-eight TV stations defy the broadcasters' code of conduct by refusing to drop Preparation H commercials.

The quiz show scandal climaxes when famed *Twenty-One* prizewinner Charles Van Doren admits to a House committee that he had been provided with answers and strategies in advance. The sad ending to the quiz show era prompts cancellation of big-prize shows and vows by NBC and CBS to end deceptive practices.

1960

A satellite sends weather reports back from a 400-mile-high orbit.

RKO-Zenith plans a \$10 million test of an on-air pay TV system in Hartford, Connecticut.

Sam Goldwyn offers a package of movies to television.

The last daytime serial on network radio ends.

The opening Kennedy-Nixon debate attracts the largest TV audience to date.

1961

FCC Chairman Newton Minnow shakes up the National Association of Broadcasters convention with his assessment of TV programming: Although it occasionally shines with programs like *Twilight Zone* and *CBS Reports*, it is, more than anything, from sign-on to sign-off "a vast wasteland."

Off-network shows become popular as syndicated fare.

The Ampex "electronic editor" permits inserts and additions to be made in videotape without physical splices.

ABC TV engineers develop a process for the immediate playback of videotape recordings in slow motion.

1962

John Glenn's orbital space flight is seen by 135 million TV viewers.

Telstar, AT&T's orbiting satellite, provides a glamorous debut for global television.

1963

Astronaut Gordon Cooper sends back the first TV pictures from space.

A Chronology of the Electronic Media

All radio and TV network commercials and entertainment programming are canceled following the assassination of President Kennedy. In the same week, the first trans-Pacific broadcast via satellite previews live TV coverage of the 1964 Olympics in Tokyo.

1964

The government and the tobacco companies each ponder their next move after the surgeon general's report links cigarette smoking and lung cancer. Within weeks, American Tobacco drops sports broadcasts, radio stations begin to ban cigarette ads and CBS TV orders a de-emphasis of cigarette use on programs.

1965

Early Bird, the first commercial communications satellite, goes into stationary orbit, opening trans-Atlantic circuits for TV use.

1966

Fred W. Friendly quits as president of CBS News when his new boss, John Schneider, CBS group vice president for broadcasting, cancels coverage of a Senate hearing on the Vietnam War and runs a rerun of *I Love Lucy* instead.

Network TV viewers see live close-up pictures of the moon—sent back by Surveyor I—as they come into the Jet Propulsion Laboratory.

1967

ABC Radio introduces a radical plan: four networks instead of one, each tailored to suit different station formats.

President Johnson signs the Public Broadcasting Act into law, establishing the Corporation for Public Broadcasting, federal funding mechanism.

1968

The Children's Television Workshop is created by the Ford Foundation, the Carnegie Corp., and the Office of Education to develop a 26-week series of hour-long color programs for preschool children. *Sesame Street* is the result.

The U.S. Supreme Court gives the FCC jurisdiction over all cable TV systems.

Pictures taken inside Apollo 7 in flight and sent back to Earth revive public interest in the space program.

NBC TV earns the life-long ire of sports fans when it cuts off the end of a Jets-Raiders game to air its made-for-TV movie *Heidi*. Viewers miss the Raiders' two-touchdowns-in-nine-seconds defeat of the Jets.

1969

The Corporation for Public Broadcasting plans the creation of the Public Broadcasting Service to distribute programming to noncommercial TV stations.

In the same week that ABC-TV announces its \$8 million *Monday Night Football* deal (games to begin in 1970), Apollo 10 sends back the first color TV pictures of the moon and of Earth from the moon.

The world watches live coverage of Neil Armstrong's walk on the moon.

1970

House and Senate conferees agree on legislation to outlaw cigarette advertising on radio and TV, but change the bill's effective date from January 1, 1971, to January 2, so commercials can appear on New Year's Day football telecasts.

The FCC rules that TV stations in the top 50 markets cannot accept more than three hours of network programming between 7 and 11 p.m., and bars them from domestic syndication and from acquiring subsidiary rights in independently produced programs.

1971

National Public Radio debuts with a 90-station interconnected lineup.

1972

Judge Benjamin Hooks of Memphis, Tennessee, is nominated to the FCC. He becomes the first black to

serve on a federal regulatory agency.

Home Box Office Inc., New York, is formed as a subsidiary of Sterling Communications to provide pay-cable TV systems with live and film programming.

1973

Western Union becomes the first company to receive federal permission to launch a commercial communications satellite in the U.S.

Broadcast media around the world open their coverage of the Senate select committee's investigation of the Watergate scandal.

1974

RCA inaugurates the nation's first domestic satellite communications service, using a Canadian satellite.

More than 110 million viewers watch President Nixon announce his resignation.

1975

Home Box Office, Time Inc.'s pay cable subsidiary, announces that it will inaugurate a satellite delivery network in the fall.

1976

Ampex Corp. and CBS develop the electronic still-store system, which uses a digital recording technique to store 1,500 frames in random mode, each accessible in 100 milliseconds.

Cable network launches include Showtime and Univision.

1977

ABC's eight-day telecast of the miniseries *Roots* becomes the most watched program in television history, with ratings in the mid-40s and shares in the mid-60s. Eighty million people watch at least some part of the final episode.

Sony unveils its Betamax videocassette in August and later the same month RCA introduces its SelectaVision home videotape recorder.

1978

The U.S. Supreme Court upholds the FCC in the "seven dirty words" case involving Pacifica's WBAI(FM) New York. The ruling says the FCC may regulate and punish for the broadcasting of "indecent material."

1979

Ampex demonstrates its digital videotape recorder at the Society of Motion Picture and Television Engineers conference in San Francisco in February. Sony unveils its version two months later.

Cable network launches include C-SPAN, ESPN, The Movie Channel, and Nickelodeon.

1980

"Who Shot J.R.?" episode of *Dallas* garners the highest rating for any program in modern TV history, with a 53.3 rating and a 76 share.

Cable network launches include Cable News Network, Black Entertainment Television, the Learning Channel, Bravo, and USA Network.

1981

With five ENG cameras rolling, the shooting of President Reagan becomes history's most heavily covered assassination attempt.

The first U.S. demonstration of high-definition television (HDTV) takes place at the annual convention of the Society of Motion Picture and Television Engineers. The Japanese Broadcasting Corp.'s (NHK) 1,125-line analog system draws raves from engineers and filmmakers.

Cable network launches include MTV: Music Television and the Eternal Word Television Network.

1982

Having reached a settlement with the Justice Department to divest itself of its 23 local telephone companies, communications giant AT&T hopes to lead the country into the "information age." The National Cable Television

Association, Congress, and the FCC wonder what the agreement has wrought.

Cable network launches include the Weather Channel and the Playboy Channel.

1983

Reagan appointee Mark Fowler, chairman of the FCC, tells a common carrier conference that the U.S. is heading toward a regulation-free telecommunications marketplace.

In February, the two-and-a-half-hour final episode of CBS's *M*A*S*H* is the most watched program in TV history, garnering a 60.3 rating and a 77 share.

Cable network launches include the Disney Channel and Country Music Television.

1984

The U.S. Supreme Court rules that home videotaping is legal.

Congress passes the Cable Telecommunications Act of 1984, landmark legislation deregulating cable. Law accelerates the growth of cable.

Cable network launches include the Arts & Entertainment Network (A&E), American Movie Classics, and Lifetime.

1985

Ted Turner makes inquiries at the FCC about a possible takeover of CBS. Later, in March, media company Capital Cities Communications purchases ABC for \$3.5 billion. Turner's efforts to acquire CBS fail by the end of July, when a federal judge approves the network's stock buyback plan.

The Advanced Television Services Committee (ATSC) votes in favor of the NHK HDTV standard: 1,125 lines, 60 fields, 2:1 interlace, 5.33:3 ratio. This standard is put forward by the U.S. to the International Radio Consultative Committee (CCIR) for consideration as the international standard. The CCIR adopts the recommendation later in the year.

Having lost his bid to buy CBS, Ted Turner makes a \$1.5 billion offer for MGM/UA.

Cable network launches include The Discovery Channel, Home Shopping Network, and VH-1.

1986

MGM and Color Systems Technology sign an agreement for the conversion of 100 of the studio's black-and-white films to color.

Cable network launches include C-SPAN2 and QVC.

1987

Fox Broadcasting Co. introduces its primetime lineup with 108 affiliates in its bid to become the fourth major U.S. commercial television network.

The National Association of Broadcasters and the Association for Maximum Service Television broadcast HDTV over standard TV channels during public demonstrations in Washington.

President Reagan vetoes legislation to write the fairness doctrine into law. The doctrine required broadcast stations to allow opposing views of issues, but critics claimed that it discouraged open debate.

Cable network launches include Movietime (renamed E! Entertainment Television in 1990), The Travel Channel, and Telemundo.

1988

The FCC adopts preliminary ground rules for HDTV. It tentatively decides to require HDTV broadcasts to be compatible with NTSC sets and says it will not make additional spectrum available outside the VHF and UHF bands for HDTV because there is enough already available to accommodate the service.

Cable network launches include Turner Network Television.

1989

Time Inc. and Warner Communications agree to swap stock and merge into what will be world's largest media and entertainment company.

1990

Digital audio broadcasting is demonstrated at the National Association of Broadcasters convention and is heralded as the HDTV of radio.

General Instrument revolutionizes the development of high-definition television by proposing an all-digital system. The video compression system also has implications for satellite transmissions.

Cable network launches include CNBC and The Inspiration Network (INSP).

1991

The U.S. air attack on Iraq begins January 16 with dramatic live coverage from network reporters in Baghdad. CNN is the lone network to maintain contact with its Baghdad reporters through the night.

Free to move around Moscow and ready to commit resources to coverage, television and radio provide gripping details of the short-lived Soviet coup and the collapse of communism in the Soviet Union. During his detention in the Crimea, Soviet President Mikhail Gorbachev keeps track of events by listening to the BBC, Voice of America, and Radio Liberty.

Cable network launches include Court TV, Comedy Central, and Encore.

1992

In March, the Supreme Court let stand an appeals court ruling that struck down the FCC's around-the-clock ban on broadcast indecency as unconstitutional and requiring the commission to establish a safe harbor—a part of the day when few children are tuning in and during which radio and TV stations may broadcast without fear of FCC sanctions for indecency.

General Instrument and MIT show the first over-the-air digital HDTV transmission to Washington lawmakers and regulators. The 12-minute transmission of 1,050-line video was broadcast by noncommercial WETA-TV Washington.

The FCC raises the limit on radio stations a single company may own from 12 AM and 12 FM to 30 of each, then backpedals and lowers the caps to 18 each, with no more than two AMs and two FMs in large markets and three stations—only two in the same service—in small markets.

Fox expands its programming lineup to seven nights a week, ending its status as a "webnet" and becoming the fourth full-fledged commercial TV network in the U.S.

The FCC unanimously approves allowing broadcast TV networks to purchase cable systems that serve no more than 10 percent of U.S. homes and up to 50 percent of a particular market's homes.

The FCC tells TV broadcasters they will have five years to begin broadcasting in HDTV once the agency adopts a standard and makes channels available.

Cable network launches include The Cartoon Network and the Sci Fi Channel.

1993

Warner Bros. announces it will launch a fifth broadcast TV network in 1994.

The FCC expands the AM band's upper limit from 1605 kHz to 1705 kHz.

General Instrument, Zenith, AT&T, and the ATRC join forces as the "Grand Alliance" to develop a single HDTV system. Later in the year, the Grand Alliance announces its support of the emerging MPEG-2 digital compression HD system: six-channel, CD-quality Dolby AC-3 music system; 1,920-pixel by 1,080-line interlaced scanning picture; and progressive scanning.

Paramount Communications begins talks with TV stations about forming a fifth broadcast TV network.

Southwestern Bell and Cox Cable form a \$4.9-billion partnership.

Cable network launches include ESPN2 and the Television Food Network.

1994

Two companies, Hubbard's United States Satellite Broadcasting and Hughes's DirecTV, begin direct broadcast satellite transmissions to 18-inch home dish antennas from a shared satellite.

Paramount and Viacom merge in a deal worth \$9.2 billion, forming the world's most powerful entertainment company. Viacom's Sumner Redstone becomes the new company's chairman. Later in the

year, Viacom adds Blockbuster Entertainment to its portfolio.

Cable network launches include FX, Home & Garden TV, the International Film Channel, Starz!, Trio, the Game Show Network, and Turner Classic Movies.

1995

Seagram pays \$7 billion for the 80 percent of Hollywood studio MCA Inc. owned by Matsushita Electric Industrial Co. Seagram is controlled by the Bronfman family and is headed by President/CEO Edgar Bronfman Jr.

The Megamedia Age begins when, in the same week, Walt Disney Co. announces it is buying Capital Cities/ABC for \$18.5 billion and then Westinghouse Electric Co. releases word of its purchase of CBS Inc. for \$5.4 billion.

Time Warner and Turner Broadcasting System agree to merge in an \$8 billion stock swap deal.

Live television coverage of the verdict in the O.J. Simpson murder trial sets viewing records when 150 million people watch the jury return a "not guilty" verdict.

Microsoft buys 50 percent stake in NBC's cable channel *America's Talking* for \$250 million. AT's talk format will be dropped and the network will become a news operation after being rechristened MSNBC.

The FCC repeals its Prime Time Access and Fin-Syn rules. These rules restricted the major broadcast networks from owning interest in their own primetime programming.

Cable network launches include CNN/fn, The Golf Channel, Great American Country, the History Channel, and the Outdoor Life Network.

1996

Congress passes—and President Clinton signs—the Telecommunications Act of 1996, the first major overhaul of telecommunication legislation since 1934. Its key provisions include: replacing the 12-station TV ownership limit with a national home coverage cap of 35 percent; eliminating the national ownership limits on radio stations and allowing one company to own different numbers of stations locally, depending on the market size; requiring TV sets sold in the U.S. to be equipped with a V-chip to enable blocking of channels based on encoded ratings; deregulating cable rates.

Westinghouse/CBS buys Infinity Broadcasting for \$4.9 billion, creating the country's largest radio station group in terms of earnings. The deal results in Westinghouse/CBS owning 83 radio stations in 15 markets.

The FCC releases its first list of proposed digital TV channel assignments for all U.S. analog television stations.

In July, WRAL-HD Raleigh, North Carolina, begins HDTV transmission on channel 32 under an experimental FCC license, making it the first HDTV station to broadcast in the U.S.

The Washington-based Model HDTV Station Project demonstrates live, over-the-air digital TV transmission and reception. A few months later, it bounces digital signals off a satellite and displays them on a receiver.

Cable network launches include Animal Planet, Fox News Channel, MSNBC, the Sundance Channel, and TVLand.

1997

After several starts and stops, the TV industry unveils content-based V-chip ratings to mixed reviews. Recalcitrant NBC maintains it will not implement the new ratings.

Paxon Communications chief Bud Paxson announces plans to launch a new television network, Pax Net, using his 73 owned UHF stations as a base and airing family friendly off-network programming.

ABC Television Network President Preston Padden and Sinclair Broadcasting President David Smith say broadcasters ought to consider using DTV channels for broadcasting multiple channels of conventional TV rather than a single channel of HDTV.

Hearst Corp. (8 TVs) and Argyle Television (6 TVs) join their TV stations and create a new company, Hearst-Argyle Television Inc., that is valued at \$1.8 billion.

The FCC gives TV broadcasters a second channel for the delivery of HDTV and other digital services and said that all network affiliates in the top 10 markets

have 24 months to start broadcasting a digital signal; those in markets 11-30 have 30 months; all other commercial stations have five years. Noncommercial broadcasters have six.

DTV service provider EchoStar plans to launch two satellites that will give it the ability to provide local broadcast TV signals to about 43 percent of the U.S.

Cable network launches include WE.

1998

The National Association of Broadcasters agrees to support plans by satellite TV providers to retransmit local TV station signals into their markets as long as the satellite services carry all a market's signals.

At 2:17 p.m. on February 27, WFAA-TV Dallas broadcast what it claims is the first non-experimental HDTV signal (in 1080i, 16:9 format). The broadcast began with a half-hour of taped HD programming, followed by a live simulcast of the station's NTSC programming that was upconverted to HDTV. The next month, Sinclair Broadcasting becomes the first TV group owner to broadcast multiple digital channels.

AT&T pays \$50 billion for cable system giant Tele-Communications Inc.

Paxon Communications launches its broadcast television network, now called Pax TV, with a lineup of 90 stations covering about 75 percent of U.S. TV homes.

Radio group owner Clear Channel Communications purchases competitor Jacor Communications for \$4.4 billion. The deal gives Clear Channel 453 stations in 101 markets. The year's other big deals include: Chancellor Media's purchase of Capstar Broadcasting for \$3.9 billion; Hearst-Argyle Television's purchase of Pulitzer Broadcasting for \$1.85 billion; Chancellor's purchase of LIN Television for \$1.5 billion; and Sinclair Broadcast Group's purchase of Sullivan Broadcasting for \$1 billion.

CBS is the first broadcast TV network to air a live HDTV sports event with its Nov. 8 telecast of the New York Jets-Buffalo Bills NFL game. It is carried by CBS stations in New York; Philadelphia; Washington; Cincinnati; Charlotte, North Carolina; Raleigh, North Carolina; and Columbus, Ohio.

Hughes Electronics Corp., parent of DBS provider DirecTV, announces deal to buy rival U.S. Satellite Broadcasting from Hubbard Broadcasting for \$1.3 billion. The DBS business now has three providers: DirecTV, EchoStar, and Primestar.

Cable network launches include BBC America, the Biography Channel, Cinemax, Tech TV, and Toon Disney.

1999

Hughes Electronics Corp., parent of DBS provider DirecTV, buys rival Primestar for \$1.1 billion plus stock. The DBS business now has two providers: DirecTV and EchoStar.

Paxon Broadcasting sells its 30 percent interest in The Travel Channel to the cable channel's 70 percent owner, Discovery Channel.

MSO Comcast offers \$58 billion for MediaOne Group's cable systems. AT&T then comes in with a \$69 billion offer that has AT&T swapping and selling Comcast systems with 2 million subscribers for roughly \$9 billion. In return, Comcast agrees to withdraw its \$58 billion offer.

CBS pays \$2.5 billion for syndication giant King World Productions, whose properties include the hit shows *Oprah*, *Wheel of Fortune*, and *Jeopardy!*

FCC votes to allow a broadcaster to own two TV stations in a market under certain conditions and liberalizes its radio/TV cross-ownership restrictions. A flood of station deals follow.

Viacom Inc. buys CBS Corp. for \$36 billion, merging Viacom's Paramount Station Group, UPN network, cable networks, and other properties, with those of CBS.

Clear Channel Communications pays \$23.5 billion in stock and assumption of debt for the 443 radio stations of AMFM Inc., the country's largest radio broadcaster. Clear Channel will have to divest about 100 stations to comply with FCC and Justice Department regulations. Those spinoffs will bring Clear Channel \$4.3 billion.

Legislation takes affect allowing satellite delivery of local television stations in their markets, increasing DBS providers' ability to compete with cable.

2000

America Online Inc. and Time Warner merge in a deal worth \$181 billion. The merged company, AOL Time Warner, combines the company that serves the largest number of Internet users with the largest producer of TV shows and movies and cable programming, plus cable systems passing 20 percent of U.S. homes.

Tribune Co. buys Times Mirror Co. for \$6.5 billion, acquiring seven daily newspapers and various magazines. The deal will give Tribune co-ownership of TV stations and major daily newspapers in the top three markets and the assets to sell packages of multimedia advertising to clients on national, regional, and local levels.

Harry Pappas, head of Pappas Television, the country's largest privately held TV station group, announces plans to launch Azteca America, the third U.S. Hispanic television network (Univision and Telemundo are the others) in 2001.

Cable network launches include Oxygen.

2001

FCC approves the \$5.4-billion sale of Chris-Craft Broadcasting's ten TV stations to Fox Television.

DBS operator EchoStar Communications engineers a \$26-billion bid for competitor DirecTV, owned by GM's Hughes Corp. The move follows attempts by Rupert Murdoch's News Corp. to acquire DirecTV. But regulatory reviews keep the deal in limbo.

XM Satellite Radio begins broadcasting a nationwide radio service of 200 channels from two satellites—"Rock" and "Roll"—in orbit above the equator. The Washington-based company charges subscribers \$9.95 a month for the service. A rival, New York-based Sirius Satellite Radio, plans to launch a similar service later in the year.

The September 11 terrorist attacks on New York and Washington result in around-the-clock news coverage, dropping commercials. It's estimated that the networks lost \$200 million-\$300 million in the first four days of coverage. Four FM and nine New York TV stations whose antennas were on top of the World Trade Center are knocked off the air and several stations lost employees who had been manning the transmitters in Tower 1. Across the country, broadcasters raised money and arranged blood drives. The fall TV season is delayed, late-night talk/comedy shows are put on hiatus, the Emmy Awards are postponed, and several industry gatherings are canceled.

NBC buys Telemundo, the No. 2 U.S. Spanish-language TV network, for \$2.7 billion.

Comcast negotiates \$72 billion merger with rival cable operator AT&T Broadband, topping bids by AOL Time Warner and Cox Communications.

Cable network launches include ABC Family, Hallmark Channel, and National Geographic Television.

2002

Sirius Satellite Radio launches its satellite-delivered subscription radio service in four markets in February, then rolls out nationally in July. Sirius follows XM Satellite Radio to become the second U.S. satellite radio programmer.

Prompted by lawsuits from Fox, Viacom, NBC, and Time Warner, a three-judge panel of the federal appeals court in Washington refuses to uphold an FCC rule limiting a TV station group owner's audience reach to 35 percent of U.S. TV households and strikes down a rule barring a cable system from owning TV stations in its market. The court orders the FCC to rewrite or justify the ownership limit rule.

Tom Brokaw of NBC News announces he will step down as evening news anchor after the 2004 presidential election, to be succeeded by NBC's Brian Williams.

Brokaw will then focus on in-depth reporting projects.

The Securities and Exchange Commission begins a formal investigation into the accounting practices of cable MSO Adelphia Communications. Five of Adelphia's top executives—including founder John Rigas and his two sons, Michael and Tim—are arrested on fraud charges, alleging that the family used the company as a "personal piggy bank," financing various personal transactions, including \$3.1 billion in loans for stock and family businesses.

The FCC mandates that all TV sets must be equipped with digital tuners by 2007 and proposes strong copy-protection measures intended to prevent widespread copying and streaming of content over the Internet.

Lifestyle diva Martha Stewart, whose media empire included TV, magazines, and books, is investigated by the Justice Department for allegedly lying to federal authorities looking into insider trading involving Stewart's sale of ImClone Systems stock the day before it became public that the Food and Drug Administration had denied the company's application to market a new cancer drug.

In October, both the FCC and the Department of Justice reject DBS operator EchoStar Communications' proposed \$26-billion purchase of competitor DirecTV, and a revised agreement fails to sway either agency. In December, EchoStar withdrew its merger request from the FCC. Rupert Murdoch's News Corp., whose previous bid for DirecTV had been rebuffed, puts together a new deal.

2003

Rupert Murdoch's News Corp. receives FCC and Justice Department approval of its deal to acquire 34 percent of DBS operator DirecTV's parent company Hughes Electronics for \$6.6 billion in cash and stock.

New York City's Metropolitan Television Alliance agrees to place a new broadcast tower for New York-area television stations on top of the Freedom Tower, a 1,776-foot office tower that will be built on the site of the World Trade Center, where the stations' towers were located prior to 9/11. The MTVA comprises all the city's major TV broadcasters. After the terrorist attacks, most of the stations operated from backup facilities atop the Empire State Building. Ground is expected to be broken on the Freedom Tower in the summer of 2004, and broadcasters should begin operating from the tower by 2008.

The FCC releases new media ownership rules in response to a federal appeals court ruling in 2002. Among the changes: raising the national coverage cap for TV groups from 35 percent to 45 percent; allowing ownership of two TV stations (duopoly) in markets with five or more commercial stations; allowing ownership of three TV stations (tripoly) in markets with at least 18 stations; newspaper-TV cross-ownership is permitted in markets with at least four TV stations; radio-TV cross-ownership now include newspapers in the formula—owners in markets with nine or more TV stations face no cross-ownership restrictions per se but are limited by individual radio and TV limits applicable to specific markets. TV-duopoly owners would not be permitted to own newspapers in markets with fewer than nine TV stations. In markets with three or fewer TV stations, no cross-ownership of TV, radio, or newspapers is permitted. In markets with four to eight TV stations, an owner may form one of the following combos: (1) A daily newspaper, one TV station, up to one-half the number of radio stations permitted to one owner in that market. (2) A daily newspaper, the total number of radio stations permitted to one owner there, no TV stations. (3) Two TV stations and the total number of radio stations permitted there. Congress quickly reacts with legislation introduced by Rep. John Dingell (D-Mich.), which would restore the 35 percent

cap. Other critics of the new rules challenge them in federal court.

Liberty Media pays \$7.9 billion for Comcast's 56 percent stake in home shopping giant QVC. With 2002 sales of \$4.4 billion, QVC is not just the largest shopping network, it's the second-largest television network of any kind.

A panel of federal appeals court judges in Philadelphia agrees with public advocacy groups and imposes a stay of the FCC's new broadcast-ownership rules scheduled to take effect on September 4. The stay will remain in effect until lawsuits to overturn the new rules are settled. The Philadelphia court then decides to retain the case attacking the new FCC broadcast-ownership limits rather than granting broadcast networks' pleas to transfer it to a court in Washington.

The Bush White House brokered a surprise compromise over media deregulation by agreeing to permanently set the national TV station ownership cap at 39 percent of U.S. television households. That percentage allows Fox and Viacom to retain all their stations. Wielding a threat to veto a catch-all spending bill over a provision that would roll the limit back to 35 percent, aides to President Bush persuaded Senate Appropriations Committee Chairman Ted Stevens (R-Alaska) to back down from the tighter limit. Stevens' action came less than a week after he had persuaded reluctant House leadership to go along with the old level. The compromise splits the difference between the 45 percent limit set by the FCC in June and the previous 35 percent level that rank-and-file lawmakers on both sides of Capitol Hill had been pushing to reinstate. The agreement is part of a spending bill that funds the FCC and many other agencies in fiscal 2004.

After a 36-year run, the California Cable Telecommunications Association's annual Western Cable Show makes its curtain call in December, citing consolidation in the cable industry and economic pressure.

Cable network launches include Spike TV.

2004

NBC gets Federal Trade Commission approval for its \$14 billion purchase of Vivendi Universal Entertainment, its last regulatory hurdle. The FCC was not required to review the deal because it involved no station licenses. Among other things, NBC acquires USA Network and the Sci Fi Network. The new entity will be called NBC Universal.

Congress and the FCC react swiftly to the "wardrobe malfunction" that bared Janet Jackson's breast during the MTV-produced half-time entertainment in CBS TV's Super Bowl broadcast. Congress passes legislation that dramatically increases the limits on FCC fines for indecency violations.

Congress and the FCC take the first steps toward punishing stations that air "excessively" violent shows. Under orders from leaders of the House Commerce Committee, FCC Chairman Michael Powell by the end of the year will start investigating whether the commission should restrict onscreen violence. Cable can't count on immunity either. Growing ranks of lawmakers say cable must do more to make sure that children aren't exposed to potentially traumatizing content.

A panel of federal appeals court judges in Philadelphia concludes that the FCC wasn't justified in its June 2003 decision relaxing ownership restrictions in the newspaper, television, and radio industries. The rules, which were blocked from taking effect in September 2003, have been sent back to the FCC for a rewrite. A frustrated FCC Chairman Michael Powell criticized the decision, claiming that it created a "clouded and confused state of media law" and makes it nearly impossible for his agency to design standards for ownership limits.

Cable network launches include TV One.

The FCC and the Rules of Broadcasting

The following is the FCC's own overview of the laws and regulations that govern TV and radio stations. It is edited and printed here with the permission of the FCC. The agency invites those with questions about its rules and how it operates to visit its web site (www.fcc.gov) or to call 1-888-CALLFCC (1-888-225-5322).

THE FCC AND ITS REGULATORY AUTHORITY

The Communications Act

The FCC was created by Congress in the Communications Act of 1934 for the purpose, in part, of "regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all the people of the United States a rapid, efficient, Nation-wide, and worldwide wire and radio communications service...." The Communications Act authorizes the FCC to "make such regulations not inconsistent with law as it may deem necessary to prevent interference between stations and to carry out the provisions of Act.

How the FCC Adopts Regulations

Like most other federal agencies, the FCC cannot adopt regulations without first notifying and seeking comment from the public. The agency releases a document called a Notice of Proposed Rulemaking, where it explains the specific regulations being proposed and set a deadline for public comment. After receiving the comments, the FCC has several options: (1) adopt the proposed rules; (2) adopt a modified version of the proposed rules; (3) ask for public comment on additional issues relating to the proposals; or (4) end the rulemaking proceeding without adopting any rules at all. The FCC also establishes broadcast regulatory policies through individual cases that it decides.

The FCC and the Media Bureau

The FCC has five commissioners who are appointed by the President and confirmed by the Senate. Under the commissioners are various operating bureaus, one of which is the Media Bureau. The Media Bureau has day-to-day responsibility for developing, recommending and administering the rules governing radio and television stations. These rules are in Title 47 of the Code of Federal Regulations ("CFR"), Parts 73 and 74. The rules of practice and procedure are in Part 1 of Title 47.

FCC REGULATION OF BROADCAST TV AND RADIO

The FCC allocates new stations based both on the relative needs of communities for additional broadcast outlets and on engineering standards that prevent interference between stations. Whenever it looks at a broadcast station application—whether to build, modify, renew or sell—it must determine if granting it would serve the public interest. The FCC expects stations to be aware of the important problems or issues in their communities and to foster public understanding by presenting some programs and/or announcements about local issues. However, broadcasters—not the FCC or any other government agency—are responsible for selecting all the material they air. The Communications Act prohibits the FCC from censoring broadcast matter and, therefore, its role in overseeing the content of programming is limited. It is authorized to fine a station or revoke its license if it has, among other things, aired obscene language, broadcast indecent language when children are likely to be in the audience, broadcast some types of lottery information, or solicited money under false pretenses.

THE LICENSING OF TV AND RADIO STATIONS

Commercial and Noncommercial-Educational Stations

The FCC licenses radio and TV stations to be either commercial or noncommercial-educational. Commercial

stations generally support themselves by advertising. In contrast, noncommercial-educational stations (including public stations) generally support themselves by contributions from listeners and viewers, and they may also receive government funding. Noncommercial-educational stations may also receive contributions from for-profit entities, and they may acknowledge such contributions or underwriting donations with announcements naming and generally describing the entity. However, noncommercial-educational stations may not broadcast promotional announcements or commercials on behalf of for-profit entities.

Applications to Build New Stations; Length of the License Period

To build a new TV or radio station, a citizen must first apply to the FCC for a construction permit. The applicant must demonstrate that he is qualified to construct and operate as proposed in the application. After the applicant has built the station, he must file a license application, where he certifies that he has constructed the station consistently with the construction permit. The FCC licenses radio and TV stations for a period of up to eight years. Before the FCC renews a station's license, it must first determine whether it has served the public interest. In addition, to have its license renewed, a station must certify that: (1) it has sent us certain specified reports that we require; (2) its ownership is consistent with Section 310(b) of the Communications Act, which restricts interests held by foreign governments and non-citizens; (3) there has not been a judgment against it by a court or administrative body under federal, state, or local law; and (4) it has placed certain specified material in its public inspection file (see below).

Employment Discrimination and Equal Employment Opportunity (EEO)

The FCC requires all radio and TV stations to afford equal opportunity in employment. We also prohibit employment discrimination on the basis of race, color, religion, national origin, or sex.

Public Participation in Licensing Process

Renewal Applications. Citizens can file a formal protest against a station by filing a formal petition to deny its renewal application, or by sending us an informal objection to the application. The citizen must file a petition to deny the application by the end of the first day of the last full calendar month of the expiring license term. (For example, if the license expires on December 31, the petition must be filed by the end of the day on December 1.) Before a citizen files a petition to deny an application, he should check the FCC's rules and policies to make sure that the petition complies with the procedural requirements. Before their licenses expire, stations have to broadcast announcements giving the date the license will expire, the date on which a renewal application must be filed, and the date by which formal petitions against it must be filed. A citizen can file an informal objection at any point until the FCC grant or deny the application.

Other Types of Applications. Citizens may also participate formally in the application process when a station is sold (technically called an assignment of the license), undergoes a major stock transfer (technically called a transfer of control), or proposes major construction. The station owner is required to run a series of advertisements in the closest local newspaper when it files these types of applications. Later, the FCC will also run a Public Notice (all FCC Public Notices are placed on our Internet home page at www.fcc.gov) and open a 30-day period during which you may file petitions to deny these applications. As with renewal applications, you can also file an informal objection at any point until we either grant or deny the application.

BROADCAST PROGRAMMING

The FCC and Freedom of Speech

The First Amendment and federal law generally prohibit

from censoring broadcast material and from interfering with freedom of expression in broadcasting. Individual radio and TV stations are responsible for selecting everything they broadcast and for determining how they can best serve their communities. Stations are responsible for choosing their entertainment programming, as well as their programs concerning local issues, news, public affairs, religion, sports events, and other subjects. They also decide how their programs (including call-in shows) will be conducted and whether to edit or reschedule material for broadcasting. The FCC does not substitute its judgment for that of the station, and it does not advise stations on artistic standards, format, grammar, or the quality of their programming. This also applies to a station's commercials, with the exception of commercials for political candidates during an election (see below).

Access to Station Facilities

Stations are not required to broadcast everything that is offered or suggested to them. Except as required by the Communications Act, stations have no obligation to have any particular person participate in a broadcast or to present that person's remarks. Further, no federal law or rule requires stations to broadcast "public service announcements" of any kind. The FCC generally does not require stations to keep the material they broadcast.

Station Identification

Stations must make identification announcements when they sign on and off for the day. They must also make the announcements hourly, as close to the hour as possible, at a natural programming break. TV stations may make these announcements on-screen or by voice only. Official station identification includes the station's call letters followed by the community or communities specified in its license as the station's location. Between the call letters and its community, the station may insert the name of the licensee, the station's channel number, and/or its frequency. However, we do not allow any other insertion.

Broadcast Journalism

Under the First Amendment and the Communications Act, the FCC cannot tell stations how to select material for news programs, and we cannot prohibit the broadcasting of an opinion on any subject. We also do not review anyone's qualifications to gather, edit, announce, or comment on the news; these decisions are the station's responsibility.

Broadcasts by Candidates for Public Office (Equal Time)

When a qualified candidate for public office has been permitted to use a station, the law requires the station to "afford equal opportunities to all other such candidates for that office." The Act also states that the station "shall have no power of censorship over the material broadcast" by the candidate. The FCC exempts the following: (1) An appearance by a legally qualified candidate on a bona fide newscast, interview or documentary (if the appearance of the candidate is incidental to the presentation of the subject covered by the documentary); or (2) on-the-spot coverage of bona fide news events, including political conventions and related incidental activities.

Children's Television Programming

Throughout its license term, every TV station must serve the educational and informational needs of children both through its overall programming. It must also broadcast programming that is specifically designed to serve those needs. The FCC considers programming to be educational and informational if it furthers the educational and informational needs of children 16 years old and under (this includes their intellectual/cognitive or social/emotional needs). A program

The FCC and the Rules of Broadcasting

is considered to be "specifically designed to serve educational and information needs of children" if (1) that it is its principal purpose; (2) it is aired between the hours of 7:00 a.m. and 10:00 p.m.; (3) it is a regularly scheduled weekly program; and (4) it is at least 30 minutes in length. Commercial TV stations must identify programs specifically designed to educate and inform children at the beginning of the program, in a form left to their discretion, and must provide information identifying such programs to publishers of program guides. Additionally, in TV programs aimed at children 12 and under, advertising may not exceed 10.5 minutes an hour on weekends and 12 minutes an hour on weekdays.

Criticism, Ridicule, and Humor Concerning Individuals, Groups, and Institutions

The First Amendment's guarantee of freedom of speech protects programming that stereotypes or otherwise offends people with regard to their religion, race, national background, gender, or other characteristics. It also protects broadcasts that criticize or ridicule established customs and institutions, including the government and its officials.

Clear and Present Danger

The First Amendment protects advocacy of using force or of violating the law. However, the Supreme Court has said that the government may curtail speech if it is both: (1) intended to incite or produce dangerous activity; and (2) likely to succeed in achieving that result. Even where this "clear and present danger" test is met, the FCC believes that any review that might lead to a curtailment of speech should be performed by the appropriate criminal law enforcement authorities, and not by the FCC.

Obscenity and Indecency

Federal law prohibits the broadcasting of obscene programming and regulates the broadcasting of "indecent" language and images. Obscene speech is not protected by the First Amendment and cannot be broadcast at any time. To be obscene, material must have all three of the following characteristics: (1) an average person, applying contemporary community standards, must find that the material, as a whole, appeals to the prurient interest; (2) the material must depict or describe, in a patently offensive way, sexual conduct specifically defined by applicable law; and (3) the material, taken as a whole, must lack serious literary, artistic, political, or scientific value. Indecent speech is protected by the First Amendment and cannot be outlawed. However, the courts have upheld Congress's prohibition of the broadcast of indecent speech during times of the day when there is a reasonable risk that children may be in the audience. The FCC has decided that those times fall between 6:00 a.m. and 10:00 p.m. In other words, stations may only broadcast indecent material between 10 p.m. and 6 a.m. Indecent speech is defined as "language or material that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards for the broadcast medium, sexual or excretory organs or activities." Profanity that does not fall under one of the above two categories is fully protected by the First Amendment and cannot be regulated.

Violent Programming

Neither the law nor FCC rules regulate violent programming. However, the law requires TV sets with screens 13 inches or larger to be equipped with V-chip technology, which allows parents to program their TV sets to block display of TV programming that carries a certain rating. The rating system, voluntarily created by the television industry, tags programming that contains sexual, violent, or other indecent material programmers believe may be harmful to children.

Station-Conducted Contests

Stations that broadcast or advertise information about a contest that they conduct must fully and accurately disclose the material terms of the contest, and they must conduct the contest substantially as announced or advertised. Contest descriptions may not be false, misleading, or deceptive with respect to any material term. Material terms include the factors that define the operation of the contest and affect participation.

Broadcast Hoaxes

Broadcasting false information concerning a crime or a catastrophe violates the FCC's rules if: (1) the

station knew the information was false; (2) broadcasting the false information directly caused substantial public harm; (3) and it was foreseeable that broadcasting the false information would cause substantial public harm. In this context, a "crime" is an act or omission that makes the offender subject to criminal punishment by law, and a "catastrophe" is a disaster or imminent disaster involving violent or sudden events affecting the public. "Public harm" must begin immediately; it must cause direct and actual damage to property or to the health or safety of the general public, or diversion of law enforcement or other public health and safety authorities from their duties.

Lotteries

The law prohibits broadcasting any advertisement for a lottery or any information concerning a lottery. A lottery is any game, contest, or promotion that contains the elements of prize, chance, and "consideration" (a legal term that means an act or promise that is made to induce someone into an agreement). There are a number of exceptions to this prohibition. Some of the exceptions are: (1) lotteries conducted by a state acting under the authority of state law, where the advertisement or information is broadcast by a radio or TV station licensed to a location in that state or in any other state that conducts such a lottery; (2) gaming conducted by an Indian Tribe under the Indian Gaming Regulatory Act; (3) lotteries authorized or not otherwise prohibited by the state in which they are conducted, and which are conducted by a not-for-profit organization or a governmental organization; and (4) lotteries conducted as a promotional activity by commercial organizations that are clearly occasional and ancillary to the primary business of that organization, as long as the lotteries are authorized or not otherwise prohibited by the state in which they are conducted.

Soliciting Funds

No federal law prohibits broadcast requests for funds for legal purposes (including appeals by stations for contributions to meet their operating expenses) if the money or other valuable things contributed are used for the announced purposes. It is up to an individual station to decide whether to permit fund solicitations. Fraud by wire, radio or television is prohibited by federal law and may lead to FCC sanctions, as well as to criminal prosecution by the U.S. Department of Justice.

Broadcasting Telephone Conversations

Before recording a telephone conversation for broadcast, or broadcasting a telephone conversation live, a station must inform any party to the call of its intention to broadcast the conversation. However, this does not apply to conversations whose broadcast can reasonably be presumed (for example, telephone calls to programs where the station customarily broadcasts the calls).

BROADCASTING AND ADVERTISING

Business Practices, Advertising Rates, and Profits

Except with respect to political advertisements, the FCC does not regulate a station's advertising rates or its profits. Rates charged for broadcast time are matters for negotiation between sponsors and stations. Further, except for certain classes of political advertisements, stations are free to accept or reject any advertising.

Sponsorship Identification

Sponsorship identification or disclosure must accompany any material that is broadcast in exchange for money, service, or anything else of value paid to a station, either directly or indirectly. This announcement must clearly say that the time was purchased and by whom. In the case of advertisements for commercial products or services, it is sufficient to announce the sponsor's corporate or trade name, or the name of the sponsor's product when it is clear that the mention of the product constitutes a sponsorship identification.

Underwriting Announcements on Noncommercial - Educational Stations

Noncommercial educational stations may acknowledge contributions over the air, but they may not promote the goods and services of for-profit donors or underwriters. Acceptable "enhanced underwriting" acknowledgements may include (1) logograms and slogans that identify

but do not promote; (2) location information; (3) value-neutral descriptions of a product line or service; and (4) brand names, trade names, and product service listings. However, such acknowledgements may not interrupt a noncommercial station's regular programming.

Amount of Advertising

Except with respect to children's television programming, no law or regulation limits the amount of commercial matter that a station may broadcast. In TV programs aimed at children 12 and under, advertising may not exceed 10.5 minutes an hour on weekends and 12 minutes an hour on weekdays.

Loud Commercials

In surveys and technical studies of broadcast advertising, the FCC has found that loudness is a judgment that varies with each listener and is influenced by many factors (such as an announcement's content and style). We have also found no evidence that stations deliberately raise audio and modulation levels to emphasize commercial messages. Broadcast licensees have primary responsibility for the adoption of equipment and procedures to avoid objectionably loud commercials. Citizens should address any complaint about such messages to the station. They should identify each message by the sponsor or product's name and by the date and time of the broadcast.

False or Misleading Advertising

The Federal Trade Commission has primary responsibility for determining whether an advertisement is false or deceptive and for taking action against the sponsor. Also, the Food and Drug Administration has primary responsibility for the safety of food and drug products. Citizens should contact these agencies regarding advertisements that they believe may be false or misleading.

Offensive Advertising

Unless a broadcast advertisement is found to be in violation of a specific law or regulation, the government cannot take action against it. If a citizen thinks that an advertisement is offensive because of the kind of item advertised, the scheduling of the announcement, or the way the message is presented, then he should address his complaint directly to the stations and networks involved. This will help them become better informed about audience opinion.

Tobacco and Alcohol

The law prohibits advertising for cigarettes, little cigars, smokeless tobacco, or chewing tobacco on radio, TV, or any other medium of electronic communication under the FCC's jurisdiction. The law does not ban the advertising of smoking accessories, cigars, pipes, pipe tobacco, or cigarette-making machines. Congress has not enacted any law prohibiting broadcast advertising for any kind of alcoholic beverage. Also, the FCC does not have a rule or policy regulating advertisements for alcoholic beverages. Most broadcasters have voluntarily abstained from advertising hard liquor, although they accept beer and wine advertising.

Subliminal Programming

The FCC sometimes receives complaints regarding the alleged use of subliminal techniques in radio and TV programming. Subliminal programming is designed to be perceived on a subconscious level only. Regardless of whether it is effective, the use of subliminal perception is inconsistent with a station's obligation to serve the public interest because the broadcast is intended to be deceptive. However, it is not specifically prohibited.

INTERFERENCE

Blanketing Interference

Some people who are close to a radio station's transmitting antenna may experience impaired reception of other stations. This is called "blanketing" interference. The FCC requires the station causing the interference to resolve most interference complaints received within the first year of operation at no cost to the person complaining. However, stations are not required to resolve interference complaints based on malfunctioning or mistuned receivers, improperly installed antenna systems, or the use of high gain antennas or antenna

booster amplifiers. Mobile receivers and non-radio frequency (RF) devices such as tape recorders or CD players are also excluded. Stations are not financially responsible for resolving interference complaints located outside the blanketing contour.

THE LOCAL PUBLIC INSPECTION FILE

Requirement to Maintain a Public Inspection File

The FCC requires all TV and radio stations and applicants for new stations to maintain a file available for public inspection containing documents relevant to the station's operation. The public inspection file generally must be maintained at the station's main studio. The station must make its public inspection file available at its main studio at any time during regular business hours. A station that chooses to maintain all or part of its public file in a computer database must provide a computer terminal to those who wish to review the file. Stations must keep the following materials in their public inspection file:

The License. Stations must keep a copy of their current FCC license in the public file, together with any material documenting FCC-approved modifications to the license. The license reflects the station's technical parameters (authorized frequency, call letters, operating power, transmitter location, etc.), as well as any special conditions imposed by the FCC on the station's operation. The license also indicates when it was issued and when it will expire.

Applications and Related Materials. The public file must contain copies of all applications that are pending before either the FCC or the courts. These include applications to sell the station or to modify its facilities (for example, to increase power, change the antenna system, or change the transmitter location); copies of any construction or sales application whose grant required the FCC to waive our rules; applications that required the FCC to waive its rules; renewal applications granted for less than a full license term (the FCC grants short-term renewals when it is concerned about the station's performance over the previous term).

Citizen Agreements. Stations must keep a copy of any written agreements they make with local viewers or listeners. These "citizen agreements" deal with programming, employment, or other issues of community concern. The station must keep these agreements in the public file for as long as they are in effect.

Contour Maps. The public file must contain copies of any service contour maps or other information submitted with any application filed with the FCC that reflects the station's service area and/or its main studio and transmitter location. These documents must stay in the file for as long as they remain accurate.

Material Relating to an FCC Investigation or a Complaint. The station must keep this material until

the FCC notifies it that the material may be discarded. Since the FCC is not involved in disputes regarding matters unrelated to the Communications Act or our rules, stations do not have to keep material relating to such matters in the public file.

Ownership Reports and Related Material. The public file must contain a copy of the most recent, complete Ownership Report filed for the station. This report has the names of the owners of the station and their ownership interests, lists any contracts related to the station that are required to be filed with the FCC, and identifies any interest held by the station licensee in other broadcast stations.

List of Contracts Filed with the FCC. Stations have to keep either a copy of all the contracts that they have to file with the FCC, or an up-to-date list identifying all such contracts. If the station keeps a list and you ask to see copies of the actual contracts, the station must give them to you within seven days. Such contracts include network affiliation contracts; contracts relating to ownership or control of the licensee or permittee or its stock. Examples include articles of incorporation, bylaws, agreements providing for the assignment of a license or permit or affecting stock ownership or voting rights (stock options, pledges, or proxies), and mortgage or loan agreements that restrict the licensee or permittee's freedom of operation; management consultant agreements with independent contractors, and station management contracts that provide for a percentage of profits or sharing of losses.

Political File. Stations must keep a file containing records of all requests for broadcast time made by or for a candidate for public office. The file must identify how the station responded to such requests and (if the request was granted) the charges made, a schedule of the time purchased, the times the spots actually aired, the rates charged, and the classes of time purchased. The file must also reflect any free time provided to a candidate. The station must keep the political records for two years after the spot airs. You can find the political broadcasting rules elsewhere in this manual.

Letters and E-Mail from the Public. Commercial stations must keep written comments and suggestions received from the public regarding their operation for at least three years. Noncommercial stations are not subject to this requirement.

Issues/Programs List. Every three months, all stations must prepare and place in their file a list of programs that have provided their most significant treatment of community issues during the preceding three months. The list must briefly describe both the issue and the programming where the issue was discussed. The stations must keep these lists for the entire license term.

Children's Television Programming Reports. The Children's Television Act of 1990 and our rules require all TV stations to air programming that serves the educational and informational needs of children 16 and under, including programming that is specifically designed to serve such needs. In addition, commercial TV stations must make and retain Children's Television Programming Reports identifying the educational and

informational programming for children aired by the station. (Noncommercial stations are not required to prepare these reports.) The report must include the name of the person at the station responsible for collecting comments on the station's compliance with the law. The station has to prepare these reports each calendar quarter, and it must place them in the public file separately from the file's other material. Stations must keep the reports for the remainder of their license terms. You can also view each station's reports on our web site at <http://www.fcc.gov—b/policy/kidstv.html>.

Records Regarding Children's Programming Commercial Limits. The Children's Television Act of 1990 and our rules limit the type and amount of advertising that may be aired in TV programming directed to children 12 and under. On weekends, commercial television stations may air no more than 10.5 minutes of commercials per hour during children's programming, and no more than 12 minutes on weekdays. Stations must keep records that substantiate compliance with these limits.

Radio Time Brokerage Agreements. A time brokerage agreement is a type of contract that generally involves a station's sale of discrete blocks of air time to a broker, who then supplies the programming to fill that time and sells the commercial spot announcements to support the programming. Commercial radio stations must keep a copy of every agreement involving: (1) time brokerage of that station; or (2) time brokerage by any other station owned by the same licensee.

List of Donors. Noncommercial TV and radio stations must keep a list of donors supporting specific programs for two years after the program airs.

Local Public Notice Announcements. When someone files an application to build a new station or to renew, sell, or modify an existing station, the FCC often requires the applicant to make a series of local announcements to inform the public of the application's existence and nature.

Must-Carry or Retransmission Consent Election. There are two ways that a broadcast TV station can choose to be carried on a cable TV system: "must-carry" and "retransmission consent." All TV stations are generally entitled to be carried on cable television systems in their local markets. A station that chooses to exercise this must-carry right receives no compensation from the cable system. Instead of exercising their must-carry rights, TV stations may choose to receive compensation from a cable system in return for granting permission to the cable system to carry the station. This option is available only to commercial TV stations. Every three years, commercial TV stations must decide whether their relationship with each local cable system will be governed by must-carry or by retransmission consent agreements. Each commercial station must keep a copy of its decision in the public file for the three-year period to which it pertains. Noncommercial stations are not entitled to compensation in return for carriage on a cable system, but they may request mandatory carriage on the system. A noncommercial station making this request must keep a copy of the request in the public file for the duration of the period to which it applies.