

XV. Appendix D: Figure 28

Figure 28: Total Access Lines, Telephone Numbers, and Retail Revenue Input Data

State	1996 Access Lines (in millions)	1995/1996 Number of Telephone Numbers (in millions)	1996 Interstate Retail Revenues (dollars in millions)	1996 State Retail Revenues (dollars in millions)
AK	0.4	0.2	192.4	265.0
AL	2.3	3.1	978.1	1,694.0
AR	1.3	1.3	589.1	921.0
AZ	2.5	3.5	1,403.0	1,454.0
CA	20.8	30.6	6,945.8	15,562.0
CO	2.5	3.5	1,385.7	1,716.0
CT	2.0	2.9	1,145.4	1,542.0
DC	0.9	1.4	410.2	447.0
DE	0.5	0.8	279.8	234.0
FL	9.9	14.4	4,657.2	6,727.0
GA	4.5	6.0	2,361.3	3,417.0
HI	0.7	1.0	297.1	459.0
IA	1.5	1.7	699.4	1,009.0
ID	0.6	0.8	365.1	390.0
IL	7.7	11.1	3,029.3	5,158.0
IN	3.3	4.7	1,310.2	2,335.0
KS	1.5	1.9	696.5	1,027.0
KY	2.0	2.5	989.3	1,547.0
LA	2.3	3.2	970.7	1,745.0
MA	4.3	6.3	1,898.2	3,003.0
MD	3.3	5.0	1,603.1	2,253.0
ME	0.8	0.9	349.1	481.0
MI	6.0	8.6	1,971.8	4,588.0
MN	2.8	3.6	1,197.8	1,839.0
MO	3.2	4.4	1,342.3	2,126.0
MS	1.3	1.7	591.7	989.0
MT	0.5	0.5	265.4	340.0
NC	4.5	6.2	1,997.1	3,304.0
ND	0.4	0.4	223.9	290.0
NE	1.0	1.2	450.1	766.0
NH	0.8	1.1	483.3	491.0
NJ	5.9	8.7	3,184.0	3,854.0
NM	0.9	1.1	504.6	597.0
NV	1.1	1.6	679.2	531.0
NY	12.3	17.6	5,446.3	9,022.0
OH	6.5	9.3	2,668.2	5,327.0
OK	1.9	2.4	791.5	1,176.0
OR	1.9	2.5	920.7	1,212.0
PA	7.7	10.8	3,183.2	4,796.0
PR	1.2	1.7	307.8	940.0
RI	0.6	0.9	319.5	363.0
SC	2.0	2.2	996.5	1,553.0
SD	0.4	0.4	224.6	272.0
TN	3.2	4.1	1,420.0	2,120.0
TX	11.3	16.0	4,253.4	7,986.0
UT	1.0	1.4	527.4	591.0
VT	4.2	6.0	2,095.2	2,850.0
VA	0.4	0.5	226.9	253.0
WA	3.3	4.6	1,579.3	2,267.0
WI	3.2	3.8	1,153.7	2,132.0
WV	0.9	1.1	430.9	674.0
WY	0.3	0.3	173.9	176.0
Total	166.2	231.6	72,166.5	116,811.0

XV. Appendix D: Figure 29

Figure 29: Input Data from the Two Proxy Models, Non-Rural Amounts for the HCF by State

State	BCPM Non-Rural HCF (dollars in millions)			HAI Non-Rural HCF (dollars in millions)		
	\$30	\$40	\$50	\$30	\$40	\$50
AK	2	1	1	1	1	1
AL	320	227	175	78	42	23
AR	158	117	95	26	17	12
AZ	152	97	67	28	21	16
CA	490	345	283	77	54	41
CO	150	109	93	44	28	20
CT	58	20	9	6	1	0
DC	0	0	0	0	0	0
DE	19	11	6	3	0	0
FL	271	136	96	46	25	14
GA	281	182	135	46	24	14
HI	22	13	10	14	9	5
IA	170	136	119	32	20	13
ID	103	99	76	24	16	11
IL	375	8	230	81	50	30
IN	292	201	151	56	28	13
KS	161	135	121	34	23	16
KY	255	190	148	51	23	8
LA	259	165	153	50	28	46
MA	71	29	17	9	3	2
MD	85	43	26	19	7	3
ME	87	64	49	27	14	9
MI	340	232	174	53	23	12
MN	290	236	205	78	55	40
MO	394	314	267	120	79	53
MS	320	252	207	84	52	32
MT	86	74	68	19	14	12
NC	394	238	156	106	50	21
ND	44	40	38	11	9	7
NE	137	120	110	55	43	23
NH	59	39	29	17	8	0
NJ	44	13	6	3	1	10
NM	100	77	66	19	12	3
NV	171	146	136	25	22	28
NY	331	218	159	109	61	22
OH	404	260	187	74	30	14
OK	234	179	151	57	37	28
OR	139	103	86	25	14	8
PA	373	233	162	93	44	16
PR	42	9	3	1	0	0
RI	15	5	2	1	0	0
SC	154	80	65	17	5	2
SD	63	56	53	13	10	8
TN	248	158	112	43	19	7
TX	989	759	648	217	147	104
UT	39	26	21	12	9	7
VT	322	13	170	100	55	26
VA	53	39	30	15	8	4
WA	229	167	142	50	35	26
WI	213	160	129	32	14	7
WV	237	183	147	51	29	15
WY	64	57	53	14	11	9
Total	10,309	6,812	5,841	2,268	1,332	838

XV. Appendix D: Figure 30

Figure 30: Input Data, Rural Amounts for the HCF by State

State	Rural HCF
	(dollars in millions)
	Total
AK	63
AL	27
AR	65
AZ	26
CA	43
CO	41
CT	1
DC	0
DE	0
FL	21
GA	61
HI	0
IA	30
ID	18
IL	23
IN	17
KS	57
KY	22
LA	63
MA	0
MD	1
ME	16
MI	30
MN	36
MO	41
MS	19
MT	42
NC	24
ND	23
NE	20
NH	8
NJ	1
NM	32
NV	9
NY	37
OH	15
OK	58
OR	36
PA	18
PR	0
RI	0
SC	38
SD	19
TN	28
TX	95
UT	8
VT	12
VA	10
WA	20
WI	51
WV	19
WY	18
Total	1,360

XV. Appendix D: Figure 31

Figure 31: Input Data from the Two Proxy Models, Totals (Rural and Non-Rural) for Options 1A, 1B, and 1C

State	BCPM Total Access Lines (in millions)	BCPM Total Monthly Cost per Line (in millions)	HAI Total Access Lines (in millions)	HAI Total Monthly Cost per Line (in millions)
	Average Cost	Average Cost	Average Cost	Average Cost
AK	NA	NA	NA	NA
AL	2	45.17	2	29.89
AR	1	54.69	1	33.81
AZ	2	36.94	2	20.62
CA	21	26.70	12	14.04
CO	2	35.16	2	23.78
CT	2	29.88	1	18.91
DC	1	30.47	0	17.77
DE	1	21.03	0	11.75
FL	10	30.41	7	16.79
GA	4	37.57	3	23.59
HI	1	28.08	0	18.09
IA	2	52.45	1	31.37
ID	1	45.84	0	32.29
IL	8	31.30	5	18.31
IN	3	38.29	2	22.35
KS	2	44.33	1	32.53
KY	2	45.33	1	27.19
LA	2	39.05	2	23.59
MA	4	26.39	3	15.73
MD	3	28.43	2	17.24
ME	1	44.60	1	31.39
MI	6	34.61	4	19.69
MN	3	41.60	2	27.79
MO	3	43.36	2	27.49
MS	1	53.84	1	35.77
MT	0	56.28	0	59.22
NC	4	38.94	3	26.39
ND	0	56.55	0	60.09
NE	1	46.71	1	40.89
NH	1	36.16	1	23.38
NJ	6	23.90	3	14.16
NM	1	43.77	1	34.19
NV	1	46.87	1	20.60
NY	12	26.98	8	16.79
OH	6	33.94	4	19.81
OK	2	46.79	1	31.35
OR	2	38.12	1	24.45
PA	8	32.00	5	19.60
PR	NA	NA	NA	NA
RI	1	29.17	0	15.63
SC	2	42.07	1	25.19
SD	0	61.22	0	60.38
TN	3	39.98	2	25.08
TX	11	36.03	7	21.91
UT	1	33.04	1	22.65
VT	0	47.95	0	31.02
VA	4	35.55	3	22.43
WA	3	34.23	2	20.01
WI	3	40.01	2	23.80
WV	1	52.54	1	36.45
WY	0	50.12	0	44.93
Total	0	34.20	0	21.38

XV. Appendix D: Figure 32

Figure 32: Calculated 25% Interstate and 75% State Amounts, BCPM Model

State	BCPM 25% Interstate (dollars in millions)			BCPM 75% State (dollars in millions)		
	\$30	\$40	\$50	\$30	\$40	\$50
AK	0.6	0.2	0.2	1.7	0.7	0.5
AL	80.0	56.8	43.6	240.1	170.3	130.9
AR	39.5	29.2	23.8	118.5	87.7	71.3
AZ	37.9	24.3	16.6	113.7	72.9	49.9
CA	122.6	86.2	70.7	367.8	258.6	212.2
CO	37.6	27.3	23.2	112.8	82.0	69.7
CT	14.6	5.0	2.1	43.7	14.9	6.4
DC	0.0	0.0	0.0	0.1	0.0	0.0
DE	4.8	2.7	1.5	14.5	8.1	4.6
FL	67.8	34.0	24.1	203.3	102.1	72.2
GA	70.2	45.5	33.8	210.7	136.6	101.5
HI	5.5	3.3	2.5	16.4	10.0	7.4
IA	42.4	34.0	29.7	127.2	101.9	89.1
ID	25.8	24.8	18.9	77.3	74.3	56.7
IL	93.7	2.0	57.6	281.1	6.0	172.8
IN	73.1	50.1	37.7	219.2	150.4	113.1
KS	40.2	33.9	30.2	120.6	101.6	90.6
KY	63.7	47.4	37.0	191.2	142.3	111.0
LA	64.8	41.3	38.2	194.5	124.0	114.7
MA	17.6	7.2	4.3	52.9	21.5	12.9
MD	21.2	10.6	6.5	63.6	31.9	19.4
ME	21.7	15.9	12.3	65.2	47.7	36.8
MI	84.9	58.0	43.5	254.8	174.0	130.4
MN	72.5	58.9	51.3	217.6	176.8	154.0
MO	98.4	78.6	66.7	295.2	235.8	200.2
MS	79.9	62.9	51.6	239.7	188.7	154.9
MT	21.5	18.5	17.1	64.6	55.5	51.2
NC	98.5	59.5	39.1	295.6	178.5	117.2
ND	11.1	10.0	9.4	33.3	30.1	28.3
NE	34.3	29.9	27.6	102.9	89.7	82.8
NH	14.8	9.7	7.2	44.4	29.1	21.5
NJ	11.0	3.4	1.6	33.0	10.1	4.8
NM	24.9	19.1	16.6	74.8	57.4	49.7
NV	42.8	36.6	34.1	128.3	109.8	102.2
NY	82.9	54.5	39.7	248.6	163.6	119.2
OH	100.9	65.0	46.6	302.7	195.0	139.9
OK	58.4	44.7	37.7	175.2	134.1	113.2
OR	34.7	25.7	21.4	104.0	77.2	64.2
PA	93.3	58.2	40.5	279.9	174.5	121.5
PR	10.6	2.3	0.8	31.7	6.8	2.5
RI	3.8	1.2	0.5	11.4	3.7	1.4
SC	38.4	20.0	16.3	115.3	60.0	49.0
SD	15.8	14.1	13.1	47.4	42.3	39.4
TN	62.1	39.6	28.0	186.2	118.7	83.9
TX	247.2	189.7	161.9	741.5	569.2	485.8
UT	9.7	6.5	5.4	29.1	19.4	16.1
VT	80.5	3.2	42.5	241.6	9.5	127.4
VA	13.2	9.8	7.5	39.7	29.3	22.4
WA	57.3	41.8	35.4	171.8	125.5	106.2
WI	53.3	40.0	32.3	160.0	120.0	97.0
WV	59.3	45.8	36.8	177.8	137.4	110.5
WY	16.0	14.1	13.3	47.9	42.4	39.8
Total	2577.4	1703.1	1460.1	7732.1	5109.4	4380.4

XV. Appendix D: Figure 33

Figure 33: Calculated 25% Interstate and 75% State Amounts, HAI Model

State	HAI 25% Interstate (dollars in millions)			HAI 75% State (dollars in millions)		
	\$30	\$40	\$50	\$30	\$40	\$50
AK	0.4	0.3	0.3	1.1	1.0	1.0
AL	19.5	10.6	5.7	58.6	31.8	17.1
AR	6.5	4.3	3.1	19.6	12.8	9.3
AZ	7.1	5.2	4.1	21.3	15.5	12.2
CA	19.1	13.5	10.2	57.4	40.6	30.5
CO	11.0	7.1	5.0	33.1	21.2	14.9
CT	1.6	0.3	0.1	4.8	1.0	0.2
DC	0.0	0.0	0.0	0.0	0.0	0.0
DE	0.7	0.1	0.0	2.2	0.3	0.1
FL	11.6	6.2	3.5	34.9	18.5	10.5
GA	11.6	6.1	3.4	34.9	18.2	10.3
HI	3.5	2.3	1.3	10.6	6.9	4.0
IA	8.1	5.0	3.2	24.4	15.1	9.5
ID	6.1	4.1	2.8	18.2	12.4	8.5
IL	20.4	12.5	7.5	61.1	37.4	22.4
IN	14.0	7.0	3.2	42.0	21.0	9.5
KS	8.4	5.8	4.1	25.1	17.5	12.3
KY	12.7	5.7	2.1	38.1	17.0	6.3
LA	12.4	6.9	11.6	37.3	20.8	34.7
MA	2.2	0.8	0.4	6.7	2.5	1.1
MD	4.7	1.8	0.7	14.2	5.3	2.2
ME	6.7	3.6	2.1	20.2	10.9	6.4
MI	13.4	5.8	3.1	40.1	17.3	9.3
MN	19.6	13.7	9.9	58.7	41.1	29.7
MO	29.9	19.7	13.2	89.7	59.2	39.6
MS	21.0	12.9	7.9	63.0	38.8	23.7
MT	4.7	3.6	2.9	14.1	10.8	8.8
NC	26.6	12.4	5.3	79.7	37.3	16.0
ND	2.7	2.1	1.7	8.1	6.4	5.0
NE	13.7	10.8	5.9	41.2	32.4	17.6
NH	4.1	2.1	0.0	12.4	6.2	0.1
NJ	0.6	0.2	2.4	1.9	0.5	7.2
NM	4.9	3.1	0.7	14.6	9.3	2.2
NV	6.2	5.5	7.0	18.6	16.4	20.9
NY	27.2	15.2	5.4	81.7	45.5	16.2
OH	18.5	7.6	3.5	55.5	22.8	10.5
OK	14.2	9.3	6.9	42.6	27.9	20.7
OR	6.2	3.5	2.0	18.6	10.4	5.9
PA	23.4	11.0	4.0	70.1	32.9	12.0
PR	0.4	0.1	0.0	1.1	0.3	0.0
RI	0.3	0.0	0.0	0.8	0.1	0.0
SC	4.3	1.3	0.4	12.9	3.9	1.3
SD	3.2	2.4	1.9	9.5	7.2	5.8
TN	10.8	4.7	1.7	32.3	14.0	5.1
TX	54.3	36.7	26.0	162.8	110.1	78.1
UT	3.0	2.1	1.7	9.0	6.4	5.1
VT	24.9	13.7	6.5	74.8	41.0	19.6
VA	3.8	2.0	1.0	11.5	6.1	2.9
WA	12.6	8.7	6.5	37.7	26.1	19.5
WI	7.9	3.6	1.7	23.8	10.7	5.0
WV	12.8	7.3	3.7	38.3	22.0	11.0
WY	3.4	2.6	2.2	10.2	7.9	6.6
Total	566.9	332.9	209.6	1700.7	998.8	628.7

XV. Appendix D: Figure 34

Figure 34: Proxy Model Input Data for Option 3, Density Zone 1, Zone 2, and Total Zones (1 to 9), BCPM

State	BCPM	BCPM	BCPM	BCPM
	Interstate Zone 1, \$30	Interstate Zone 2, \$30	Interstate Zones 1 + 2, \$30	Interstate Total Zones (1 to 9), \$30
AK	0.2	0.8	0.9	2.3
AL	64.8	209.1	274.0	320.1
AR	51.1	80.7	131.8	158.0
AZ	40.0	34.0	74.0	151.6
CA	149.3	210.1	359.4	490.3
CO	63.1	54.8	117.9	150.4
CT	0.5	23.1	23.6	58.2
DC	0.0	0.0	0.0	0.1
DE	0.2	12.6	12.8	19.3
FL	43.7	111.2	154.8	271.1
GA	54.8	166.4	221.2	281.0
HI	4.5	10.3	14.8	21.9
IA	90.8	58.5	149.3	169.6
ID	52.5	42.2	94.6	103.1
IL	132.3	183.5	315.8	374.9
IN	25.3	218.2	243.5	292.3
KS	106.7	36.9	143.6	160.8
KY	33.2	195.4	228.6	255.0
LA	43.0	113.8	156.8	259.3
MA	1.8	29.3	31.1	70.5
MD	3.3	53.3	56.6	84.8
ME	11.5	60.8	72.3	87.0
MI	25.9	251.1	277.0	339.7
MN	130.5	125.3	255.8	290.2
MO	132.9	204.8	337.7	393.7
MS	89.4	200.7	290.1	319.5
MT	58.2	20.5	78.8	86.1
NC	27.4	272.6	300.0	394.2
ND	36.3	6.3	42.6	44.4
NE	100.8	26.1	126.8	137.1
NH	4.5	39.7	44.2	59.2
NJ	1.9	17.2	19.2	44.0
NM	49.8	33.6	83.3	99.7
NV	21.4	13.6	35.0	171.1
NY	18.0	241.0	259.0	331.4
OH	15.1	311.4	326.5	403.6
OK	91.4	108.4	199.8	233.6
OR	52.7	60.3	113.0	138.6
PA	20.3	255.6	275.9	373.1
PR	0.2	10.2	10.4	42.2
RI	0.0	5.0	5.1	15.2
SC	17.7	95.5	113.2	153.7
SD	46.9	11.7	58.6	63.2
TN	23.9	175.3	199.1	248.3
TX	412.9	402.5	815.4	988.6
UT	14.6	14.6	29.3	38.8
VT	28.9	248.7	277.6	322.2
VA	4.0	43.1	47.1	52.9
WA	94.6	81.4	176.0	229.0
WI	32.4	151.9	184.3	213.4
WV	33.5	176.6	210.1	237.1
WY	46.3	12.7	59.0	63.9
Total	2605.1	5522.3	8127.4	10309.4

XV. Appendix D: Figure 35

Figure 35: Proxy Model Input Data for Option 3, Density Zone 1, Zone 2, and Total Zones (1 to 9), HAI

State	HAI	HAI	HAI	HAI
	Interstate Zone 1, \$30	Interstate Zone 2, \$30	Interstate Zones 1 + 2, \$30	Interstate Total Zones (1 to 9), \$30
AK	0.4	0.5	0.9	0.9
AL	27.4	87.0	114.4	114.4
AR	19.2	18.9	38.1	38.1
AZ	20.3	9.6	29.9	29.9
CA	52.2	26.7	78.9	78.9
CO	39.2	19.0	58.3	58.3
CT	0.0	11.7	11.7	11.7
DC	0.0	0.0	0.0	0.0
DE	0.3	2.4	2.7	2.7
FL	21.9	31.7	53.6	53.6
GA	20.1	56.7	76.9	76.9
HI	5.9	1.3	7.2	7.2
IA	26.5	19.1	45.6	45.6
ID	20.3	10.6	30.9	30.9
IL	26.7	62.8	89.6	89.6
IN	1.8	68.1	69.8	69.8
KS	42.0	8.7	50.7	50.7
KY	4.8	53.8	58.6	58.7
LA	23.8	38.9	62.7	62.7
MA	0.1	10.7	10.9	10.9
MD	1.2	22.7	23.9	23.9
ME	8.2	23.3	31.5	31.5
MI	14.8	61.6	76.4	76.4
MN	57.3	47.8	105.2	105.2
MO	55.5	90.8	146.3	146.3
MS	41.2	77.2	118.4	118.4
MT	20.3	3.0	23.3	23.3
NC	10.0	141.4	151.4	151.6
ND	16.4	1.0	17.4	17.4
NE	52.5	15.2	67.7	67.7
NH	3.4	15.1	18.5	18.5
NJ	0.7	4.9	5.7	5.7
NM	24.2	5.8	30.0	30.0
NV	19.1	2.0	21.1	21.1
NY	11.1	115.4	126.4	126.5
OH	1.1	89.7	90.8	90.8
OK	41.4	36.6	78.0	78.0
OR	19.3	21.2	40.5	40.5
PA	9.4	97.6	107.1	107.1
PR	0.5	4.2	4.8	5.8
RI	0.0	1.1	1.1	1.1
SC	5.5	28.4	33.8	33.8
SD	19.0	0.8	19.7	19.7
TN	5.1	69.7	74.8	74.8
TX	161.2	109.7	270.8	271.3
UT	10.1	3.0	13.1	13.1
VT	4.5	103.9	108.4	108.6
VA	1.6	16.0	17.6	17.6
WA	41.1	20.6	61.7	61.7
WI	10.4	37.2	47.6	47.6
WV	5.9	56.4	62.3	62.3
WY	24.6	1.8	26.5	26.5
Total	1049.6	1863.4	2913.0	2915.2

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Notes

- ¹ FCC, *In the Matter of the Joint Board on Universal Service* (hereinafter referred to as *Universal Service Report*), CC Docket No. 96-45, *Report and Order*, FCC 97-157, May 8, 1997, ¶ 245, page 135.
- ² The FCC in its *Universal Service Report*, states "Consistent with the Joint Board's recommendation, we anticipate, however, that forward-looking support mechanisms that could be used for rural carriers within the continental United States will be developed within three years of release of this order." *Ibid.*, ¶ 293, page 160.
- ³ Carol Weinhaus, Sandra Makeeff, Brian Roberts, et al, *Options for the Universal Service Fund* (hereinafter referred to as *Options for Universal Service*), Presentation at the November 1997 NARUC Meeting, Boston, MA, Telecommunications Industries Analysis Project, Boston, MA, October 15, 1997.
- ⁴ The order of the options in this paper does not indicate preference for one over another.
- ⁵ *Telecommunications Act of 1996*, Pub. L. No. 104-104, February 8, 1996 (hereinafter referred to as the *Act of 1996*). For more details, see U.S. Congress, House of Representatives, 104th Congress, 2d Session, Report 104-458, *Telecommunications Act of 1996, Conference Report to Accompany S. 652* (hereinafter referred to as the *Conference Report*).
- ⁶ For information on these models, see the model sponsors. For the BCPM, Version 3.0, see U S WEST, Sprint, and BellSouth, January 14, 1998. For the HAI Model, see HAI, Release 5.0A, HAI Associates, Inc., Boulder, CO, February 16, 1998.
- ⁷ The old USF non-rural and rural amounts are based on the 1997 *USF Submission* by the National Exchange Carrier Association (NECA). The 1998 calculations for weighted DEM and LTS amounts for 1995 are from a USAC letter to the FCC, October 31, 1997. Starting January 1, 1998, LTS is calculated on a new basis. Lifeline support and Link-up support are from the USAC letter to the FCC, October 31, 1997. The support for schools, libraries, and rural health care providers is based on the amount of the annual cap set in the *Code of Federal Regulations (CFR)*.

Figure 1 in the paper uses the maximum amount for the schools, libraries, and rural health care subsidies. "The annual cap on federal universal support for schools and libraries shall be \$2.25 billion per funding year." 47 C.F.R. § 54.507 (August 1, 1997). "The annual cap on federal universal service support for health care providers shall be \$400 million per funding year." 47 C.F.R. § 54.623 (August 1, 1997). On December 16, 1997, the FCC's *Third Order on Reconsideration*, CC Docket 96-45 reduced this maximum amount for collection during the first six months of 1998. The FCC projections for this first quarter were \$25 million for rural health care \$300 million for schools and libraries. *FCC First Quarter 1998 Universal Service Contribution Factors Revised and Approved*, CC Docket No. 96-25, *Public Notice*, DA 97-2623, December 16, 1997.
- ⁸ The total (rural and non-rural) costs for the provision of local service (from the BCPM and HAI proxy models) are included in the algorithm of the Ad Hoc Proposal. The Ad Hoc Proposal's algorithm then computes the levels of support used for Options 1A, 1B, and 1C.
- ⁹ See **Section XV, Appendix C**, for the assumptions and selections regarding these benchmarks.
- ¹⁰ The data used in this paper may differ from the model's defaults since only non-rural data is used (with the exception of Options 1A, 1B, and 1C which use total outputs).
- ¹¹ *Options for the Universal Service*, page 3.
- ¹² NARUC Ad Hoc Working Group on Funding for High Cost Areas, *High Cost Support: An Alternative Distribution Proposal, Executive Summary* (hereinafter referred to as *Ad Hoc Proposal*), ex parte filing CC Docket 96-45 with the FCC, February 20, 1998, page 2.
- ¹³ *Ad Hoc Proposal*, page 15.
- ¹⁴ *Ibid.*, pages 14 and 15. "The 75 percent factor used here is an approximation of the composite state separations factor. It is used here for illustrative purposes to determine the approximate size of the federal fund required. It may be desirable in the final plan to use each state's individual composite

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separations factor in lieu of the fixed 75 percent amount. That change would not dramatically alter the amount of money allocated to each state nor would it dramatically alter the total size of the fund," ¶ 33, page 15.

¹⁵ *Ad Hoc Proposal, Executive Summary, page 2.*

¹⁶ *Ad Hoc Proposal, page 13.*

¹⁷ *Ad Hoc Proposal, Executive Summary, page 3.*

¹⁸ *Ibid.*

¹⁹ *Ibid.* Also, discussion with Peter Bluhm, February 23, 1998.

²⁰ *Ibid.*

²¹ See **Section III, What Does Each Option Cover?**, for a discussion of the costs used in Options 1A, 1B, and 1C.

²² "Collections for the federal high cost support program should be derived from a charge on the interstate revenues of interstate carriers. The intrastate revenues of interstate carriers should not be used in any way in determining collections," *Ad Hoc Proposal, page 8.*

²³ *Ad Hoc Proposal, spreadsheet attached to the filing dated January 10, 1998. "Federal USF Surcharge Rate: 2.40%".*

²⁴ HAI Model, Version 4.0.

²⁵ See **Section XV, Appendix D, Figures 34 and 35**, for proxy model data for density zone 1, zone 2, and total zones (1 to 9).

²⁶ See **Section XIV, Appendix B, Figure 25** for the cash flow diagram and an outline of the steps in this process.

²⁷ *Universal Service Joint Board, ¶ 833, page 426.* In July 1997, the FCC stated that this *Order* "recognized that 25 percent is the current interstate allocation factor applied to loop costs in the Part 36 separations process, and concluded that because loop costs will be the predominant cost that varies between high-cost and non-high-cost areas, this factor best approximates the interstate portion of universal service costs. In adopting this approach, the Commission anticipated that states will participate fully in a federal-state partnership and that the contributions collected by both jurisdictions will be sufficient to fund universal service," *Order on Reconsideration, July 10, 1997, ¶ 27.*

²⁸ *Universal Service Joint Board, ¶ 834.*

²⁹ For an overview of universal service see Carol Weinhaus, Bob Lock, et al., *Overview of Universal Service*, Presentation at the Communications Media Center, New York Law School, Telecommunications Industries Analysis Project, December 6, 1995. Also see the section on residual rate making in Carol L. Weinhaus and Anthony G. Oettinger, *Behind the Telephone Debates*, Ablex Publishing Company, Norwood, NJ, 1988, pages 64 through 66 (hereinafter referred to as *Behind the Telephone Debates*).

³⁰ See **Section II, What is the New High Cost Fund?** for the background on this total amount for Lifeline/Link-up, weighted dial equipment minutes (DEM), long term support (LTS), and the current USF fund (both rural and non-rural companies). These subsidies are explicit except for weighted DEM.

³¹ Carol Weinhaus, Sandra Makeeff, et al., *What is the Price of Universal Service? Impact of Deaveraging Nationwide Urban/Rural Rates*, Presentation at the July 1993 National Association of Regulatory Utility Commissioners (NARUC) Meeting, San Francisco, CA, Telecommunications Industries Analysis Project, July 26, 1993, Figure 3, page 11.

³² Carol Weinhaus, Sandra Makeeff, et al., *Loop Dreams: The Price of Connection for Local Service Competition*, Presentation at the July 1995 NARUC Meeting, San Francisco, CA, Telecommunications

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Industries Analysis Project, July 21, 1995, Figure 8, page 16. The 1993 nationwide average business rate was \$38.55 and the nationwide average residential rate was \$16.75.

- ³³ For illustrations of current cash flow of three programs designed to assist companies serving high-cost areas and low-income customers, see *Options for Universal Service*, Figures 10, 11, and 12, pages 22-24.
- ³⁴ The calculations for 1998 weighted DEM and LTS are from a letter from USAC to the FCC, October 31, 1997.
- ³⁵ Alexander Belinfante and James Eisner, *Universal Service Support and Telephone Revenue by State* (hereinafter referred to as *FCC Universal Service Support*), FCC, Common Carrier Bureau, Industry Analysis Division, January 1998, page 5, footnote 9.
- ³⁶ *Ibid.*, page 6.
- ³⁷ *Ibid.*, page 6, footnote 10.