APPENDIX - A
Input Values
Part 1: Feeder and Distribution

Interface Options		
Values	**Description**	**Comments**
-s0.36	Clusintf Options	Determine microgrid size in kilofeet
-v -p	Feeddist Options	Determine output reporting and optimization in distribution plant
0	Plant Mix by Study Area	Requires file PlantMixByStudyArea.csv in Inputs Subdirectory
1	Save Workfiles	Saves Cluster.zip and HM Worksheets
3	HCPM Start With	
1	HAI Start With	
1	Output Reports	

Cluster Inputs		
Values	**Description**	**Comments**
150	Raster_Size	Initial value for rasterization process
17000	Distance_Limit	
1800	Line_Limit	
80	Line_Fill	Determines cluster size before optimizaton
36	Block_Divide_Factor	Used only with Census block data
1	Cluster_Algorithm	
4	Optimization_Method	
1000	Maximum_populated_cells	Initial value for rasterization process
1	Use_hcpm.mdb	
1	True-up_line_counts	

Feeder / Distribution Inputs		
Value	**Variable Name**	**Comments**
0.5	max_drop_length	kilofeet
0.5	user_lambda	kilofeet
12	copper_gauge_xover	kilofeet
18	max_copper_distance	kilofeet
1.25	MaxCopperPenalty	
18	copper_t1_xover	kilofeet
0	t1_fiber_xover	kilofeet; Set this value to zero to turn off T1 technology for switched services
1.25	t1_redundancy_factor	
24	copper_placement_depth	inches
36	fiber_placement_depth	inches
3	CriticalWaterDepth	feet
1.3	WaterFactor	
12	MinSlopeTrigger	
1.10	MinSlopeFactor	
30	MaxSlopeTrigger	
1.05	MaxSlopeFactor	
1.20	CombSlopeFactor	
12.7500%	pct_ds1	
91.75%	pct_lsa	
24	ChannelsPerT1System	
2	PairsPerT1System	
4	FibersPerTerminal	
2016	CapacityF2016	
1344	CapacityF1344	
672	CapacityF672	
96	CapacityF96	
24	CapacityF24	
96	CapacityT96	
24	CapacityT24	
10	lines_per_bus	
1.00	DistRoadFactor	
1.00	FiberFillFactor	
1	DistanceType	
1.00	FeederRoadFactor	
2	Max_SAIs	Maximum number of SAI's placed in a cluster

APPENDIX - A
Input Values
Part 1: Feeder and Distribution

24 Gauge Distribution Cable Costs							
Size		UG		Buried		Aerial	Comments
4200	$	40.36	$	41.97	$	39.57	Price per foot for underground, buried and aerial copper
3600	$	35.32	$	36.07	$	34.10	
3000	$	30.28	$	30.17	$	28.64	
2400	$	25.24	$	24.27	$	23.17	
2100	$	22.72	$	21.32	$	20.44	
1800	$	20.20	$	18.37	$	17.70	
1200	$	15.16	$	12.47	$	12.23	
900	$	12.64	$	9.51	$	9.50	
600	$	10.12	$	6.56	$	6.77	
400	$	8.43	$	4.60	$	4.95	
300	$	7.59	$	3.61	$	4.03	
200	$	6.75	$	2.63	$	3.12	
100	$	5.91	$	1.65	$	2.21	
50	$	5.49	$	1.16	$	1.76	
25	$	5.28	$	0.91	$	1.53	
18	$	5.23	$	0.84	$	1.46	
12	$	5.17	$	0.78	$	1.41	
6	$	5.12	$	0.72	$	1.36	
1	$	5.08	$	0.67	$	1.31	

26 Gauge Distribution Cable Costs							
Size		UG		Buried		Aerial	Comments
4200	$	30.07	$	31.81	$	28.48	Price per foot for underground, buried and aerial copper
3600	$	26.37	$	27.37	$	24.63	
3000	$	22.67	$	22.93	$	20.78	
2400	$	18.97	$	18.49	$	16.94	
2100	$	17.12	$	16.27	$	15.01	
1800	$	15.27	$	14.05	$	13.09	
1200	$	11.60	$	9.61	$	9.23	
900	$	9.78	$	7.39	$	7.31	
600	$	7.98	$	5.17	$	5.38	
400	$	6.82	$	3.68	$	4.08	
300	$	6.27	$	2.94	$	3.44	
200	$	5.75	$	2.20	$	2.78	
100	$	5.32	$	1.45	$	2.12	
50	$	5.18	$	1.07	$	1.79	
25	$	5.15	$	0.88	$	1.61	
18	$	5.15	$	0.82	$	1.57	
12	$	5.15	$	0.78	$	1.52	
6	$	5.16	$	0.73	$	1.48	
1	$	5.16	$	0.69	$	1.45	

APPENDIX - A
Input Values
Part 1: Feeder and Distribution

24 Gauge Feeder Cable Costs				
Size	UG	Buried	Aerial	Comments
4200	$ 40.36	$ 41.97	$ 39.57	Price per foot for underground, buried and aerial copper
3600	$ 35.32	$ 36.07	$ 34.10	
3000	$ 30.28	$ 30.17	$ 28.64	
2400	$ 25.24	$ 24.27	$ 23.17	
2100	$ 22.72	$ 21.32	$ 20.44	
1800	$ 20.20	$ 18.37	$ 17.70	
1200	$ 15.16	$ 12.47	$ 12.23	
900	$ 12.64	$ 9.51	$ 9.50	
600	$ 10.12	$ 6.56	$ 6.77	
400	$ 8.43	$ 4.60	$ 4.95	
300	$ 7.59	$ 3.61	$ 4.03	
200	$ 6.75	$ 2.63	$ 3.12	
100	$ 5.91	$ 1.65	$ 2.21	
50	$ 5.49	$ 1.16	$ 1.76	
25	$ 5.28	$ 0.91	$ 1.53	
18	$ 5.23	$ 0.84	$ 1.46	
12	$ 5.17	$ 0.78	$ 1.41	
6	$ 5.12	$ 0.72	$ 1.36	
1	$ 5.08	$ 0.67	$ 1.31	

26 Gauge Feeder Costs				
Size	UG	Buried	Aerial	Comments
4200	$ 30.07	$ 31.81	$ 28.48	Price per foot for underground, buried and aerial copper
3600	$ 26.37	$ 27.37	$ 24.63	
3000	$ 22.67	$ 22.93	$ 20.78	
2400	$ 18.97	$ 18.49	$ 16.94	
2100	$ 17.12	$ 16.27	$ 15.01	
1800	$ 15.27	$ 14.05	$ 13.09	
1200	$ 11.60	$ 9.61	$ 9.23	
900	$ 9.78	$ 7.39	$ 7.31	
600	$ 7.98	$ 5.17	$ 5.38	
400	$ 6.82	$ 3.68	$ 4.08	
300	$ 6.27	$ 2.94	$ 3.44	
200	$ 5.75	$ 2.20	$ 2.78	
100	$ 5.32	$ 1.45	$ 2.12	
50	$ 5.18	$ 1.07	$ 1.79	
25	$ 5.15	$ 0.88	$ 1.61	
18	$ 5.15	$ 0.82	$ 1.57	
12	$ 5.15	$ 0.78	$ 1.52	
6	$ 5.16	$ 0.73	$ 1.48	
1	$ 5.16	$ 0.69	$ 1.45	

APPENDIX - A
Input Values
Part 1: Feeder and Distribution

Fiber Cable Costs

Size	UG	Buried	Aerial	Comments
288	$ 9.43	$ 8.89	$ 8.17	{Costs of underground,
144	$ 6.14	$ 4.76	$ 4.69	buried and aerial fiber
96	$ 5.04	$ 3.39	$ 3.53	cable}
72	$ 4.49	$ 2.70	$ 2.95	
60	$ 4.22	$ 2.35	$ 2.66	
48	$ 3.94	$ 2.01	$ 2.37	
36	$ 3.67	$ 1.67	$ 2.08	
24	$ 3.40	$ 1.32	$ 1.79	
18	$ 3.26	$ 1.15	$ 1.65	
12	$ 3.12	$ 0.98	$ 1.50	
1	$ 2.87	$ 0.66	$ 1.24	

Distribution Plant Mix

Density	UG	Buried	Aerial	Comments
0	0.00%	60.00%	40.00%	{These entries represent
5	1.00%	62.00%	37.00%	minimum placement percentages
100	2.00%	68.00%	30.00%	for underground, buried
200	4.00%	66.00%	30.00%	and aerial respectively.
650	8.00%	62.00%	30.00%	When they sum to less than 1,
850	20.00%	50.00%	30.00%	the model selects the residual
2550	40.00%	30.00%	30.00%	placement to minimize cost
5000	60.00%	10.00%	30.00%	for the particular terrain and
10000	90.00%	0.00%	10.00%	density.}

Copper Feeder Plant Mix

Density	UG	Buried	Aerial	Comments
0	5.00%	50.00%	45.00%	{Minimum placement percetages.
5	5.00%	50.00%	45.00%	See comment in distrmix
100	5.00%	50.00%	45.00%	for further explanation.}
200	20.00%	40.00%	40.00%	
650	40.00%	30.00%	30.00%	
850	60.00%	25.00%	15.00%	
2550	75.00%	15.00%	10.00%	
5000	90.00%	5.00%	5.00%	
10000	95.00%	0.00%	5.00%	

APPENDIX - A
Input Values
Part 1: Feeder and Distribution

Fiber Feeder Plant Mix				
Density	UG	Buried	Aerial	Comments
0	5.00%	50.00%	45.00%	Minimum placement percetages.
5	5.00%	50.00%	45.00%	See comment in distrmix
100	5.00%	50.00%	45.00%	for further explanation.
200	20.00%	40.00%	40.00%	
650	40.00%	30.00%	30.00%	
850	60.00%	25.00%	15.00%	
2550	75.00%	15.00%	10.00%	
5000	90.00%	5.00%	5.00%	
10000	95.00%	0.00%	5.00%	

Drop Terminal Costs				
Size	Buried	Aerial	UG	Comments
1	$ 133.46	$ 70.44	$ 133.46	Drop terminal costs
6	$ 157.05	$ 95.98	$ 157.05	
12	$ 440.87	$ 131.81	$ 440.87	
25	$ 451.00	$ 216.00	$ 451.00	
50	$ 220.00	$ 220.00	$ 220.00	For terminal sizes larger than 25
100	$ 333.00	$ 333.00	$ 333.00	the values in this table reflect the
200	$ 665.00	$ 665.00	$ 665.00	cost of an indoor SAI.
400	$ 1,331.00	$ 1,331.00	$ 1,331.00	
600	$ 1,996.00	$ 1,996.00	$ 1,996.00	
900	$ 2,770.00	$ 2,770.00	$ 2,770.00	
1200	$ 3,993.00	$ 3,993.00	$ 3,993.00	
1800	$ 5,539.00	$ 5,539.00	$ 5,539.00	
2400	$ 7,536.00	$ 7,536.00	$ 7,536.00	
3600	$ 11,079.00	$ 11,079.00	$ 11,079.00	
5400	$ 16,618.00	$ 16,618.00	$ 16,618.00	
7200	$ 21,708.00	$ 21,708.00	$ 21,708.00	

APPENDIX - A
Input Values
Part 1: Feeder and Distribution

Feeder Distribution Interface Costs			
Lines	Outdoor	Indoor	Comments
1	$ 150.78	$ 150.78	Costs of Outdoor and Indoor feeder/distribution
50	$ 562.00	$ 220.00	interface devices
100	$ 787.00	$ 333.00	
200	$ 1,349.00	$ 665.00	
400	$ 2,248.00	$ 1,331.00	
600	$ 3,147.00	$ 1,996.00	
900	$ 4,271.00	$ 2,770.00	
1200	$ 5,395.00	$ 3,993.00	
1800	$ 7,644.00	$ 5,539.00	
2400	$ 9,667.00	$ 7,536.00	
3600	$ 13,489.00	$ 11,079.00	Costs for SAIs with greater than 7200 lines
5400	$ 18,434.00	$ 16,618.00	are determined by summing the input values
7200	$ 22,481.00	$ 21,708.00	for two or more SAIs with less than 7200 lines
9000	$ 30,125.00	$ 27,247.00	
10800	$ 35,970.00	$ 32,787.00	
12600	$ 40,915.00	$ 38,326.00	
14400	$ 44,962.00	$ 43,416.00	
16200	$ 52,606.00	$ 48,955.00	
18000	$ 58,451.00	$ 54,495.00	
19800	$ 63,396.00	$ 60,034.00	
21600	$ 67,443.00	$ 65,124.00	
23400	$ 75,087.00	$ 70,663.00	
25200	$ 80,932.00	$ 76,203.00	
27000	$ 85,877.00	$ 81,742.00	
28800	$ 89,924.00	$ 86,832.00	

Fill Factors			
Density	Feeder	Distr	Comments
0	70.0%	50.0%	Utilization factors for feeder and distribution plant
5	77.5%	55.0%	
100	80.0%	55.0%	
200	82.5%	60.0%	
650	82.5%	70.0%	
850	82.5%	75.0%	
2550	82.5%	75.0%	
5000	82.5%	75.0%	
10000	82.5%	75.0%	

APPENDIX - A
Input Values
Part 1: Feeder and Distribution

	Normal Terrain Costs						
	Underground		Buried		Aerial		
Density	Feeder	Distr.	Feeder	Distr.	Feeder	Distr.	Comments
0	$ 1.86	$ 1.86	$ 0.77	$ 0.77	$ 1.51	$ 1.51	Placement costs for normal terrain
5	$ 1.86	$ 1.86	$ 1.54	$ 1.54	$ 1.51	$ 1.51	
100	$ 7.63	$ 7.59	$ 3.24	$ 3.14	$ 1.98	$ 1.98	
200	$ 8.16	$ 8.38	$ 4.26	$ 4.45	$ 1.98	$ 1.98	
650	$ 8.90	$ 9.25	$ 5.20	$ 5.52	$ 2.27	$ 2.27	
850	$ 10.23	$ 10.53	$ 5.51	$ 5.82	$ 2.27	$ 2.27	
2550	$ 14.15	$ 14.23	$ 7.34	$ 7.42	$ 2.64	$ 2.64	
5000	$ 27.79	$ 27.78	$ 9.02	$ 9.00	$ 2.72	$ 2.72	
10000	$ 42.59	$ 42.57	$ 11.93	$ 11.91	$ 2.72	$ 2.72	

	SoftRock Costs						
	Underground		Buried		Aerial		
Density	Feeder	Distr.	Feeder	Distr.	Feeder	Distr.	Comments
0	$ 5.78	$ 5.78	$ 1.40	$ 1.40	$ 1.80	$ 1.80	Placement costs for soft rock terrain
5	$ 5.78	$ 5.78	$ 2.17	$ 2.17	$ 1.80	$ 1.80	
100	$ 9.04	$ 9.10	$ 3.81	$ 3.93	$ 2.35	$ 2.35	
200	$ 9.99	$ 10.25	$ 5.04	$ 5.32	$ 2.35	$ 2.35	
650	$ 11.02	$ 11.31	$ 6.42	$ 6.70	$ 2.68	$ 2.68	
850	$ 13.24	$ 13.52	$ 7.03	$ 7.29	$ 2.68	$ 2.68	
2550	$ 18.66	$ 18.74	$ 9.18	$ 9.27	$ 3.13	$ 3.13	
5000	$ 38.86	$ 38.85	$ 11.70	$ 11.68	$ 3.21	$ 3.21	
10000	$ 61.20	$ 61.19	$ 16.15	$ 16.13	$ 3.21	$ 3.21	

	HardRock Costs						
	Underground		Buried		Aerial		
Density	Feeder	Distr.	Feeder	Distr.	Feeder	Distr.	Comments
0	$ 9.69	$ 9.69	$ 2.04	$ 2.04	$ 2.09	$ 2.09	Placement costs for hard rock terrain
5	$ 9.69	$ 9.69	$ 2.80	$ 2.80	$ 2.09	$ 2.09	
100	$ 16.93	$ 16.84	$ 4.89	$ 4.89	$ 2.71	$ 2.71	
200	$ 17.57	$ 17.57	$ 6.45	$ 6.37	$ 2.71	$ 2.71	
650	$ 18.63	$ 18.69	$ 7.67	$ 7.73	$ 3.10	$ 3.10	
850	$ 21.40	$ 21.45	$ 8.65	$ 8.69	$ 3.10	$ 3.10	
2550	$ 27.62	$ 27.63	$ 11.87	$ 11.87	$ 3.61	$ 3.61	
5000	$ 58.18	$ 58.19	$ 15.71	$ 15.72	$ 3.69	$ 3.69	
10000	$ 92.02	$ 92.02	$ 22.46	$ 22.46	$ 3.69	$ 3.69	

APPENDIX - A
Input Values
Part 1: Feeder and Distribution

Manhole Costs				
Duct Capacity	Normal	SoftRock	HardRock	Comments
2	$ 1,436.50	$ 1,511.50	$ 1,586.50	Installed Cost for Manholes
4	$ 4,472.47	$ 4,652.47	$ 4,832.47	
9	$ 5,176.00	$ 5,336.00	$ 5,496.00	
99	$ 3,070.00	$ 3,150.00	$ 3,230.00	

Manhole Spacing		
Density	Spacing(ft)	Comments
0	725	
5	725	
100	725	
200	725	
650	575	
850	575	
2550	575	
5000	400	
10000	400	

Sharing				
Density	UG	Buried	Aerial	Comments
0	100.00%	100.00%	50.00%	Percentage of underground, buried and aerial structure used by telco
5	100.00%	100.00%	50.00%	
100	85.00%	85.00%	50.00%	
200	65.00%	65.00%	50.00%	
650	65.00%	65.00%	50.00%	
850	65.00%	65.00%	50.00%	
2550	55.00%	55.00%	35.00%	
5000	55.00%	55.00%	35.00%	
10000	55.00%	55.00%	35.00%	

APPENDIX - A
Input Values
Part 1: Feeder and Distribution

Annual Charge Factors		
Annual Factors	**Variable**	**Comments**
0.166762	ac_ugd_cop	
0.192854	ac_bur_cop	
0.224354	ac_aer_cop	
0.150832	ac_ugd_fib	
0.146548	ac_bur_fib	
0.150824	ac_aer_fib	
0.133737	ac_ugd_struc	
0.169701	ac_bur_struc	
0.182915	ac_aer_struc	
0.133737	ac_manhole	
0.191178	ac_t1_term	
0.191178	ac_fib_term	
0.189371	ac_fdi	
0.142135	ac_fib_splice	

Value	Variable	Comments
$ 560.00	cost_per_drop_kf	Units are in kilofeet
$ 39.50	nid_cost	
$ 720.00	duct_cost_per_kf	Units are in kilofeet
$ 152,617.43	a2016	Fixed cost of size 2016 fiber terminal
$ 74.98	b2016	Variable cost of size 2016 fiber terminal
$ 107,224.92	a1344	
$ 74.98	b1344	
$ 97,443.38	a672	
$ 74.98	b672	
$ 23,848.20	a96	
$ 87.30	b96	
$ 19,881.39	a24	
$ 87.30	b24	
$ 23,848.20	ac96	Fixed cost of size 96 T1 (or HDSL) terminal
$ 87.30	bc96	Variable cost of size 96 T1 (or HDSL) terminal
$ 19,881.39	ac24	
$ 87.30	bc24	
$ 11,000.00	site_prep_cost	
$ -	fiber_splice_cost	

APPENDIX A

Input Values

Part 2: Switching and Expense Modules

End Office Switching - Multi Company - Multi company

Switch Capacity Limits

Lines	Real-time (BHCA)	Traffic (BHCCS)
0	10,000	30,000
1,000	50,000	150,000
10,000	200,000	600,000
40,000	600,000	1,800,000

Switch maximum line size	80,000
Switch post administrative fill	94.00%
Switch maximum processor occupancy	90.00%

Investment Parameters

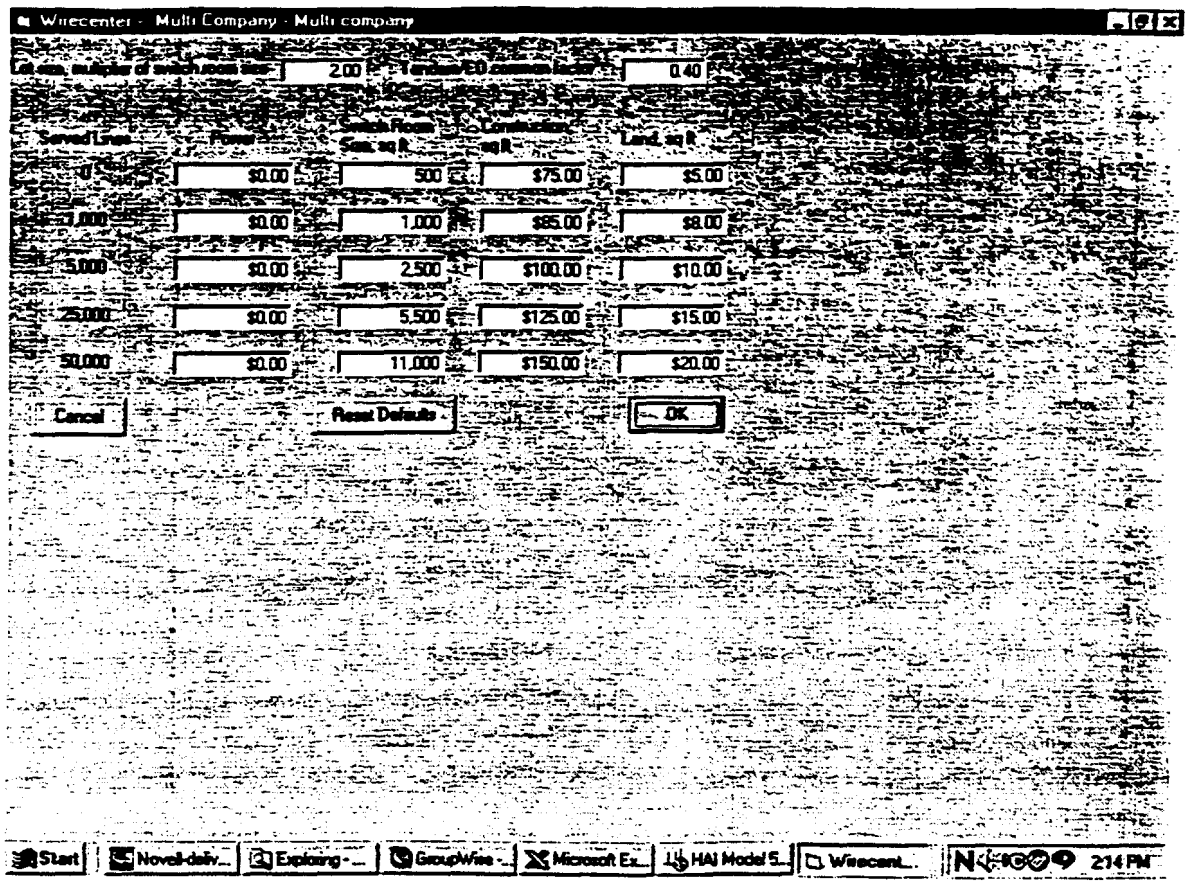
MDF/protector investment per line	$0.00
Analog line circuit offset of DLC per line	$0.00
Switch installation multiplier	1.00
EO Switching investment constant term, small ICO	$416.11
EO Switching investment constant term, BOC and large ICO	$242.73
EO Switching investment slope term	-14.922

Processor feature loading multiplier

Normal	1.20
Heavy business	2.00
Business penetration threshold	0.30

Cancel | Reset Defaults | OK

Start | Novell-deliv... | HAI Model 5... | End Offic... | Exploring - ... | GroupWise - ... | 11:34 AM


Wirecenter - Multi Company - Multi company
2.00
0.40
Served Lines
Power
Switch Room Size, sq ft
Construction sq ft
Land, sq ft
0
$0.00
500
$75.00
$5.00
7,000
$0.00
1,000
$85.00
$8.00
5,000
$0.00
2,500
$100.00
$10.00
25,000
$0.00
5,500
$125.00
$15.00
50,000
$0.00
11,000
$150.00
$20.00
Cancel
Reset Defaults
OK
Start
Novell-deliv...
Exploring - ...
GroupWise -...
Microsoft Ex...
HAI Model 5...
Wirecent...
2:14 PM

Traffic Parameters - Multi Company - Multi company

Local Call Attempts, thousands	0	Local Bus/Res DEMs	1.10
Call Completion Factor	0.00%	InterState Bus/Res DEMs	2.00
IntraLATA Calls Completed, thousands	0	InterState Bus/Res DEMs	3.00
IntraLATA InterState Calls Completed, thousands	0	BH Fraction of Daily Usage	10.00%
IntraLATA InterState Calls Completed, thousands	0	Annual to Daily Usage Reduction Factor	270
Local DEMs, thousands	0	Residential Holding Time Multiplier	1.00
InterState DEMs, thousands	0	Business Holding Time Multiplier	1.00
InterState DEMs, thousands	0	Residential Call Attempts/ BH	1.30
		Business Call Attempts/ BH	3.50

Cancel | Reset Defaults | OK

Start | Novell-delivered Appli... | Exploring - Removable... | GroupWise - Mailbox | Traffic Parameter... | 11:41 AM

Interoffice Investment - Multi Company - Multi company

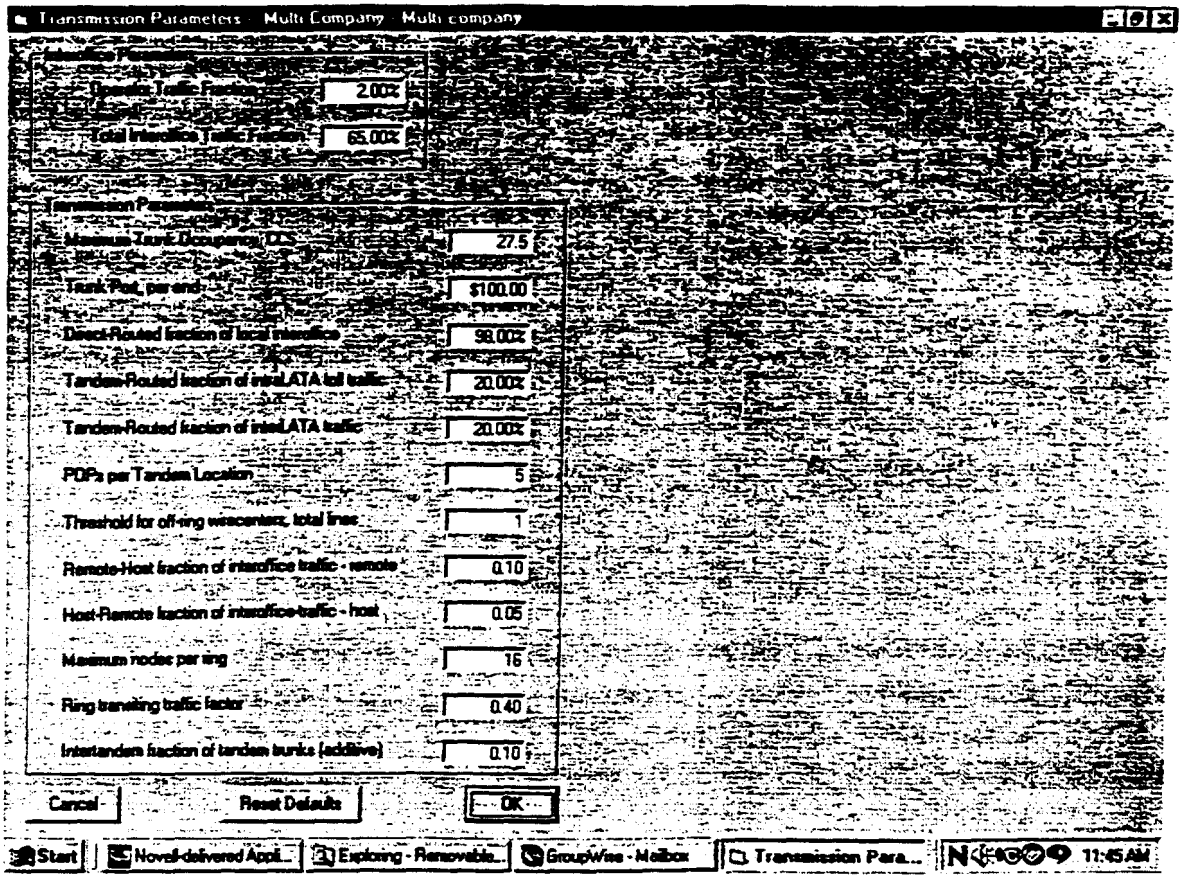
OC-48 ADM, installed, 48 DS-3s	$50,000.00
OC-48 ADM, installed, 12 DS-3s	$40,000.00
OC-3/DS-1 Terminal Multiplexer, installed, 84 DS-1s	$26,000.00
Investment per 7 DS-1s	$500.00
Number of Fibers	24
Pigtails, per strand	$60.00
Optical Distribution Panel	$1,000.00
EF&I, per hour	$55.00
EF&I, hours	32
Regenerator, installed	$15,000.00
Regenerator Spacing, mi	40
Channel Bank Investment/24 line	$5,000.00
Fraction of SA lines req. multiplex	0.00%
DCS installed, per DS-3	$30,000.00
Transmission Terminal Fill (DS0)	0.90

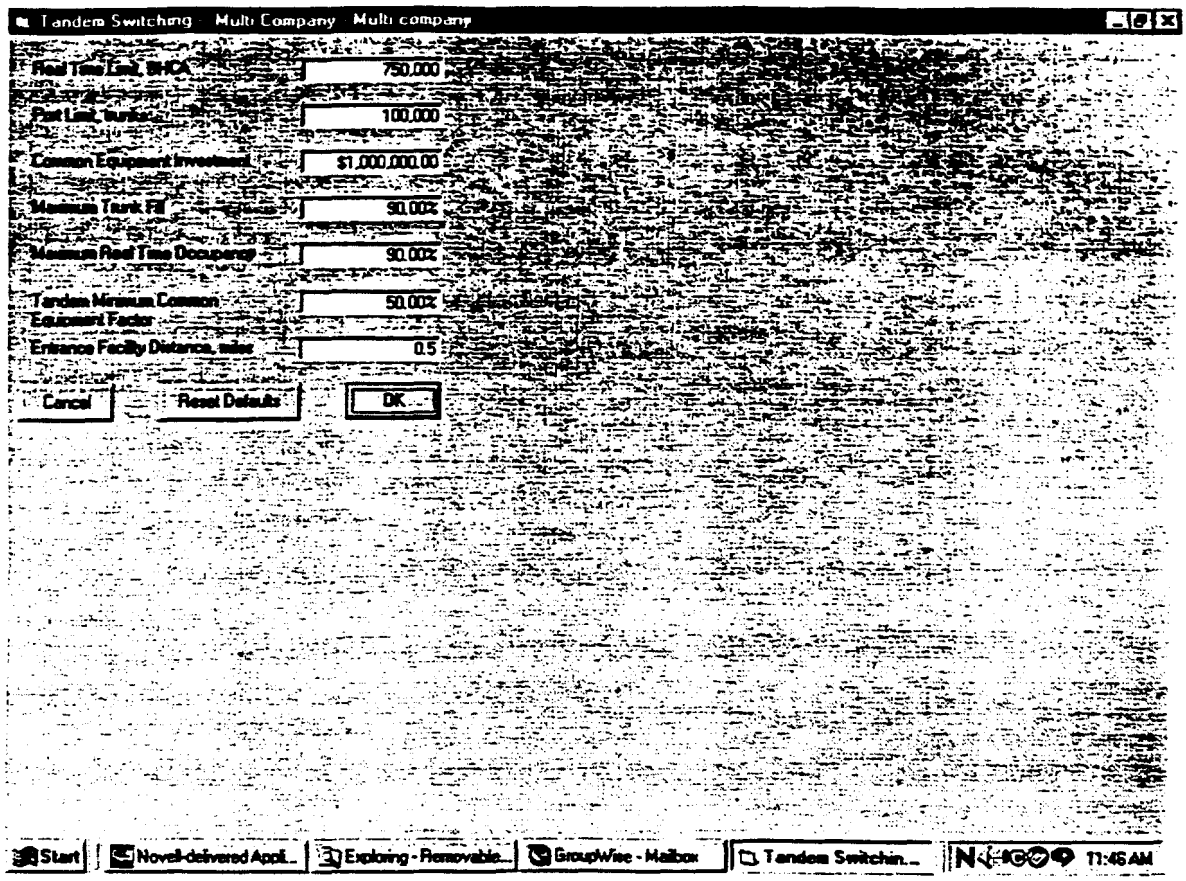
Fiber Cable	$3.50
Number of Sheaths per ADM	4
Buried Fraction	60.00%
Buried Placement	$1.77
Buried Sheath Addition	$0.20
Conduit	$0.60
Spare Tubes per route	1
Conduit Placement	$16.40
Pullbox Spacing	2,000
Pullbox Investment	$500.00
Aerial Fraction	20.00%
Pole Spacing, ft	150
Pole Material	$201.00
Labor (basic)	$216.00

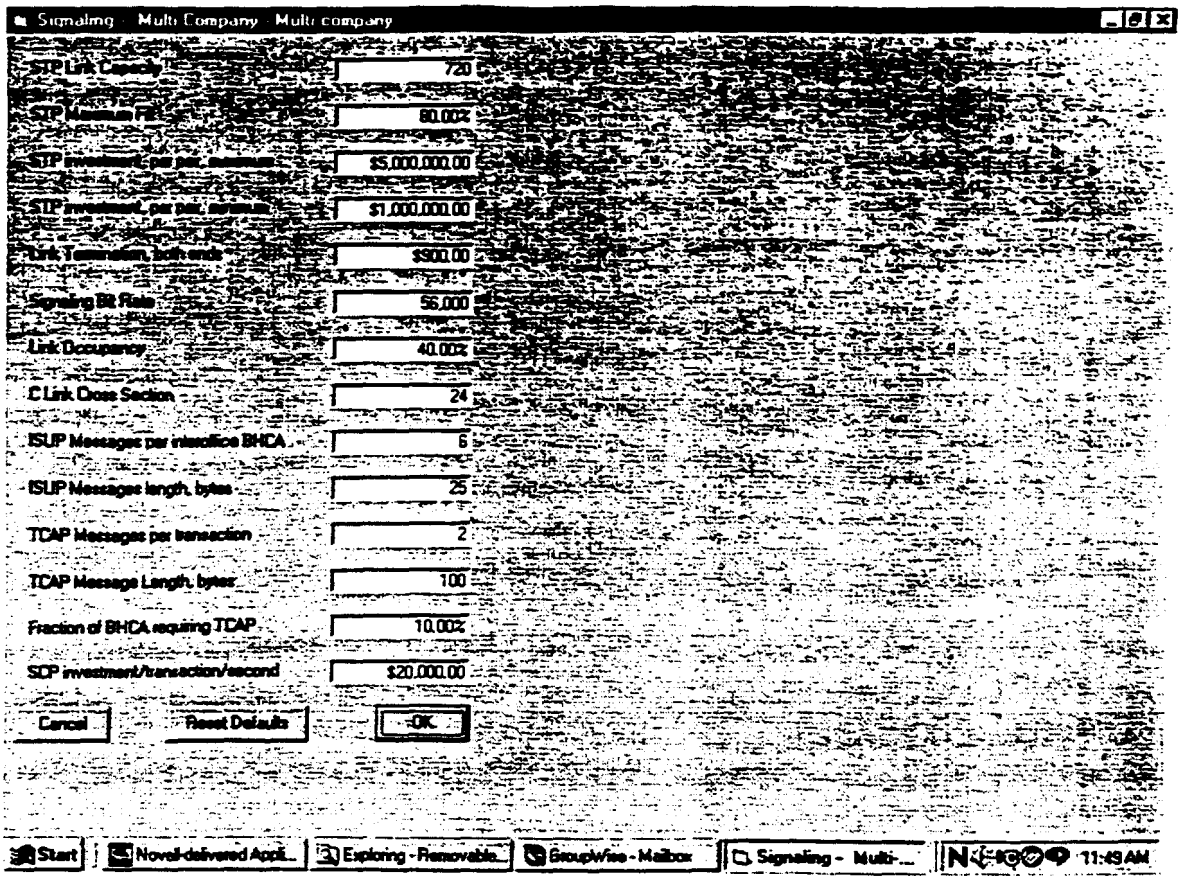
Fraction of poles and buried/ug placement common with feeder	75.00%
Fraction of aerial structure assigned to telephone	50.00%
Fraction of buried structure assigned to telephone	78.00%
Fraction of underground structure assigned to telephone	73.00%

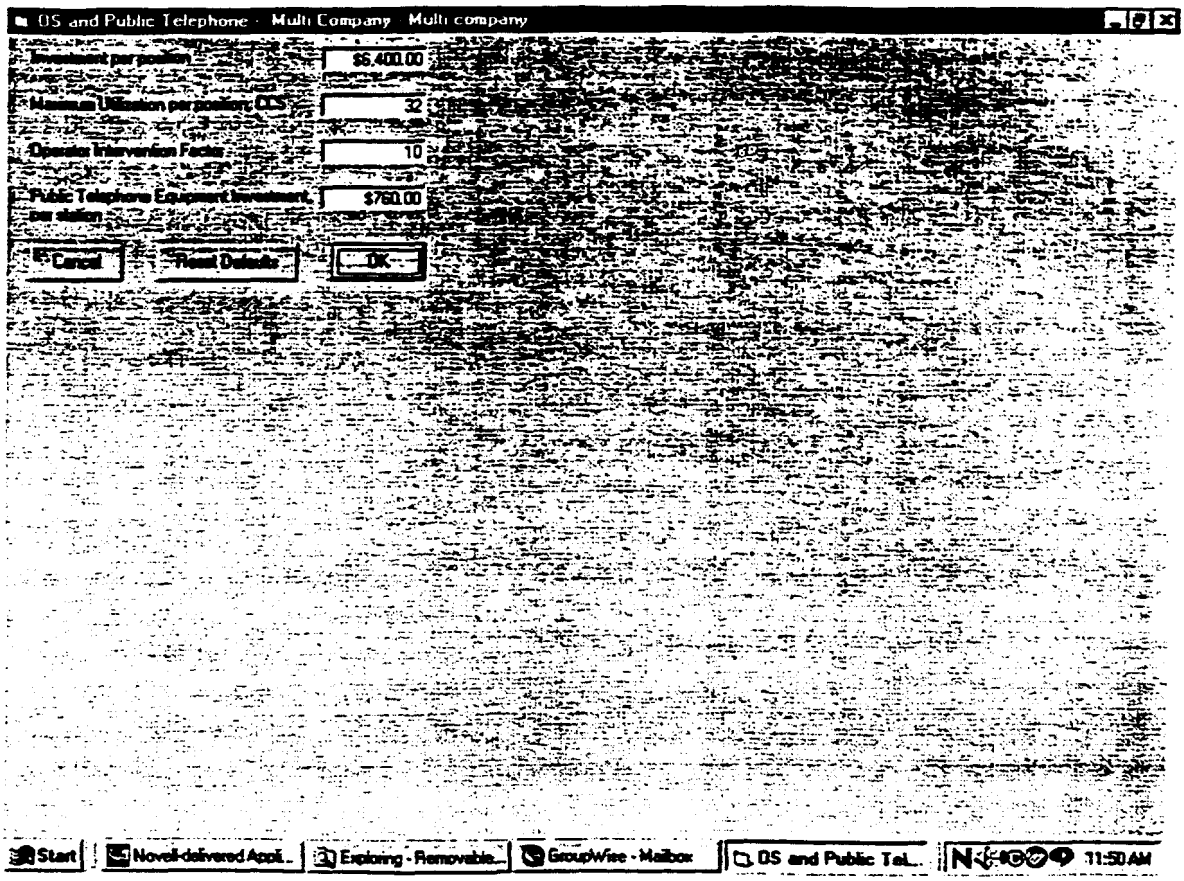
Cancel | Reset Defaults | OK

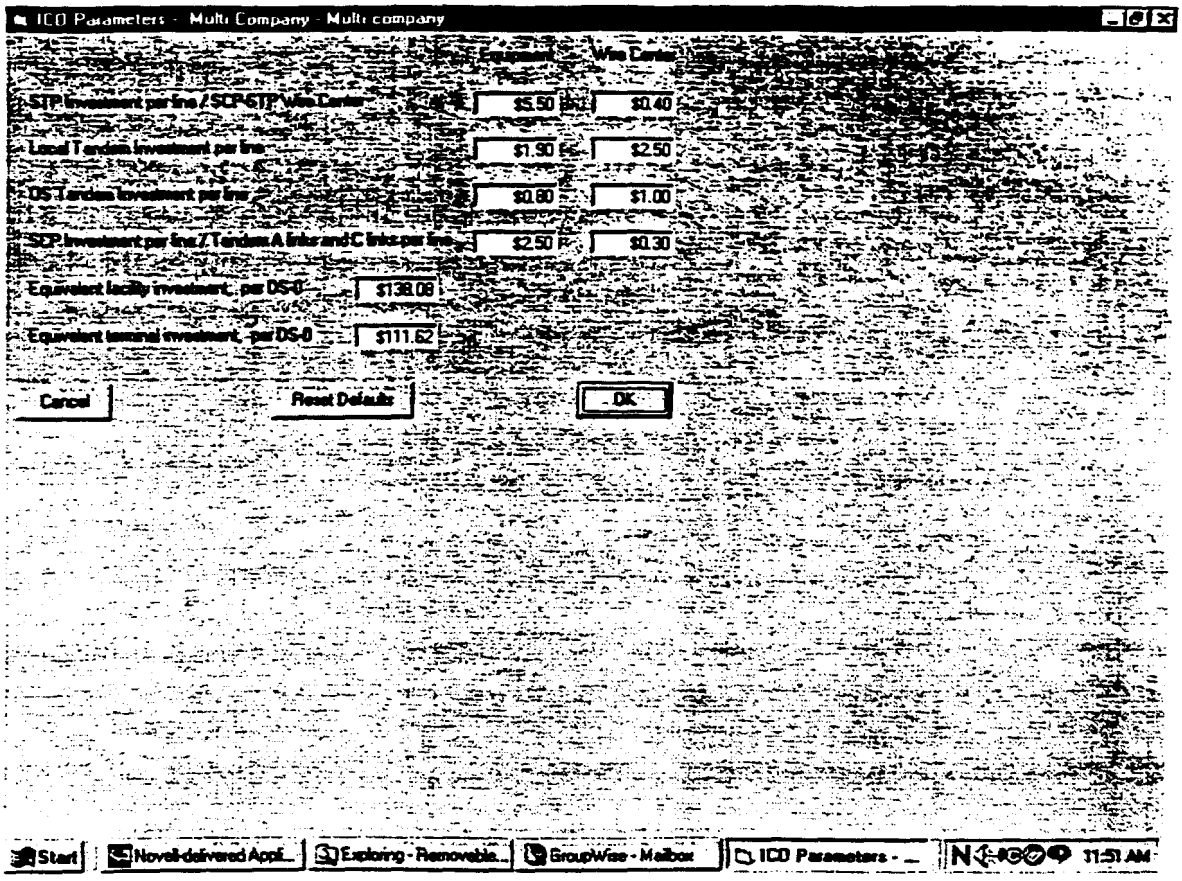
Start | Novell-delivered Appl... | Exploring - Removable... | GroupWise - Mailbox | Interoffice Invest... | 11:43 AM

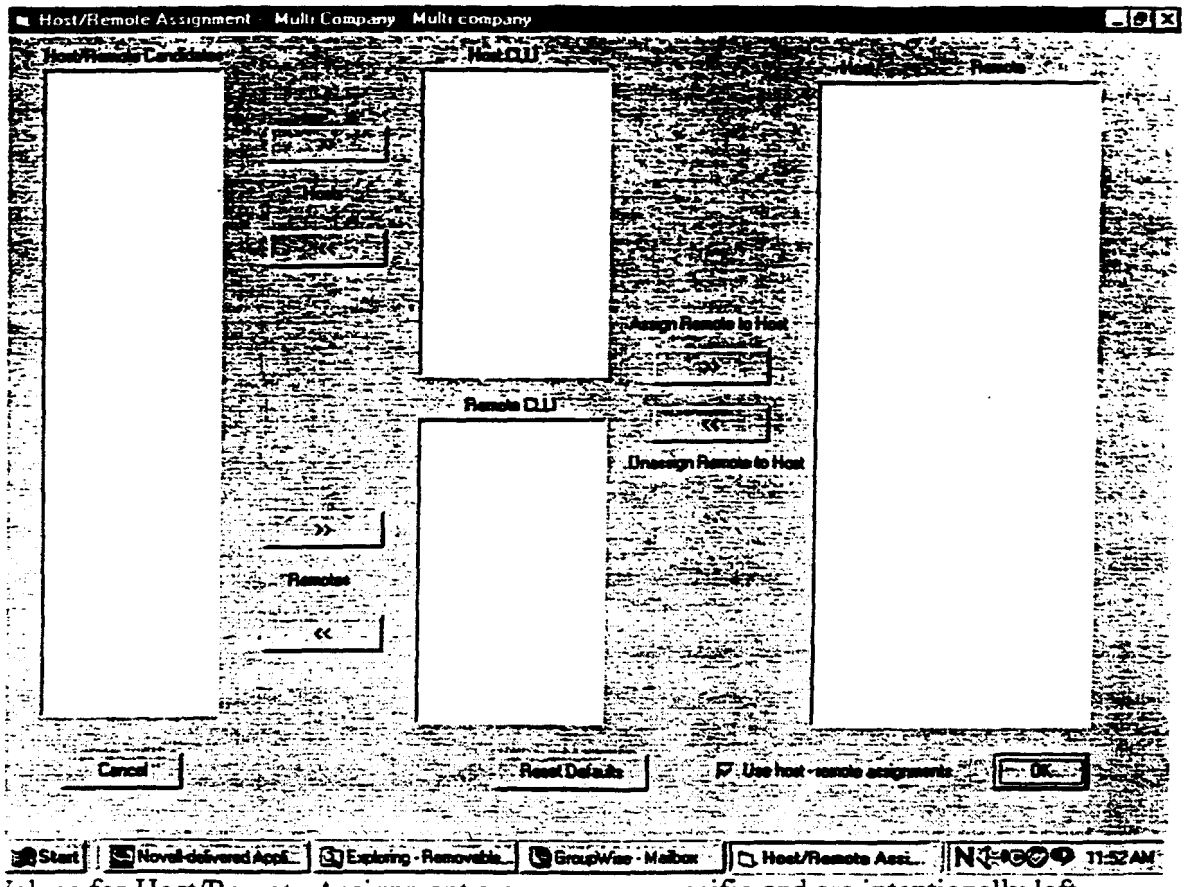

Transmission Parameters - Multi Company - Multi company
2.00%
65.00%
27.5
$100.00
98.00%
20.00%
20.00%
5
1
0.10
0.05
16
0.40
0.10
Cancel
Reset Defaults
OK
Start
Novell-delivered Appl...
Exploring - Removable...
GroupWise - Mailbox
Transmission Para...
11:45 AM


Tandem Switching - Multi Company - Multi company
Real Time Limit, BHCA
750,000
Port Limit, trunks
100,000
Common Equipment Investment
$1,000,000.00
Maximum Trunk Fill
90.00%
Maximum Real Time Occupancy
90.00%
Tandem Minimum Common Equipment Factor
50.00%
Entrance Facility Distance, miles
0.5
Cancel
Reset Defaults
OK
Start
Novell-delivered Appli...
Exploring - Removable...
GroupWise - Mailbox
Tandem Switchin...
11:46 AM


Signaling - Multi Company - Multi company
STP Link Capacity
720
STP Maximum Fill
80.00%
STP investment, per pair, maximum
$5,000,000.00
STP investment, per pair, minimum
$1,000,000.00
Link Termination, both ends
$900.00
Signaling Bit Rate
56,000
Link Occupancy
40.00%
C Link Cross Section
24
ISUP Messages per interoffice BHCA
6
ISUP Messages length, bytes
25
TCAP Messages per transaction
2
TCAP Message Length, bytes
100
Fraction of BHCA requiring TCAP
10.00%
SCP investment/transaction/second
$20,000.00
Cancel
Reset Defaults
OK
Start
Novell-delivered Appli...
Exploring - Removable...
GroupWise - Mailbox
Signaling - Multi-...
11:49 AM


OS and Public Telephone - Multi Company - Multi company
Investment per position
$6,400.00
Maximum Utilization per position, CCS
32
Operator Intervention Factor
10
Public Telephone Equipment Investment, per station
$760.00
Cancel
Reset Defaults
OK
Start
Novell-delivered Appl...
Exploring - Removable...
GroupWise - Mailbox
OS and Public Tel...
11:50 AM


ICO Parameters - Multi Company - Multi company
Wire Center
STP Investment per line / SCP/STP Wire Center
$5.50
$0.40
Local Tandem Investment per line
$1.90
$2.50
DS Tandem Investment per line
$0.80
$1.00
SCP Investment per line / Tandem A links and C links per line
$2.50
$0.30
Equivalent facility investment, per DS-0
$138.08
Equivalent terminal investment, per DS-0
$111.62
Cancel
Reset Defaults
OK
Start
Novell-delivered Appl...
Exploring - Removable...
GroupWise - Mailbox
ICO Parameters - ...
11:51 AM



*Values for Host/Remote Assignment are company-specific and are intentionally left blank in this file. The Host/Remote Assignments are contained in the model DB folder, HM50 file, Lerg.host.remote table.

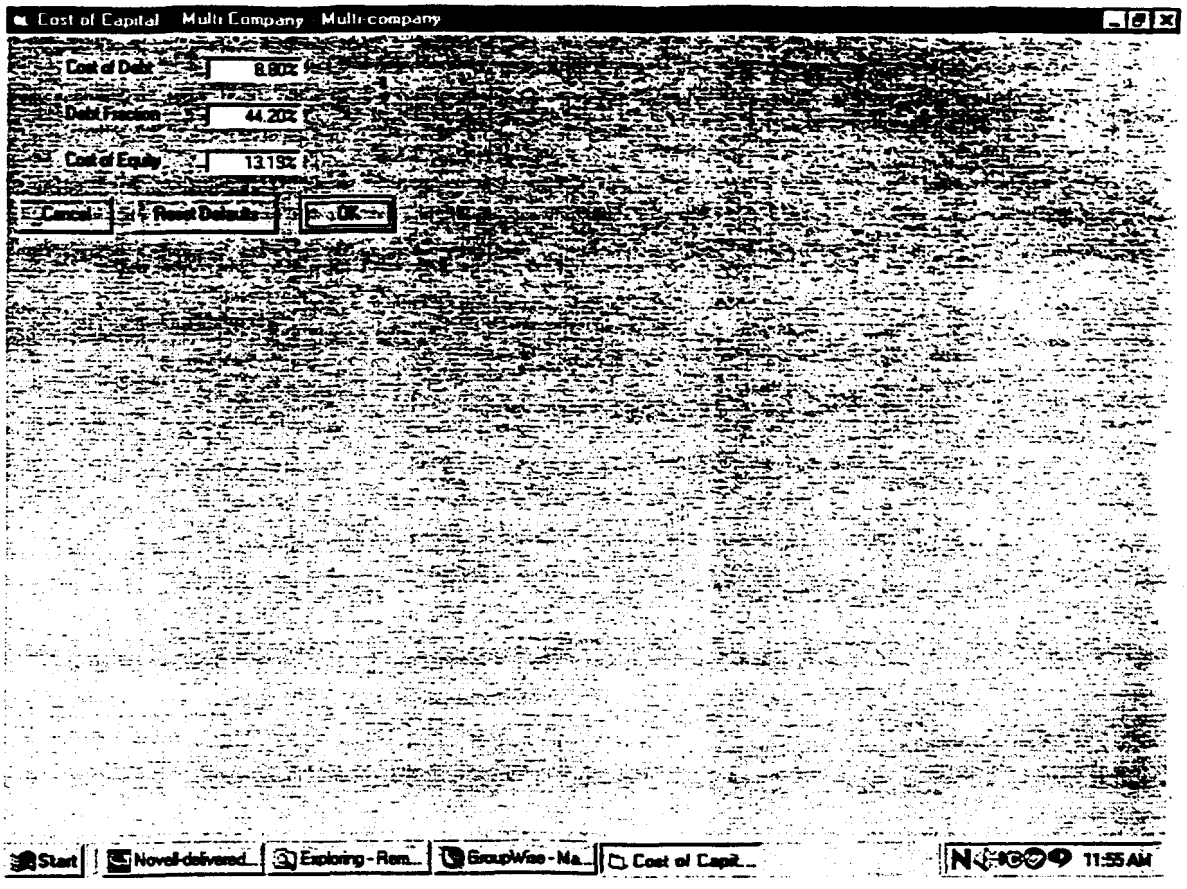
Host/Remote Investment - Multi-Company - Multi company

Line Size	Standalone fixed investment	Host fixed investment	Remote fixed investment	Standalone per line investment	Host per line investment	Remote per line investment
0	$486,700.00	$486,700.00	$161,800.00	$87.00	$87.00	$87.00
640	$486,700.00	$486,700.00	$161,800.00	$87.00	$87.00	$87.00
5,000	$486,700.00	$486,700.00	$161,800.00	$87.00	$87.00	$87.00
10,000	$486,700.00	$486,700.00	$161,800.00	$87.00	$87.00	$87.00

Small ICDs

Standalone fixed investment	Host fixed investment	Remote fixed investment	Standalone per line investment	Host per line investment	Remote per line investment
$486,700.00	$486,700.00	$161,800.00	$87.00	$87.00	$87.00
$486,700.00	$486,700.00	$161,800.00	$87.00	$87.00	$87.00
$486,700.00	$486,700.00	$161,800.00	$87.00	$87.00	$87.00
$486,700.00	$486,700.00	$161,800.00	$87.00	$87.00	$87.00

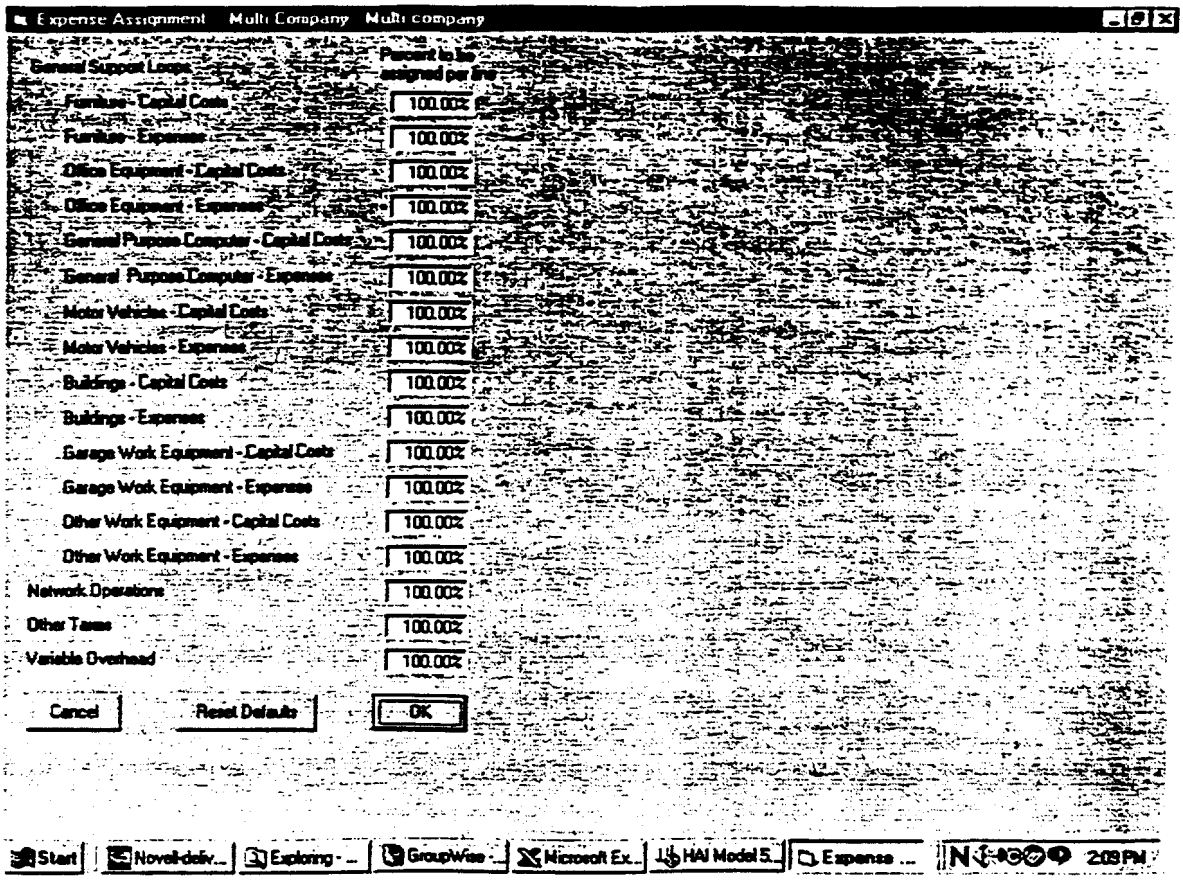
Cancel | Reset Defaults | OK

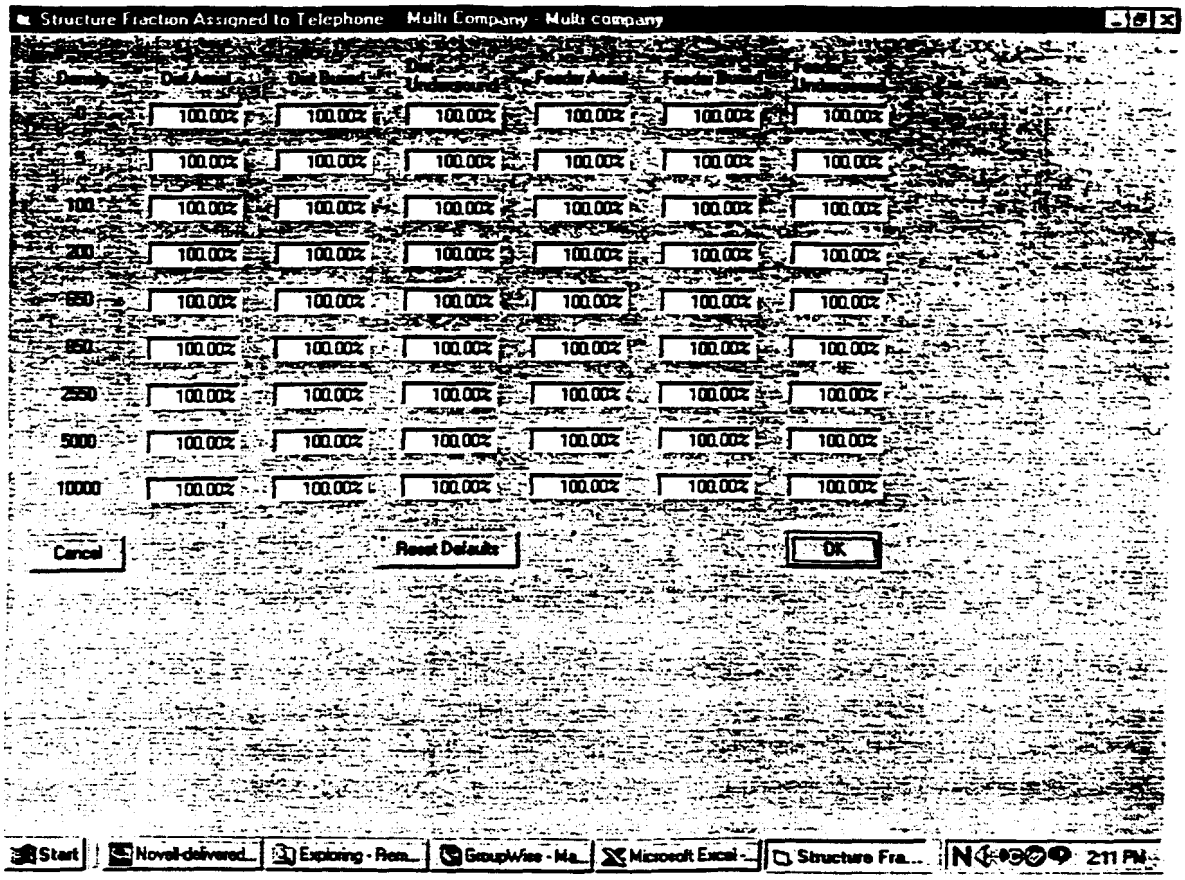

Cost of Capital Multi Company Multi-company
Cost of Debt
8.80%
Debt Fraction
44.20%
Cost of Equity
13.19%
Cancel
Reset Defaults
OK
Start
Novell-delivered...
Exploring - Rem...
GroupWise - Ma...
Cost of Capit...
11:55 AM

Depreciation - Multi-Company - Multi-company

Account	Description	Economic Life	Net Salvage %	Account	Description	Economic Life	Net Salvage %
2112	Motor Vehicles	8.24	10.38%	2351	Public Telephone Term. Equipment	7.60	5.12%
2115	Garage Work Equipment	12.22	-5.58%	2411	Poles	30.25	-89.98%
2116	Other Work Equipment	13.04	1.69%	2421.1	Aerial Cable metallic	20.61	-23.03%
2121	Buildings	46.93	1.64%	2421.2	Aerial Cable non metallic	26.14	-17.53%
2122	Furniture	15.92	4.02%	2422.1	Underground Cable metallic	25.00	-17.97%
2123.1	Office Support Equipment	10.78	4.12%	2422.2	Underground Cable non metallic	26.45	-14.58%
2123.2	Company Comm. Equipment	7.40	2.52%	2423.1	Buried Cable metallic	21.57	-8.39%
2124	General Purpose Computer	6.12	2.29%	2423.2	Buried Cable non metallic	25.91	-6.91%
2212	Digital Electronic Switching	16.17	1.57%	2426.1	Intrebuilding Cable metallic	18.18	-15.69%
2220	Operator Systems	9.41	-0.41%	2426.2	Intrebuilding Cable non metallic	26.11	-10.43%
2232.2	Digital Circuit Equipment	10.24	-0.62%	2442	Conduit Systems	56.19	-9.95%

Cancel | Reset Defaults | OK


Expense Assignment Multi Company Multi company
General Support Loops
Percent to be assigned per line
Furniture - Capital Costs 100.00%
Furniture - Expenses 100.00%
Office Equipment - Capital Costs 100.00%
Office Equipment - Expenses 100.00%
General Purpose Computer - Capital Costs 100.00%
General Purpose Computer - Expenses 100.00%
Motor Vehicles - Capital Costs 100.00%
Motor Vehicles - Expenses 100.00%
Buildings - Capital Costs 100.00%
Buildings - Expenses 100.00%
Garage Work Equipment - Capital Costs 100.00%
Garage Work Equipment - Expenses 100.00%
Other Work Equipment - Capital Costs 100.00%
Other Work Equipment - Expenses 100.00%
Network Operations 100.00%
Other Taxes 100.00%
Variable Overhead 100.00%
Cancel
Reset Defaults
OK
Start
Novell-deliv...
Exploring - ...
GroupWise -
Microsoft Ex...
HAI Model 5...
Expense ...
2:09 PM



Structure Fraction Assigned to Telephone Multi Company - Multi company

Density	Dist Aerial	Dist Buried	Dist Underground	Feeder Aerial	Feeder Buried	Feeder Underground
0	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
5	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
200	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
650	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
850	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
2550	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
5000	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
10000	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Cancel Reset Defaults OK

Start | Novell-delivered... | Exploring - Rea... | GroupWise - Ma... | Microsoft Excel - | Structure Fra... | 2:11 PM

Other - Multi-Company - Multi-company

Tax Rate	39.25%	EO Non Line Port Cost Fraction	70.00%
Corporate Overhead Factor	0.00%	Per line monthly LNP cost	$0.00
Other Taxes Factor	5.00%	Carrier-Carrier Customer Service, per line per year	$1.69
Billing/Bill Inquiry per line per month	$0.00	NID Expense per line per year	$1.00
Directory Listing per line per month	$0.00	DS-0/DS-1 Terminal Factor	12.4
Forward-looking Network Operations Factor	50.00%	DS-1/DS-3 Terminal Factor	9.9
Alternative CO Switching Factor	2.69%	Average Lines per business location	4.00
Alternative Circuit Equipment Factor	1.53%	Average Trunk Utilization	30.00%

Cancel | Reset Defaults | OK

APPENDIX A

Input Values

Part 3: Capital Costs

GrUpROR 16.01%

DefTax: TRUE

Account	USOA Category	Economic Life	Net Salvage Percent	Adjusted Projection Life	Rgltry Deprec Method	IRS Deprec Category	Capital Annual Charge Factors (RegDeprec/TaxDeprec) SL/SL	SL/Accel	ELG/ELG	ELG/Accel	Selected KACF
2112	Motor Vehicles	8.24	0.1038	9.194376	elg	2	0.202106	0.182596	0.202419	0.181483	0.181483
2115	Garage Work Equipment	12.22	-0.0558	11.57416	elg	3	0.182903	0.165529	0.181323	0.164976	0.164976
2116	Other Work Equipment	13.04	0.0169	13.26416	elg	2	0.174079	0.149475	0.168837	0.1494	0.1494
2121	Buildings	46.93	0.0164	47.71248	elg	6	0.150941	0.134557	0.150121	0.133878	0.133878
2122	Furniture	15.92	0.0402	16.58679	elg	3	0.163143	0.140292	0.158946	0.140065	0.140065
2123.1	Office Support Equipment	10.78	0.0412	11.24322	elg	3	0.185005	0.168117	0.183124	0.167662	0.167662
2123.2	Company Comm Equipment	7.4	0.0252	7.591301	elg	2	0.222954	0.206413	0.223643	0.20537	0.20537
2124	Computers	6.12	0.0229	6.263433	elg	2	0.249096	0.235937	0.249314	0.235185	0.235185
2212	Digital Switching	16.17	0.0157	16.42792	elg	2	0.163532	0.136172	0.16217	0.135036	0.135036
2220	Operator Systems	9.41	-0.0041	9.371577	elg	2	0.2003	0.18049	0.200098	0.179483	0.179483
2232.2	Digital Circuit Equipment	10.24	-0.0062	10.1769	elg	2	0.192912	0.171924	0.191334	0.171178	0.171178
2351	Public Telephone	7.6	0.0512	8.010118	elg	2	0.216563	0.199226	0.216442	0.198331	0.198331
	NID, SAI and Drop			19	elg	5	0.158367	0.150531	0.155576	0.150771	0.150771
2411	Poles	30.25	-0.8998	15.92273	elg	5	0.164836	0.160569	0.161979	0.161015	0.161015
2421-m	Aerial Cable - Metallic	20.61	-0.2303	16.75201	elg	5	0.162748	0.15741	0.161353	0.157454	0.157454
2421-nm	Aerial Cable - Non-Metallic	26.14	-0.1753	22.24113	elg	5	0.154376	0.143657	0.152517	0.143524	0.143524
2422-m	Underground - Metallic	25	-0.1797	21.19183	elg	5	0.155438	0.145575	0.152417	0.145762	0.145762
2422-nm	Underground - Non-Metallic	26.45	-0.1458	23.08431	elg	5	0.153648	0.142287	0.150465	0.142432	0.142432
2423-m	Buried - Metallic	21.57	-0.0839	19.90036	elg	5	0.157033	0.14832	0.155345	0.148254	0.148254
2423-nm	Buried - Non-Metallic	25.91	-0.0691	24.23534	elg	5	0.152816	0.140631	0.150839	0.140448	0.140448
2426-m	Intrabuilding - Metallic	18.18	-0.1569	15.71441	elg	5	0.165416	0.161426	0.185288	0.156518	0.156518
2426-nm	Intrabuilding - Non-Metallic	26.11	-0.1043	23.64394	elg	5	0.153224	0.141453	0.167453	0.137457	0.137457
2441	Conduit Systems	56.19	-0.0995	51.10505	elg	5	0.151339	0.128939	0.150529	0.127937	0.127937

Account	USOA Category	Economic Lives	Net Salvag Percent	Adjusted Projection Lives (years)	IRS Deprec Category	Regulatory Deprec Method (SL/ELG)	ELG Curve Parameters c	Log g	Log s
2112	Motor Vehicles	8.24	0.1038	9.194376	2	elg	1.262139	-0.0396	0.008554
2115	Garage Work Equipment	12.22	-0.0558	11.57416	3	elg	1.027665	-5.710313	0.145524
2116	Other Work Equipment	13.04	0.0169	13.26416	2	elg	0	0	-0.043441
2121	Buildings	46.93	0.0164	47.71248	6	elg	1.499068	-0.00491	0.001774
2122	Furniture	15.92	0.0402	16.58679	3	elg	1.019541	-4.48722	0.058591
2123.1	Office Support Equipment	10.78	0.0412	11.24322	3	elg	1.020103	-8.97444	0.163161
2123.2	Company Comm Equipm	7.4	0.0252	7.591301	2	elg	1.262139	-0.0396	0.008554
2124	Computers	6.12	0.0229	6.263433	2	elg	1.027665	-5.710313	0.145524
2212	Digital Switching	16.17	0.0157	16.42792	2	elg	1.133397	-0.217455	0.023969
2220	Operator Systems	9.41	-0.0041	9.371577	2	elg	1.133397	-0.217455	0.023969
2232.2	Digital Circuit Equipment	10.24	-0.0062	10.1769	2	elg	1.020103	-8.97444	0.163161
2351	Public Telephone	7.6	0.0512	8.010118	2	elg	1.102494	-0.3341	0.024012
	NID, SAI and Drop			19	5	elg	1.027665	-5.710313	0.145524
2411	Poles	30.25	-0.8998	15.92273	5	elg	1.020103	-8.97444	0.163161
2421-m	Aerial Cable - Metallic	20.61	-0.2303	16.75201	5	elg	1.133397	-0.217455	0.023969
2421-nm	Aerial Cable - Non-Metalli	26.14	-0.1753	22.24113	5	elg	1.133397	-0.217455	0.023969
2422-m	Underground - Metallic	25	-0.1797	21.19183	5	elg	1.027665	-5.710313	0.145524
2422-nm	Underground - Non-Metal	26.45	-0.1458	23.08431	5	elg	1.027665	-5.710313	0.145524
2423-m	Buried - Metallic	21.57	-0.0839	19.90036	5	elg	1.133397	-0.217455	0.023969
2423-nm	Buried - Non-Metallic	25.91	-0.0691	24.23534	5	elg	1.133397	-0.217455	0.023969
2426-m	Intrabuilding - Metallic	18.18	-0.1569	15.71441	5	elg	0.96	-0.194886	-0.011252
2426-nm	Intrabuilding - Non-Metalli	26.11	-0.1043	23.64394	5	elg	0.96	-0.194886	-0.011252
2441	Conduit Systems	56.19	-0.0995	51.10505	5	elg	1.499068	-0.00491	0.001774

USOA Category	GM Std. Curve Shape	ELG Curve Parameters		
		c	Log g	Log s
Motor Vehicles	GM 3.5	1.2621388	-3.96000900E+02	8.5537158E-03
Garage Work Equipment	GM 1.5	1.0276647	-5.71031270E+00	1.45524080E-01
Other Work Equipment	GM 0.0	0	0.00000000E+00	-4.34411150E-02
Buildings	GM 4.5	1.4990682	-4.91004630E-03	1.77395090E-03
Furniture	GM 0.5	1.0195406	-4.48721900E+00	5.8590832E-02
Office Support Equipment	GM 1.0	1.0201029	-8.97443950E+00	1.6316108E-01
Company Comm Equipment	GM 3.5	1.2621388	-3.9600900E+02	8.5537158E-03
Computers	GM 1.5	1.0276647	-5.71031270E+00	1.45524080E-01
Digital Switching	GM 2.5	1.1333974	-2.17455120E-01	2.39688400E-02
Operator Systems	GM 3.5	1.2621388	-3.96000900E+02	8.5537158E-03
Digital Circuit Equipment	GM 1.0	1.0201029	-8.97443950E+00	1.6316108E-01
Public Telephone	GM 2.0	1.102494	-3.34100410E-01	2.40118790E-02
NID, SAI and Drop	GM 1.5	1.0276647	-5.71031270E+00	1.45524080E-01
Poles	GM 1.0	1.0201029	-8.97443950E+00	1.6316108E-01
Aerial Cable-Metallic	GM 2.5	1.1333974	-2.17455120E-01	2.39688400E-02
Aerial Cable-Non-Metallic	GM 2.5	1.1333974	-2.17455120E-01	2.39688400E-02
Underground-Metallic	GM 1.5	1.0276647	-5.71031270E+00	1.45524080E-01
Underground-Non-Metallic	GM 1.5	1.0276647	-5.71031270E+00	1.45524080E-01
Buried-Metallic	GM 2.5	1.1333974	-2.17455120E-01	2.39688400E-02
Buried-Non-Metallic	GM 2.5	1.1333974	-2.17455120E-01	2.39688400E-02
Conduit Systems	GM 4.5	1.4990682	-4.91004630E-03	1.77395090E-03

Actuals for 1996 ($000s)

	Investments	Expenses	Calculated Factor			
Plant-Specific Operations Expenses						
TPIS - General Support						
2111 Land	0.000001	2.76E-08	0.0276			0.0276
2112 Motor Vehi	0.000001	2.76E-08	0.0276			0.0276
2113 Aircraft	0.000001	2.76E-08	0.0276			0.0276
2114 Special Pu	0.000001	2.76E-08	0.0276			0.0276
2115 Garage W	0.000001	2.76E-08	0.0276			0.0276
2116 Other Wor	0.000001	2.76E-08	0.0276			0.0276
2121 Buildings	0.000001	9.06E-08	0.0906		Land & Bldg Exp Appli	0.0906
2122 Furniture	0.000001	9.06E-08	0.0906			0.0906
2123 Office Equi	0.000001	9.06E-08	0.0906			0.0906
2124 General P	0.000001	9.06E-08	0.0906			0.0906
2110 Total Land	0.00001	5.28E-07	0.0528			0
TPIS - Central Office Switching						
2211 Analog Ele	0	0	0.000001			0.0558
2212 Digital Ele	0	0	0.000001	0.0558	NET CO S	0.0558
2210 Total Cent	0	0	0.000001			
2220 Operator S	0	0	0.000001			
TPIS - Central Office Transmission						
2231 Satellite & Earth Station Facilities						0.0204
2231 Other Radio Facilities						0.0171
2231 Radio Systems						0.013
2232 Circuit Equ	0	0	0.000001	0.02	alternative	0.02
2230 Total Cent	0	0	0.000001			0.02
TPIS - Information Orig/Term						
2311 Station Ap	0	0	0.000001			
2321 Customer	0	0	0.000001			
2341 Large Priv	0	0	0.000001			
2351 Public Tele	0	0	0.000001			
2362 Other Ter	0	0	0.000001			
2310 Total Infor	0	0	0.000001			
				Alternative Cable		
TPIS - Cable & Wire Facilities				Maintenance Factors		
2411 Poles	0	0	0.000001	Fiber	Copper	0.0219
2421 Aerial Cabl	0	0	0.000001	0.0073	0.0669	0.0669
2422 Undergrou	0	0	0.000001	0.0084	0.021	0.021
2423 Buried Ca	0	0	0.000001	0.0061	0.0446	0.0446
2424 Submarine Cable			0.000001			
2425 Deep Sea Cable			0.000001			
2426 Intrabuilding Network Cable			0.000001			
2431 Aerial Wire			0.000001			
2441 Conduit Sy	0	0	0.000001			0.0058
2410 Total Cabl	0	0	0.000001			
240 Total TPIS	0	5.28E-07	0.000001			
710 Total Corp	0	1	0	0		
720 Total Oper	5.38E-07	1		0.3231	Total Operations General Support Allocato	
note: does not include dep/amort				0.6769	"Office Worker" General Support Allocato	