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98 JUL 31 PM 4:23
RECORDS AND
REPORTING

July 31, 1998

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Special Project No. 980000A-SP

Dear Ms. Bayo:

Enclosed for filing is one (1) redacted copy of Sprint-Florida, Incorporated's response to the Commission's June 19, 1998 Data Requests in this matter. Some of the information requested is confidential and has been submitted under separate cover subject to a claim of confidentiality pursuant to §. 364.183, Fla. Stat. and Motion for Temporary Protective Order filed this same day.

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning the same to this writer.

Thank you for your assistance in this matter.

Sincerely,

Charles J. Rehwinkel

CJR/th

Enclosures

RECEIVED & FILED

FPSC-BUREAU OF RECORDS

response to CMU request
DOCUMENT NUMBER-DATE

08086 JUL 31 88

FPSC-RECORDS/REPORTING

response to AFA request
DOCUMENT NUMBER-DATE

08087 JUL 31 88

FPSC-RECORDS/REPORTING

ACK _____
AFA Cover letter only
APP _____
CAF _____
CMU Cover letter only
CTN _____
EAG _____
LEG Cover letter only
LIR _____
GFC _____
RC Cover letter only
SEC Cy cover letter only
WAS _____
OTH _____



F. B. (Ben) Poag
Director - Regulatory Affairs

Southern Operations
Box 2214
Tallahassee, FL 32316
Mailstop F111100101
Voice 850 599 1027
Fax 850 878 0777

July 31, 1998

Mr. Walter D'Haeseleer
Director - Division of Communications
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 980000A-SP UNDOCKETED SPECIAL PROJECT: Fair and Reasonable Rates

Dear Mr. D'Haeseleer:

Per your request dated June 19, 1998 Sprint - Florida, Incorporated is providing the information prescribed by the Commission for the purpose of recommending a fair and reasonable Florida residential basic local telecommunications service rate. Some of the information requested is confidential and has been submitted under separate cover subject to a claim of confidentiality pursuant to s. 364.183, Fla. Stat.

If you have any questions please contact me at 850-599-1027.

Sincerely,

F. Ben Poag
Director - Regulatory Affairs

Enclosure

cc: Division of Communications
Division of Auditing and Financial Analysis

DOCUMENT NUMBER-DATE
08086 JUL 31 98
FEDERAL REPORTING

SPRINT – FLORIDA, INCORPORATED

Data Request 980000A-SP: UNDOCKETED SPECIAL PROJECT: Fair and Reasonable Rates

1.
 - (a) Please provide a contribution analysis for "voice grade, flat-rate residential local exchange service," as this term is used in Section 364.02(2), F.S.
 - (b) Please provide the cost study and all associated work papers and related documentation, that results in the contribution analysis in (a).
 - (c) Please provide a contribution analysis for "voice-grade, flat-rate single-line business local exchange service," as this term is used in Section 364.02(2), F.S.
 - (d) Please provide the cost study and all associated work papers and related documentation, that results in the contribution analysis in (c).
 - (e) Please provide a contribution analysis for ESSX/Centrex service.
 - (f) Please provide the cost study and all associated work papers and related documentation, that results in the contribution analysis in (e).
 - (g) Please provide a contribution analysis for PBX trunk service.
 - (h) Please provide the cost study and all associated work papers and related documentation, that results in the contribution analysis in (g).
 - (i) Please provide a contribution analysis for all multi-line circuit-switched business services other than those indicated in (e) and (g).
 - (j) Please provide the cost study and all associated work papers and related documentation, that results in the contribution analysis in (i).

The response to this request is contained in the enclosed binder.

2.
 - (a) Please provide a contribution analysis for intrastate switched access charges.
 - (b) Please provide the cost study and all associated work papers and related documentation, that results in the contribution analysis in (a).

The response to this request is contained in the enclosed binder.

08086-98

3. (a) Please provide a contribution analysis for intraLATA toll (including common line WATS/800-type services).

(b) Please provide the cost study and all associated work papers and related documentation, that results in the contribution analysis in (a).

The response to this request is contained in the enclosed binder.

4. (a) Please provide contribution analyses (separately for residence and business) for each of the following features, whether purchased individually or as part of a package:

- (1) 3-Way Calling
- (2) Call Forwarding
- (3) Call Forwarding Busy Line
- (4) Call Forwarding Don't Answer
- (5) Call Return
- (6) Repeat Dialing
- (7) Call Selector
- (8) Preferred Call Forwarding
- (9) Caller ID Deluxe
- (10) Custom Code Restrictions

(b) Please provide the cost study and associated work papers and related documentation, that results in each contribution analyses in (a).

The response to this request is contained in the enclosed binder.

4. (c) For each of the features listed in (a), please indicate the percent of your access lines (separately for residence and business) equipped with each of these features.

Sprint has included the response as requested.

5. (a) Please provide any studies, reports or analyses conducted by or for your company that concern the relationship between the price and quantity demanded for various services offered by your company. If the company does not have company-specific studies, reports or analyses, but does have studies, reports or analyses that deal with this subject prepared within the past 10 years, please provide such studies, reports or analyses.

Sprint participates with other local telephone companies and a neutral third party company to quantitatively examine the relationship between price and quantity demanded for various telephone services. Each local exchange

telephone company participating in this consortium provides the third party company with billing data for their services. The third party uses the data to estimate demand models for various telephone services. The participants meet periodically to review the results from these modeling efforts. Provided as attachment are presentation material and other documents from the most recent meeting that concern the relationship between price and quantity demanded.

- (b) Please provide any reports, studies or analyses conducted by or for your company that concern the consumption patterns of your Florida consumers as it pertains to telecommunications purchases. If the company does not have any company-specific studies or reports, but does have relevant materials prepared within the past five years, please provide such studies, reports or analyses.

Sprint has included the analyses completed by the company.

- (c) To the extent not provided in response to (b), please provide any reports, studies, surveys or analyses prepared within the past five years that discuss the ability of Florida consumers to pay for various telecommunications products and services.

No information available.

- (d) To the extent not provided in response to (b), please provide any reports, studies, surveys or analyses prepared within the past five years that discuss the willingness of Florida consumers to pay for various telecommunications products and services.

No information available.

- (e) To the extent not provided in response to (b), please provide any reports, studies, surveys or analyses prepared within the past five years that discuss the relative valuation placed upon various telecommunication products and services by Florida consumers.

No information available.

- (f) Please provide any reports, studies or analyses in your possession prepared within the past five years that compare or discuss the relative price levels of residential basis local exchange service in the United States.

No information available.

- (g) Please provide any reports, studies or analyses in your possession prepared within the past five years that compare or otherwise discuss the price paid for typical mixes of telecommunications product and services by residential consumers in different areas of the United States. If known, please indicate the dollar amount associated with each component of the "market basket" of telecommunications goods and services. (e.g., indicate amount typically spent on local service, toll, ancillary services, taxes and other fees, etc.).

No information available.

SPRINT – FLORIDA, INC.

980000A- SP: UNDOCKETED SPEICAL PROJECT: Fair and Reasonable Rates

Data Request Cross Reference: 4. (c)

Sprint - Florida
Feature PenetrationResidential Lines 1,276,055
Business Lines 248,284

Single	Pkg 1		Pkg 2		Pkg 3		Pkg 4		Pkg 5		Pkg 6		Pkg 7		Total		Penetration %	
	Res.	Bus.	Res.	Bus.	Res.	Bus.	Res.	Bus.	Res.	Bus.	Res.	Bus.	Res.	Bus.	Res.	Bus.	Res.	Bus.

3 Way Calling
Call Waiting
CFB
CFNA
Call Return
Repeat Dialing
Caller ID Deluxe
Custom Code Rstr.
Call Forward

SPRINT – FLORIDA, INC.

980000A- SP: UNDOCKETED SPEICAL PROJECT: Fair and Reasonable Rates

Data Request Cross Reference: 5. (a)



Introduction

- ❖ Emergence of Competition in the Intralata market
 - Regulator sponsored and mandated
 - Other
 - ♦ I.e., 1-0-xxx
- ❖ Present Study
 - Availability of data from Bill Harvesting II
 - Models make allowance for multiple intralata carriers

PNR and Associates Telecom Review - Sept. 1996



Models used in Estimation

- ❖ Models are estimated in 2 stages
 - First-stage probit model for estimating nonzero intralata minutes
 - Second-stage models estimate intralata usage
- ❖ Non-Price independent variables include:
 - Income, age, call concentration index, subscription to calling plans (both intra and Interlata), dummy variables for primary IX carrier, and dummy variable for competition

PNR and Associates Telecom Review - Sept. 1996



Data Sets Used in Estimation

- ❖ Data are from Bill Harvesting II, collected in the spring of 1995
- ❖ Models are estimated for:
 - all households with nonzero Intralata minutes
 - households with Intralata minutes greater than 4
 - households with Intralata minutes between 5 and 1000

PNR and Associates Telecom Review - Sept. 1996



Interpretation of Elasticities

- ❖ Since the data are for individual households, the vantage point is that of customers of Intralata carriers, rather than of the carriers themselves
- ❖ However, if it is assumed that all households in the sample had access to a non-LEC carrier (even of only through 1-0-XXX), then the LEC-only elasticity can be interpreted as the elasticity for the households which remain "loyal" to the LEC
- ❖ On the other hand, the 'net' elasticity can be interpreted as the elasticity for households who use multiple Intralata carriers

PNR and Associates Telecom Review - Sept. 1996



Conclusions

- ❖ There is a strong response on the part of some households to the existence of non-LEC Intralata carriers
- ❖ The estimated 'market' price elasticity for Intralata toll is about -0.23
- ❖ For households who use multiple carriers, the LEC price elasticity is about -0.44, while the "cross" elasticity is about 0.21

PNR and Associates Telecom Review - Sept. 1996

SPRINT – FLORIDA, INC.

980000A- SP: UNDOCKETED SPEICAL PROJECT: Fair and Reasonable Rates

Data Request Cross Reference: 5. (a)



Introduction

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PNR and Associates Telecom Review - Sept. 1996



Competitive Own- and Cross- Price Elasticities in the Intralata Toll Market

Lester D. Taylor
University of Arizona

PNR and Associates Telecom Review - Sept. 1996



Outline

- ❖ Introduction
- ❖ Models used in Estimation
- ❖ Data Sets used in Estimation
- ❖ Emirical Results
- ❖ Conclusions

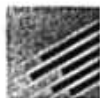
PNR and Associates Telecom Review - Sept. 1996



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PNR and Associates Telecom Review - Sept. 1996



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- ❖ On the other hand, the 'net' elasticity can be interpreted as the elasticity for households who use multiple Intralata carriers

PNR and Associates Telecom Review - Sept. 1996



Models used in Estimation (con't)

- ❖ Price variables include:
 - Average cost per minute of a 4-minute call for local exchange company state
 - Average cost per minute of a 4-minute call for AT&T by state
- ❖ Competition dummy is defined in terms of whether a household used multiple carriers for intralata calls

PNR and Associates Telecom Review - Sept. 1996



Models used in Estimation (con't)

- ❖ Price variables are interacted with both call concentration index and competition dummy variable
- ❖ Other socio-demographical variables not included in tabulated models because price coefficients are generally insensitive to their presence or absence

PNR and Associates Telecom Review - Sept. 1996



Conclusions

- ❖ There is a strong response on the part of some households to the existence of non-LEC Intralata carriers
- ❖ The estimated 'market' price elasticity for Intralata toll is about -0.23
- ❖ For households who use multiple carriers, the LEC price elasticity is about -0.44, while the "cross" elasticity is about 0.21

PNR and Associates Telecom Review - Sept. 1996

Intralata Toll Demand
Bill Harvesting II Database
Households with Non-Zero Minutes

<u>Variable</u>	<u>Coefficient</u>	<u>t-ratio</u>
CONSTANT	350.777	15.74
INCOME	0.342E-04	0.69
AGE	-0.415	-4.31
MILLS	11.045	1.46
COMP	23.151	1.86
LP	43.145	11.21
LPCOMP	13.503	1.49
LDP	2.218	0.70
LDPCOMP	11.793	1.80
CALLCON	-3.046	-13.56
SPR	11.988	1.59
LECRATE	-283.538	-2.79
LECRATECC	2.310	2.13
LECRATECOMP	-120.685	-2.41
ATTRATECOMP	287.242	2.99
ATTRATECOMPCC	-2.016	-2.39

No. of Ob: = 6135
 R^2 = 0.224
 R^2 (adj) = 0.222
S.E. = 103.93
 $F(15, 6119)$ = 117.53

Intralata Toll Demand
Bill Harvesting II Database
Households with More Than 4 Minutes of Calling per Month

<u>Variable</u>	<u>Coefficient</u>	<u>t-ratio</u>
CONSTANT	323.525	13.03
INCOME	0.559E-04	0.94
AGE	-0.460	-4.03
MILLS	15.46106	1.73
COMP	28.954	1.99
LP	48.422	10.78
LPCOMP	10.315	1.01
LDP	2.53	0.67
LDPCOMP	12.6767	1.68
CALLCON	-2.702	-10.61
SPR	14.064	1.60
LECRATE	-244.499	-2.18
LECRATECC	1.916	1.55
LECRATECOMP	-138.874	-2.36
ATTRATECOMP	303.038	2.80
ATTRATECOMPCC	-2.324	-2.47

No. of Obs: = 5113
 R^2 = 0.192
 $R^2(\text{adj})$ = 0.190
S.E. = 112.47
 $F(15, 5097)$ = 80.84

Intralata Toll Demand
Bill Harvesting II Database
Households with Calling Activity
Between 4 and 1000 Minutes per Month

<u>Variable</u>	<u>Coefficient</u>	<u>t-ratio</u>
CONSTANT	324.052	13.05
INCOME	0.574E-04	0.97
AGE	-0.457	-4.00
MILLS	15.708	1.76
COMP	28.686	1.97
LP	48.810	10.86
LPCOMP	9.914	0.97
LDP	2.236	0.59
LDPCOMP	13.029	1.72
CALLCON	-2.710	-10.65
SPR	13.938	1.58
LECRATE	-252.908	-2.25
LECRATECC	2.001	1.62
LECRATECOMP	-137.827	-2.34
ATTRATECOMP	307.154	2.84
ATTRATECOMPCC	-2.362	-2.50

No. of Obs:	= 5105
R ²	= 0.192
R ² (adj)	= 0.190
S.E.	= 112.43
F(15,5089)	= 80.73

Average Bills by Long Distance Carrier
Bill Harvesting II Database

<u>Long Distance Carrier</u>	<u>Total Local Phone Bill</u>	<u>Local Co. Toll Bill</u>	<u>Total LD Bill</u>	<u>Cellular Phone Bill</u>	<u>Cable TV Bill</u>
AT&T	\$30.27	\$8.74	\$23.14	\$45.87	\$32.04
MCI	30.97	9.12	27.18	44.07	31.44
Sprint	30.83	8.97	31.39	46.88	33.38
Other	26.91	8.48	20.23	43.54	30.06
Total	30.11	8.78	23.77	45.51	31.86

Average Bills by Local Phone Company
Bill Harvesting I. Database

Local Phone <u>Company</u>	Total Local <u>Phone Bill</u>	Local Co. <u>Toll Bill</u>	Total LD <u>Bill</u>	Cellular <u>Phone Bill</u>	Cable TV <u>Bill</u>
Ameritech	\$30.49	\$ 9.25	\$20.95	\$46.27	\$31.94
Bell Atlantic	26.80	7.33	21.92	38.95	32.33
Bell South	30.51	7.02	27.56	42.38	31.42
Cincinnati Bell	28.47	13.33	19.08	23.83	32.43
GTE	32.54	8.27	22.83	55.15	31.39
NYNEX	34.20	9.70	24.07	39.31	35.54
Pacific Bell	23.84	7.35	23.91	63.14	34.07
SNET	34.19	11.08	23.70	49.24	35.49
Southwestern Bell	30.71	8.60	23.68	52.27	31.97
United/Sprint	29.06	8.70	25.89	37.16	28.91
U.S. West	28.10	8.33	22.87	41.72	29.74
Independents	28.68	11.45	26.06	45.35	30.58
<i>Total</i>	<i>29.78</i>	<i>8.62</i>	<i>23.75</i>	<i>46.29</i>	<i>31.91</i>

Percentages of Households
With Non-Zero Bills
By Income
Bill Harvesting II Database

<u>Income</u>	<u>Total Local Phone Bill</u>	<u>Local Co. Toll Bill</u>	<u>Total LD Bill</u>	<u>Cellular Phone Bill</u>	<u>Cable TV Bill</u>
Total	100.00%	61.62%	84.58%	11.14%	57.42%
Under 7500	100.00	52.72	72.23	2.06	45.97
7500- 9999	100.00	56.51	75.63	3.57	44.96
10000- 12499	100.00	54.47	78.75	2.53	46.71
12500- 14999	100.00	56.30	81.10	5.28	50.00
15000- 19999	100.00	55.50	85.49	4.84	51.63
20000- 24999	100.00	61.12	83.61	6.45	55.19
25000- 29999	100.00	59.69	84.49	6.82	56.52
30000- 34999	100.00	67.02	85.39	11.19	60.78
35000- 39999	100.00	67.39	85.86	10.45	58.09
40000- 44999	100.00	63.11	85.27	13.78	62.30
45000- 49999	100.00	62.52	86.65	14.99	61.06
50000- 59999	100.00	64.25	88.74	18.71	64.05
60000- 69999	100.00	66.72	90.56	21.21	64.40
70000- 74999	100.00	68.93	90.94	21.68	71.52
75000- 99999	100.00	64.52	91.07	21.84	67.99
100000-149999	100.00	68.13	89.01	29.12	63.74
150000-199999	100.00	62.16	83.78	45.93	56.74
200000 plus	100.00	62.07	72.41	37.93	62.07

Average Bills by Household Income
 Bill Harvesting II Database
 (For Households with Non-Zero Bills)

<u>Income</u>	<u>Total Local Phone Bill</u>	<u>Local Co. Toll Bill</u>	<u>Total LD Bill</u>	<u>Cellular Phone Bill</u>	<u>Cable TV Bill</u>
Total	\$29.78	\$ 8.67	\$23.82	\$46.45	\$31.92
Under 7500	28.78	10.37	19.17	35.71	30.16
7500- 9999	26.35	7.32	19.34	38.82	30.49
10000- 12499	26.64	7.55	19.99	45.49	29.83
12500- 14999	27.09	8.92	22.07	51.57	30.15
15000- 19999	29.01	8.29	20.92	49.11	29.89
20000- 29999	28.97	8.05	22.20	43.34	31.14
25000- 29999	28.87	8.03	21.55	38.45	30.51
30000- 34999	30.36	9.20	23.32	50.77	31.65
35000- 39999	29.98	7.82	23.49	56.65	32.59
40000- 44999	29.88	8.49	22.53	43.19	31.60
45000- 49999	30.15	8.88	23.43	38.97	31.71
50000- 59999	31.54	8.35	27.57	44.75	33.06
60000- 69999	31.90	8.75	29.77	53.85	34.14
70000- 74999	31.44	9.06	29.53	46.06	33.18
75000- 99999	33.02	11.64	29.50	43.37	36.98
100000-149999	34.68	11.07	28.15	44.60	36.98
150000-199999	54.08	21.38	52.20	44.74	43.06
200000 plus	36.84	9.87	48.23	59.93	38.26

Price Elasticities for Models in Tables 5 - 7

LEC Only With Other Carriers

Table 5

LEC rate	-0.238	-0.411
AT&T rate		0.227

Table 6

LEC rate	-0.226	-0.434
AT&T rate		0.206

Table 7

LEC rate	-0.230	-0.435
AT&T rate		0.207

Comparison of Toll Calling Activity
Households Who Use LEC Only Versus Households
Who Use Multiple Carriers
Bill Harvesting II Database

Income	No. of Households	Avg. intralata Minutes	Avg. interlata Minutes	Avg. Total Minutes
--------	----------------------	---------------------------	---------------------------	-----------------------

Households using only LEC for intralata toll calling

under 15000	853	54.6	65.0	119.6
15000- 24999	903	55.6	74.1	129.7
25000- 34999	811	63.9	88.6	152.5
35000- 49999	972	55.3	98.0	153.3
50000- 74999	940	67.3	117.4	184.7
75000 plus	299	63.5	122.1	185.6
total	4778	59.6	91.3	150.9

Households using LEC and/or IXC's for intralata toll calling

under 15000	259	84.7	88.5	173.2
15000- 24999	261	91.8	100.6	192.4
25000- 34999	241	103.9	110.8	214.7
35000- 49999	268	106.5	90.5	197.0
50000- 74999	256	94.1	132.1	226.2
75000 plus	83	115.5	185.7	301.2
total	1368	97.4	109.2	206.6

Saint Michaels, Maryland
September 19-20, 1996.

Competition in the long distance market in the US is at a cross-roads. While there has been competition in the interLATA long distance market for nearly two decades, intraLATA toll has had limited competition with the incumbent local exchange company still having a virtual monopoly. The signing of the recent Telecommunications Bill seems likely to spur more competition in all parts of the long distance industry—both interLATA through the (eventual) entry of the Regional Bell Operating Companies (RBOCs) and intraLATA with the likely end of 1+ default going to the incumbent RBOC. It is with these changes in mind, that we begin our analysis of characterizing the current status of long distance competition. While we will primarily be interested in short-haul (or intraLATA) service, for comparison we will use the more frequently analyzed interLATA market as a point of comparison.

The Competitive Landscape

The US long distance industry is bifurcated into interLATA and intraLATA. The split was a result of the AT&T divestiture in 1984. The divestiture prohibited AT&T from providing local services and prevented the Regional Bell Operating Companies (RBOCs) from entering the long distance or equipment manufacturing markets. The basic idea was to split the industry into competitive and non-competitive segments. The "competitive" interLATA business (already open to competition since the late 1970s as a result of MCI's actions) went with AT&T and was subject to "free and fair" competition through 1+ subscription (implemented as so-called equal access became available nationwide).¹ Allegedly non-competitive lines of business stayed with the RBOCs. IntraLATA toll (short haul) went with the RBOCs—not because it was suspected to be non-competitive but rather as a political compromise resulting from fears (since

¹ The subscriber selects its default carrier through pre-subscription. All 1+ calls are handled by this default carrier.

IntraLATA Competition: Carrier Choice Models Using Bill Harvesting™

Donald Kridel
University of Missouri-St. Louis

Paul Rappoport
Temple University

Lester Taylor
University of Arizona

Presented at the 7th Annual NTDS Meetings

The new telecommunications bill allows the RBOCs into long distance (after certain competitive conditions are met for the local market), allows AT&T and others to enter into the local service market and most likely eventually allow some sort "pre-selection of carriers" for intraLATA calling.²

We will analyze how customers select carriers for long distance for both the intraLATA markets. Our findings at this point should provide some of the groundwork necessary for understanding the likely competitive impacts of the new bill.

We will utilize Bill Harvesting II data from PNR.³ Approximately 10,000 bills are "harvested" from consumers and entered. Detailed call information and aggregate usage data as well as consumer demographics are available for these customers. For a more complete description of the data set, see the provided binders from previous NTDS meetings.

The Data

Initially, we provide some descriptive statistics for the US.⁴ Customers make approximately 19 long distance calls per month. Of these, approximately 11 are interLATA and the remaining eight are intraLATA. The average holding time for interLATA calls is 11 minutes; while for intraLATA calls, average holding time is 5.9 minutes. Approximately 87% of the sample placed an interLATA call in the month the bills were collected. On the other hand, only 66% placed an intraLATA call during the same month.

² One way or another, one would expect the artificial distinction between inter and intraLATA to end. Customers have never understood the concept of a LATA.

³ Details on the collection and availability of Bill Harvesting are available from PNR Associates.

⁴ All statistics are based on sample of 9364 customers that comprise Bill Harvesting II. For ease of calculation, all averages are unweighted and hence are not fully reflective of US as a whole. To give some sense of the impact of weighting, non-weight intraLATA market share is 16.4%, while the weighted counterpart is 15.2%.

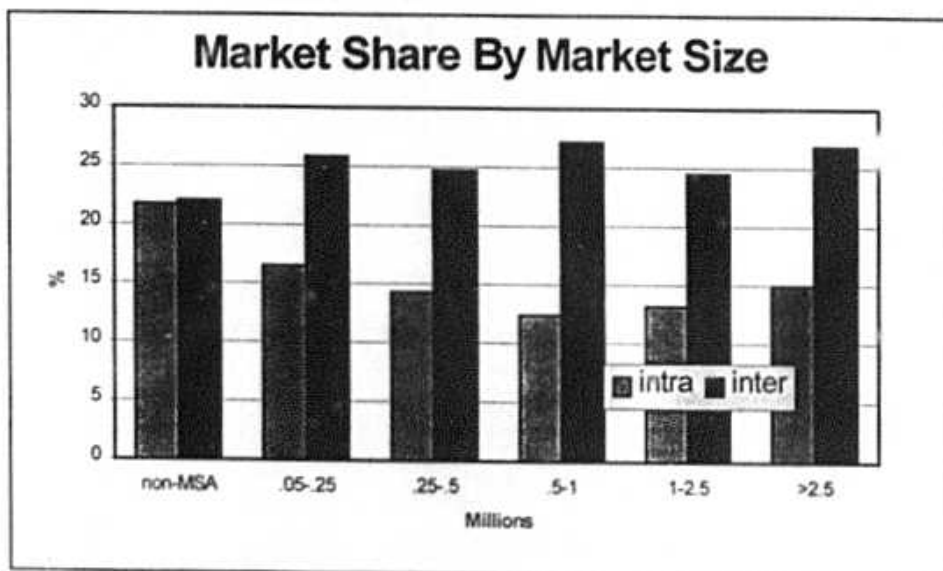
unsubstantiated) that the local companies would shortly become insolvent. Of course, the idea that certain lines of business could remain non-competitive--especially when regulated prices diverged widely from costs--would soon be proven wrong. Furthermore, the very same concerns about the RBOC's economic health and universal service led to the creation of subsidy-laden access charges (fees paid by long distance companies to "access" the end-user) which blunted the price competition that was expected post-divestiture.

Even though interLATA long distance is publicly believed to be highly competitive, there has been considerable academic debate about how intense residential interLATA price competition in the US has been. Taylor and Taylor (1993), for example, conclude that the price reductions passed on to end-users are no larger than would be expected looking at access price reductions mandated by the FCC. This suggests the possibility of a price-leadership model (which is certainly consistent with the tariffs filed "informationally" by MCI and Sprint which are virtually identical to AT&T's). Price reductions have not been numerous nor large. On the other hand, there have a significant number of lower-priced optional calling plans (OCPs) offered. Certainly, for call plan non-subscribers, price differences between the carriers have decreased dramatically over the last several years.

On the other hand, intraLATA service is typically not considered to be highly competitive—at least in most regions. IntraLATA competition got off to a very slow start. While most states allowed 1-0xxx competition fairly early after divestiture, the level of intrastate access charges gave the inter-exchange carriers (IXCs, e.g., AT&T, MCI, and Sprint) very little incentive to compete with the RBOCs. As access charges have fallen, IXC incentives to carry this traffic have increased. Nonetheless, since callers had to make alternative routing decisions for each and every call, RBOC market shares are still quite high.

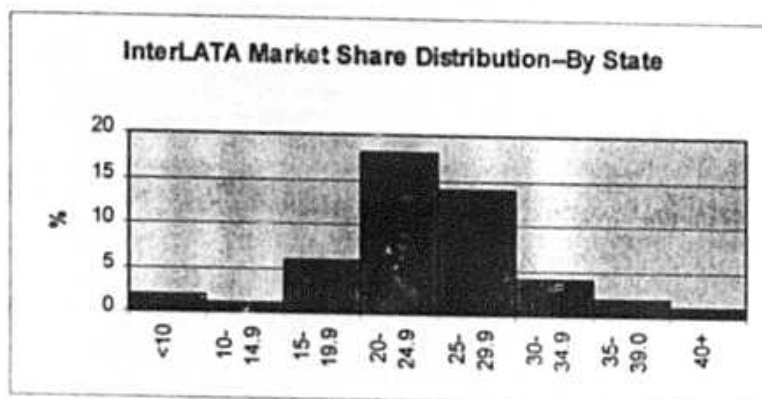
- interLATA competition is better developed (and older);
- intraLATA rates and rules for competition vary widely by state.

There are also obvious differences across market size. For example, the non-MSA competitive share is virtually identical for both markets. For intraLATA however, share falls as market size increases (until the largest market size), while for interLATA share is larger in MSAs than in rural areas. For interLATA, this is no surprise. MCI and Sprint generally targeted high volume, high density areas. On the other hand, it is perhaps mildly surprising that rural customers are more likely to avail themselves of alternative providers of intraLATA service. (The relative importance of intraLATA calling to rural customers may be part of the explanation for this finding. Almost 38% of rural calling is intraLATA compared to 34% in MSAs.)

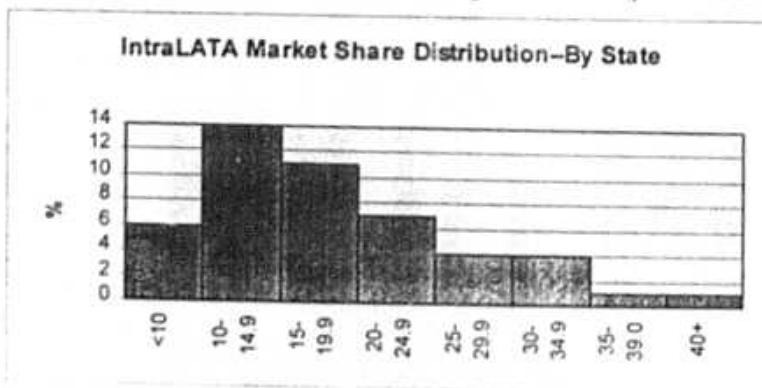


Similarly, when we look at non-local intraLATA share by company we find similar results. There are differences in share by RBOC (low of 8.9% for Bell South to a

On average, non-local intraLATA market share is about 16.4%, while non-AT&T interLATA share is about 25% (measured on a customer basis). There is limited state-to-state difference in interLATA market shares. Non-AT&T market share ranges from approximately 6% in Wyoming to 40% in South Dakota (both small states with few observations). Eighteen states have shares between 18% and 24%. Fourteen states have share between 26% and 30%. Six states have shares between 15 and 20%. Another five have shares between 30 and 35%. Only three states are below 15% and two above 35%. (See histogram below.)



In contrast, intraLATA shares are much more variable ranging from a low of 3.5% in Virginia to 47.5% in South Dakota. Six states have non-local shares over 30%; another six have shares under 10%. Fourteen have shares between 10 and 15%, while eleven have shares between 15 and 20%. Another eleven have shares between 20 and 30%. (See histogram below.) That the interLATA



and intraLATA distributions are different is not surprising:

The Models

Choice models were developed in an attempt to explain the choice of a competitive alternative for intraLATA toll service.⁷ The following models for intraLATA carrier choice have been developed:

1. simple logit models with the alternatives being the incumbent local service provider or an alternative provider;
2. carrier choice models where the alternatives are specific carriers, e.g., the local incumbent, AT&T, MCI, Sprint or "Other"

Models For The Decision To Use An Alternative Provider

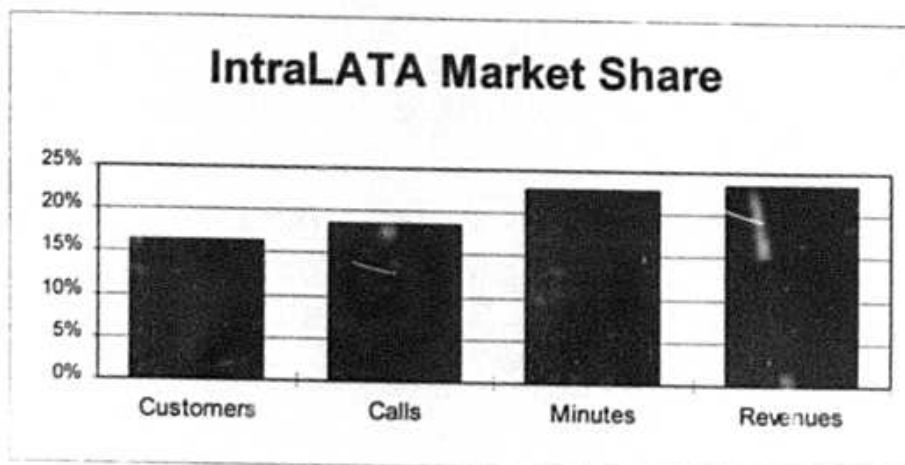
It should be noted that unlike interLATA carrier choice which is done "once" (at least for a given month), to use an alternative vendor for intraLATA calling requires the choice to be made for each and every call. As a result, we observe some households that use only the incumbent local telephone company, some that use only an alternative carrier(s), and some that place some calls with the local company and others with an alternative provider.

Interestingly, those that opt entirely for the incumbent (default 1+ dialing) or entirely for the alternative provider (perhaps, through speed dialing) are quite different from those that split their traffic. Default 1+ dialers (on average) make 11.2 calls per month which last 5.1 minutes per call and spend a total of \$6.67. "Alternative providers" only callers make 11.1 calls lasting 6.1 minutes per call for a total spending of \$8.84. On the other hand, those that split their traffic make 21.4 calls which last 5.7 minutes per call for a total monthly billing of \$14.32. (Of these 21.4 calls, 12.1 calls with an average holding time of 5.1 minutes are placed with the incumbent and 9.3 calls with an average holding time of 6.4

⁷ Similar models for interLATA carrier choice have been developed in Kridel, Rappoport, and Taylor (1996). See, also, Kridel (1995).

high of 16.8% for Southwestern Bell), but the largest share is found in primarily rural independent company territory where it approaches 50%.⁵

IntraLATA market shares vary slightly depending on how it is measured. For example, non-local companies have approximately 16.4% of the customers but over 23% of the revenues. This is consistent with consumers opting to "dial the extra digits" for calls of longer distances and/or for calls that are expected to be of longer duration. Of these 16% of the customers that use alternative vendors for intraLATA toll, approximately 51% use the alternative vendor exclusively.⁶ For the remaining 49%, 46% of their traffic is routed with the alternative vendor(s) while the remaining 54% is routed with their local company.



There is surprisingly little variation in intraLATA market share by household demographics. For example, there is very little difference in intraLATA market share by income quartile. The lowest quartile (income less \$17,500) has market share of 18.5%, while the three upper quartiles (\$17,500-\$32,500, \$32,500-\$55,000, and >\$55,000) have market shares of 15.9%, 15.8% and 15.3%, respectively.

⁵ There are possible coding errors relating to some smaller independent telephone company calls. As a result, the impact of these questionable independent company households will be deleted from the estimated models in the remainder of the paper.

⁶ The share (unweighted) for the seven RBOCs is just over 12.5%.

Table 1⁹
Logit Results for
intraLATA Choice (0, proportion,1)

Variable	Coefficient	T-Stat	Mean
CONSTANT	-2.5584	-9.6	1.00
Price Spread	1.5966	2.7	0.01
LD Bill	0.0042	3.3	21.38
Call Plan	0.4197	4.5	0.43
LATA Call Plan	-1.1436	-4.9	0.08
MCI	0.2782	2.3	0.13
OTHER	1.3643	10.5	0.08
Age	0.0250	1.6	5.93
Income	-0.0019	1.1	38.55
Male Head of HH	-0.2093	1.5	0.11
Market Size	-0.0481	1.8	2.42
Population of LATA	0.8626	5.1	0.32
Call Concentration Index	0.0002	0.1	88.90
LLF	-1888.2900		
Number of Observations:	5085		
Average LLF:	-0.3713		

All variables have their expected sign and are consistent with expectations. The price spread significantly impacts the likelihood of a household using an alternative provider (the elasticity is just over 0.1).¹⁰ Those with high interLATA long distance bills are more likely to forego the incumbent provider. Note that customers that use MCI and other carriers for interLATA toll are much more likely to avail themselves of an alternative provider for intraLATA toll. These last two findings taken together suggest that the larger customers (and in particular MCI customers) have an increased awareness of and likelihood to use a competitive

⁹ Trimmed for possible mis-coding of independent company households. When using all households, the price parameter estimate decreases to 1.05 with t-statistic of 2.0.

¹⁰ Per minute price spread between the local company and AT&T (likewise the other carriers) for a 100 mile call.

minutes are placed with the alternative provider. Of the \$14.32 spent, \$6.92 goes to the local incumbent and \$7.40 goes to the "competitor".)⁸

This suggests that several possible "simple logit" models that might be estimated to explain the customers choice of an alternative provider. We consider three different alternative models:

1. a simple bivariate logit model where the dependent variable takes on the values of 0 (local incumbent is selected for all calls), 1 (a competitive carrier is selected for all calls), and a number between zero and one representing the proportion of calls carried by the competitive carrier--see Table 1;
2. a simple bivariate logit model where the dependent variable takes on the values of 0 (local incumbent is selected for all calls), or 1 (a competitive carrier is utilized for any calls)—see Table 2;
3. choice models where the three alternatives are: local only, alternative only, or both (MNL and Nested logit are considered)

⁸ These data clearly suggest the possible importance of calling characteristics as predictors. e.g., customers with long average holding times would be more likely to choose an alternative carrier because the gains from the lower price would be larger. Unfortunately, holding time would also clearly be endogenous and hence would necessitate a more complicated estimation regime. California provides an interesting case study when utilizing Bill Harvesting. During Bill Harvesting I, the California PUC "banned" 1-0xxx traffic. As a result, the local telephone company had a virtual monopoly. By the time of Bill Harvesting II, however, 1-0xxx calling was allowed in California. Hence, we can use calling characteristics from BH1 to aid in predicting the use of alternative providers without the endogeneity problem noted above. (The 120 observation sample size is small, however.) Kridel, Rappoport and Taylor (1996) estimate a simple logit model utilizing this data and finds that the model results are consistent with our present findings and that calling characteristics enter in a way that is consistent with our expectations.

Table 3^{12,13}
MNL Results for
intraLATA Choice

Variable	Value	SE	t-stat
All Traffic with Alternative Provider			
const	-5.1270	0.4911	-10.4
Price Spread	1.7705	0.7911	2.2
InterLATA LD Bill	0.0038	0.0009	4.2
Call Plan	0.4981	0.1242	4.0
IntraLATA Call Plan	-0.4289	0.1459	-2.9
has MCI	0.3705	0.1632	2.3
has Other LD Carrier	1.7113	0.1641	10.4
Age	0.0169	0.0206	0.8
Income	-0.0005	0.0020	-0.3
Male Head of HH	-0.2102	0.1788	-1.2
Market Size	-0.0398	0.0369	-1.1
LATA Population	0.9502	0.2161	4.4
Call Concentration Index	0.0253	0.0043	5.8
HH Size	-0.1731	0.0474	-3.7
Traffic split between Incumbent & Alternative Provider(s)			
const	-0.0432	0.2735	-0.2
Price Spread	0.6477	0.6219	1.0
Call Plan	0.3876	0.0933	4.2
has MCI	0.2855	0.1252	2.3
has Other LD Carrier	1.1524	0.1450	7.9
Age	-0.0030	0.0170	-0.2
Income	-0.0033	0.0018	-1.8
Male Head of HH	-0.4689	0.1670	-2.8
Market Size	-0.0564	0.0266	-2.1
LATA Population	0.8956	0.1657	5.4
Call Concentration Index	-0.0250	0.0023	-11.0
HH Size	-0.0039	0.0343	-0.1
LLF:	-2995.27		
# of observations:	5085		
Average LLF:	-0.58904		

¹² Trimmed for possible mis-coding of independent company households. When using all households, the price parameter is about one-half as large.

¹³ IntraLATA Call Plan and InterLATA LD Bill have been restricted to enter both equations with the same parameter value.

intraLATA alternative. Those that ^{already use} LATA calling plans, ^{have} higher income and in ^{an} larger market sizes are less likely to use an alternative.

Table 2¹¹
Logit Results for
intraLATA Choice (0,1)

Variable	Coefficient	T-Stat	Mean
CONSTANT	-0.8556	-4.1	1.00
Price Spread	1.0825	2.1	0.01
LD Bill	0.0039	3.4	21.38
Call Plan	0.4189	5.3	0.43
LATA Call Plan	-0.4338	-3.0	0.08
MCI	0.3192	3.1	0.13
OTHER	1.3810	11.7	0.08
Age	0.0147	1.1	5.93
Income	-0.0029	-2.1	38.55
Male Head of HH	-0.2688	-2.2	0.11
Market Size	-0.0486	-2.1	2.42
Population of LATA	0.9079	6.3	0.32
Call Concentration Index	-0.0125	-6.2	88.90
LLF	-2420.4300		
Number of Observations:	5085		
Average LLF:	-0.4760		

As can be seen when comparing Tables 1 and 2 that while the qualitative results suggested by the two models are quite similar, there are some rather large differences in the estimated parameters and their associated statistical significance. For example, the price parameter falls from 1.05 to .78 (and the t-statistic falls from 2 to 1.6). On the other hand, the estimated impact of several variables are largely unchanged, e.g., the interLATA LD bill, and market size.

Table 3 presents the results of an MNL model where the three alternatives are: (1) incumbent only; (2) both incumbent and alternative; and (3) alternative only.

¹¹ Trimmed for possible mis-coding of independent company households. When using all households, the price parameter estimate decreases to .78 with t-statistic of 1.6.

Table 4¹⁵
MNL Results for
intraLATA Carrier Choice

	Value	SE	t-stat
Local Incumbent Utility			
Price Spread	-1.3575	0.4912	-2.8
Age	0.0009	0.0194	0.0
Income	0.0030	0.0014	2.2
Unlisted #	0.0213	0.0365	0.6
InterLATA LD Bill	-0.0038	0.0009	-4.3
Male Head of HH	0.3614	0.1224	3.0
LATA Pop	-0.5764	0.1985	-2.9
Market Size	0.1239	0.0311	4.0
LATA Call Plan	0.5385	0.2009	2.7
HH Size	0.0571	0.0276	2.1
Call Concentration Index	0.0142	0.0020	7.2
Alternative Provider Utilities			
const-ATT	-2.4946	0.3113	-8.0
Has ATT interLATA	1.6016	0.1958	8.2
Age	0.0164	0.0254	0.6
LATA Pop	0.4282	0.2621	1.6
Market Size	0.1108	0.0419	2.6
Call Plan	0.5401	0.0959	5.6
LATA Call Plan	0.2542	0.2778	0.9
const-MCI	-3.2365	0.3142	-10.3
Has MCI interLATA	2.9737	0.2160	13.8
Call Plan	0.7867	0.2078	3.8
const-Sprint	-4.1034	0.4238	-9.7
Has Sprint interLATA	3.9291	0.3773	10.4
Call Plan	0.0468	0.3704	0.1
const-Other	-1.3147	0.2606	-5.0
Has OTHER interLATA	2.6546	0.1453	18.3
Call Plan	-0.3516	0.1583	-2.2
LLF	-3120.31		
# of Observations:	4837		
Average LLF	-0.6451		

¹⁵ Trimmed for possible mis-coding of independent company households. When using all households, the price parameter declines from 1.35 to 1.05 with a slight reduction in the t-statistic.

Here we find results similar to those from the simple logit models. For example, compare the impact of having a interLATA calling plan—the estimate is .42 in Table 1, .42 in Table 2, while from Table 3 it is .49 for “only alternative” customers and .39 for “split” customers.

There are some additional insights, however. The price spread is much more significant in the “All Alternative” equation than in the “Split” equation. There are several possible explanations for this finding. It possibly indicates that since the decision is made on a call by call basis, the price we have utilized is not representative for the calls that are most likely to be ultimately routed with the alternative provider. Alternatively, those customers that are most price sensitive could be undertaking actions so as guarantee use of the least cost provider (i.e., speed dialing).

The Carrier Choice Models

Here two different alternative modeling strategies were investigated:

- multinomial logit (MNL) model with the alternatives being the incumbent local service, AT&T, MCI, Sprint, or an “OTHER” long-distance company;
- nested logit model with the upper level being the choice between the incumbent and an alternative and the lower level being the choice of which alternative carrier, e.g. AT&T, MCI, Sprint, or “OTHER”.

Table 4 presents the results of the MNL model for intraLATA carrier choice.¹⁴ Note, that price enters only the through the local incumbent utility function and hence has no impact on the which alternative provider is used—only on the

¹⁴ The nested model had a coefficient on the inclusive value term of less than zero—a violation of theory. Therefore, the results of the model will not be presented here.

References

- Kridel, D., P. Rappoport, and L. Taylor, "Competition in US Long Distance: Carrier Choice Models Using Bill Harvesting™" presented at the 11th Biennial Conference of the International Telecommunications Society, Seville, Spain, June 15-19, 1996.
- Kridel, D., "A Preliminary Carrier Choice Model", presented at the Sixth Annual National Telecommunications Demand Study (NTDS) Meetings, Monterey, CA, April, 1995.
- Taylor, W. and L. Taylor, "Post Divestiture Long-Distance Competition in the United States", American Economic Review, Papers and Proceedings, 83:85-90, 1993.
- Taylor, L., Telecommunications Demand in Theory and Practice, Kluwer Academic Publishers, 1994.
- Ward, M., "Product Differentiation and Competition in the Long-Distance Telecommunications Industry", University of Illinois working paper, Nov. 1995.

likelihood of using an alternative provider.¹⁶ When comparing to Tables 1-3, we see that results confirm our previous analysis. It is also worth noting that the existing interLATA carrier is a strong and significant indicator of which alternative provider will be used when routing intraLATA toll away from the local incumbent.

Conclusions/Next Steps

We have identified several of the important determinants of intraLATA carrier choice. To our knowledge these are the first publicly available models of intraLATA carrier choice in the US utilizing individual data. For the most part, these findings are consistent with expectations--both in terms of theory and practical experience in the industry. Indeed, we note a high degree of consistency between all the models estimated here and the interLATA carrier choice models described by Kridel, Rappoport and Taylor (1996):

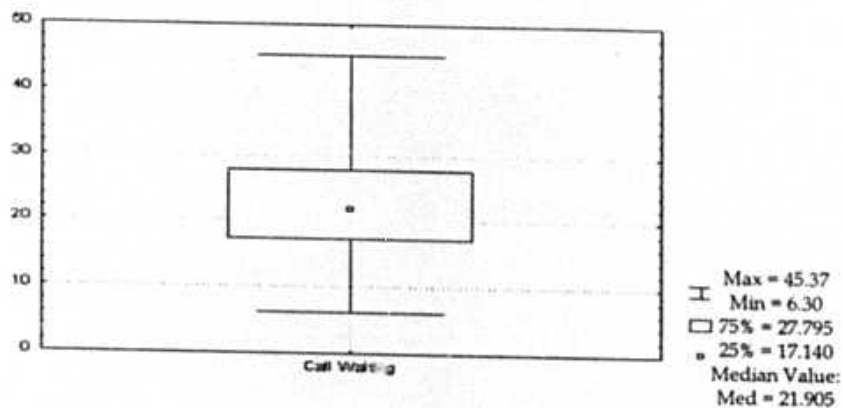
There is much still to do, however. The next steps in our research agenda are:

- merge with BH1 so as to incorporate historic caller characteristics (avoid the endogeneity difficulties of next bullet)
- investigate discrete/continuous modeling of choice and usage more fully, e.g., "combine" usage and choice models into "one super-model"
- more carefully analyze the role of calling plans in the choice of carriers
- and, of course, BH3 is just around the corner.

¹⁶ Allowing each alternative provider to have its own price parameter yields the following results: AT&T: 1.46 (with a t-statistic of 2.2); MCI: 1.68 (1.3); Sprint: -.50 (0.1) and OTHER: 1.18 (1.4). A likelihood ratio test for the null that all the price parameters are the same (e.g., the model in Table 4) cannot be rejected at any reasonable level of significance. While at the state level there are no differences in carrier prices, price impacts could potentially also enter through calling plans. Additional analysis into this issue may be required.



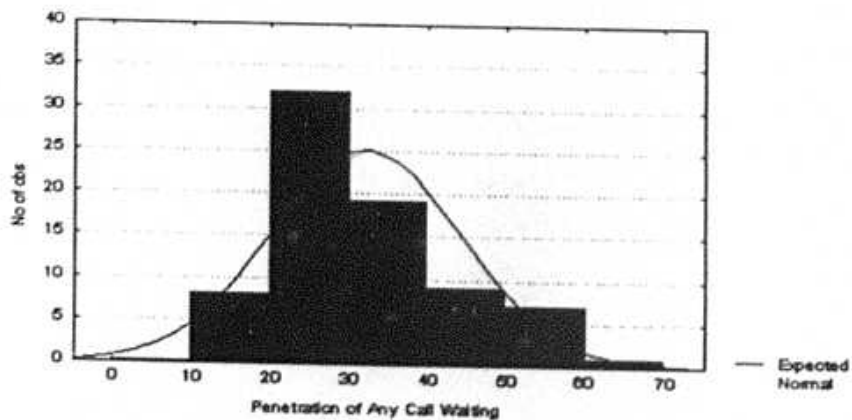
Box & Whisker Plot - Call Waiting



PNR and Associates Telecom Review - Sept. 1996



Distribution of Any Call Waiting



PNR and Associates Telecom Review - Sept. 1996

9/17/96



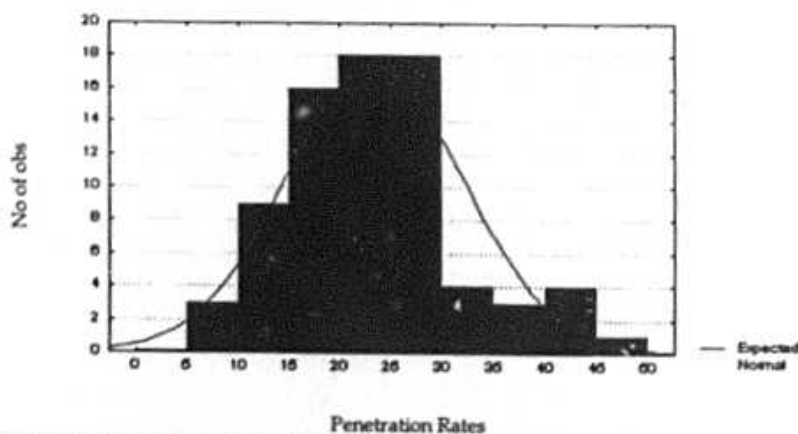
NTDS Residential Models

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PNR and Associates

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Distribution of Call Waiting

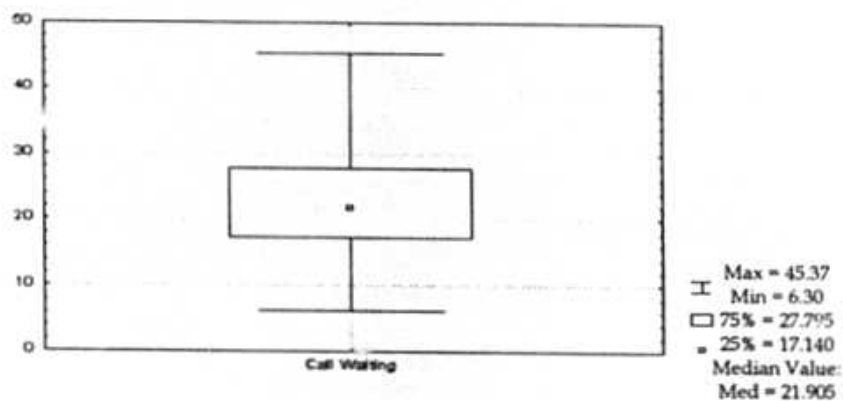


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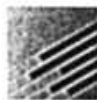
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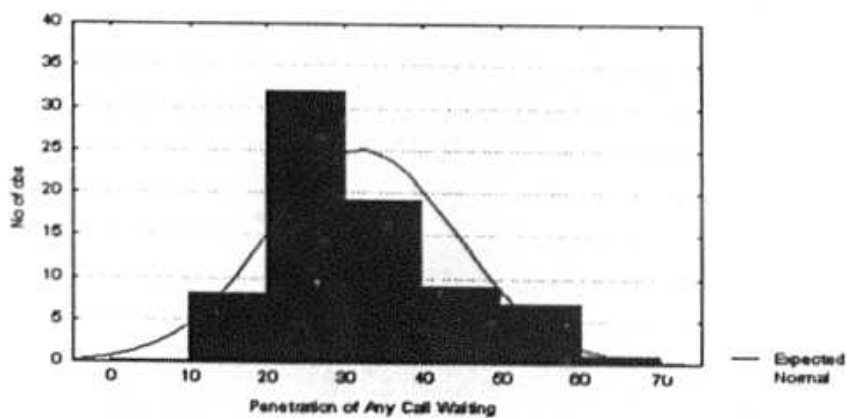
Box & Whisker Plot - Call Waiting



PNR and Associates Telecom Review - Sept. 1996



Distribution of Any Call Waiting



PNR and Associates Telecom Review - Sept. 1996



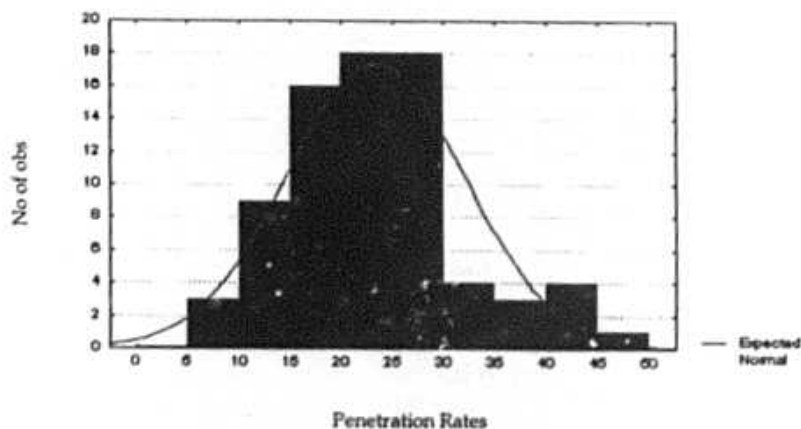
Custom and CLASS Services

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PNR and Associates

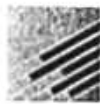
PNR and Associates Telecom Review - Sept. 1996



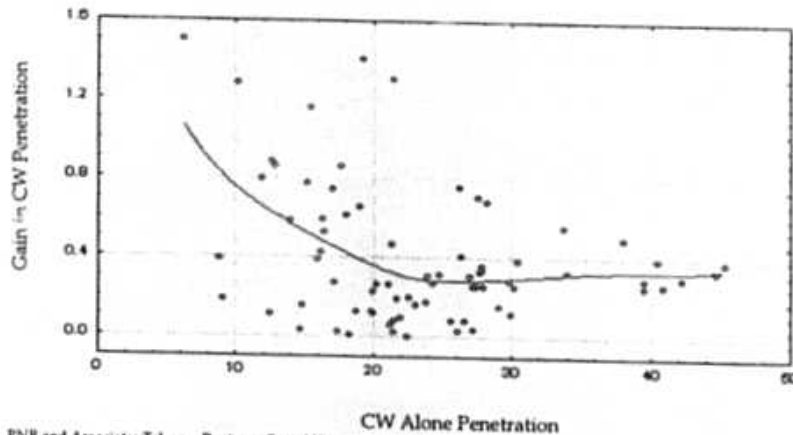
Distribution of Call Waiting



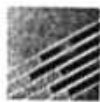
PNR and Associates Telecom Review - Sept. 1996



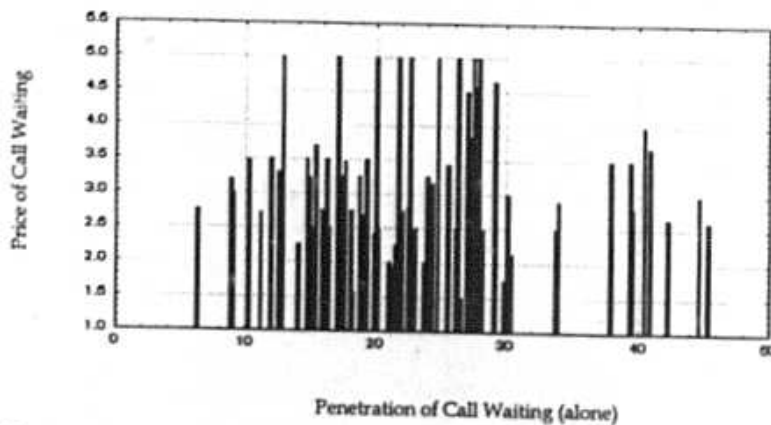
Expected Gain in Call Waiting against Call Waiting Alone



PNR and Associates Telecom Review - Sept. 1996



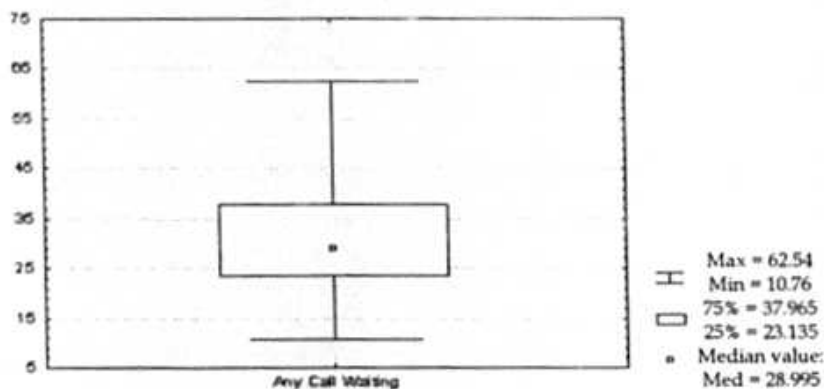
Price - Call Waiting Relationship



PNR and Associates Telecom Review - Sept. 1996



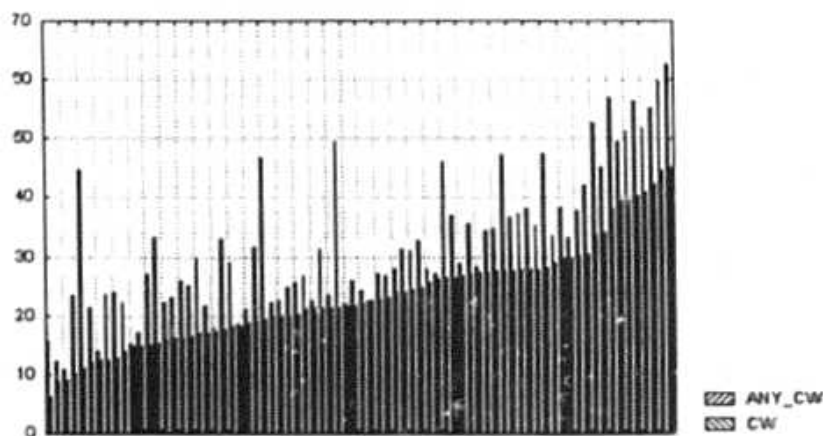
Box & Whisker Plot - Any Call Waiting



PNR and Associates Telecom Review - Sept. 1996



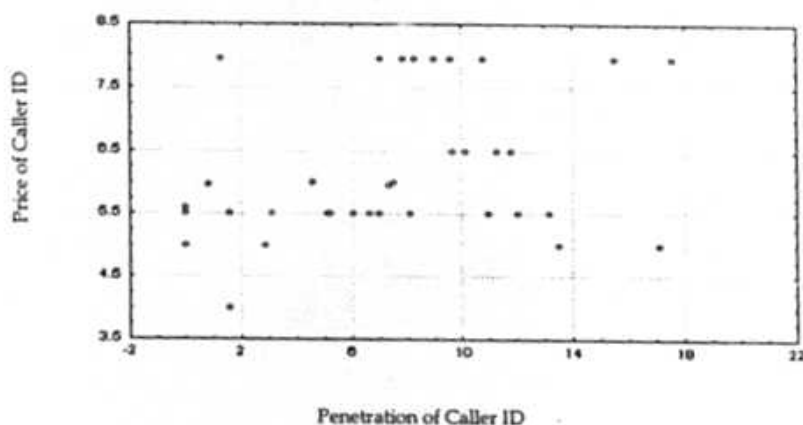
Relationship Between Any Call Waiting and Call Waiting Alone



PNR and Associates Telecom Review - Sept. 1996



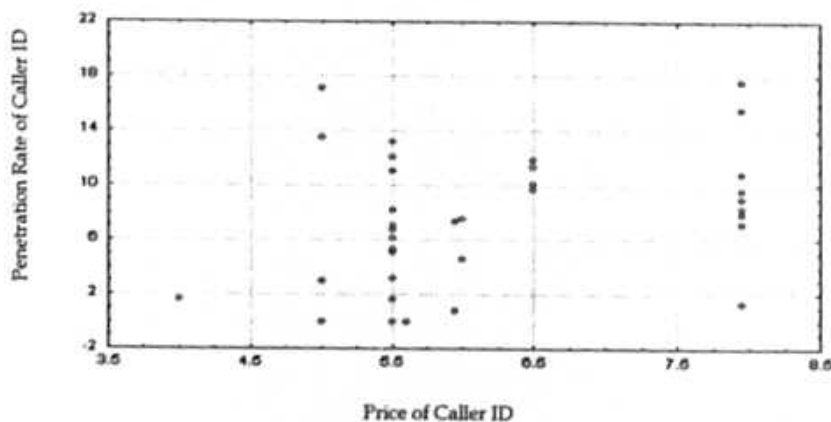
Relationship Between Price and Caller ID



PNR and Associates Telecom Review - Sept. 1996



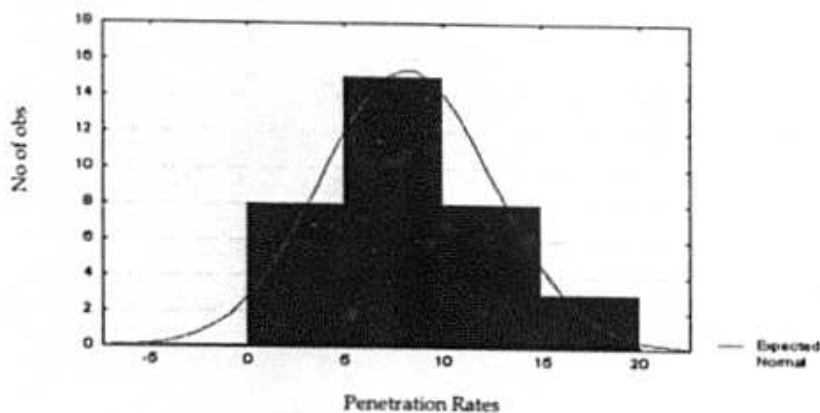
Relationship Between Price and Penetration - Caller ID



PNR and Associates Telecom Review - Sept. 1996



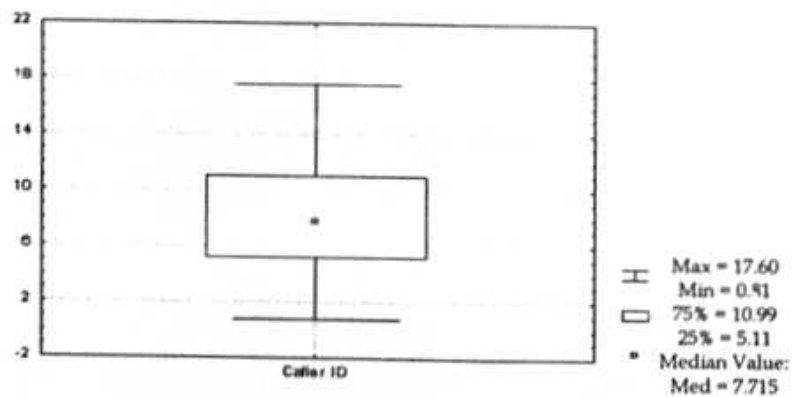
Caller ID Distribution



PNR and Associates Telecom Review - Sept. 1996



Box & Whisker Plot - Caller ID

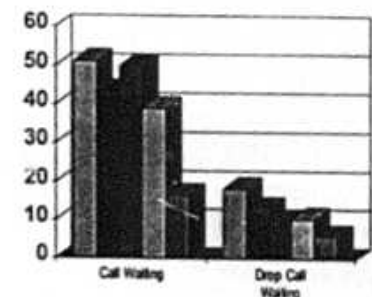


PNR and Associates Telecom Review - Sept. 1996



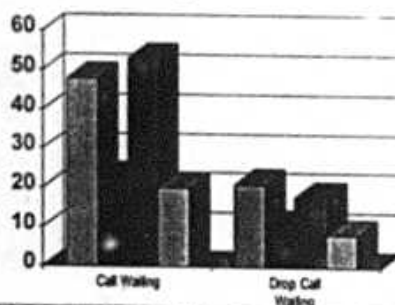
Call Waiting Penetration- By Age

Family Households



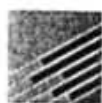
Under 30 30-39 40-49
50-59 60 years

Non-Family Households



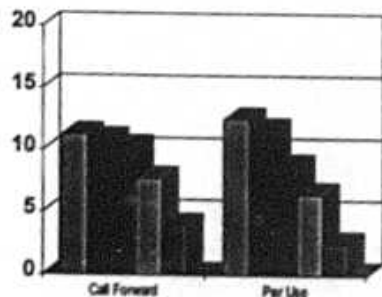
Male under 30
Male 30 and over
Female under 30
Female 30 and over

PNR and Associates Telecom Review - Sept. 1996



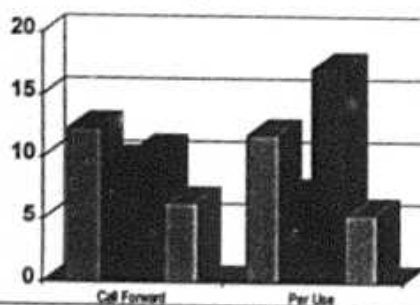
Call Forwarding Penetration- By Age

Family Households



Under 30 30-39 40-49
50-59 60 years

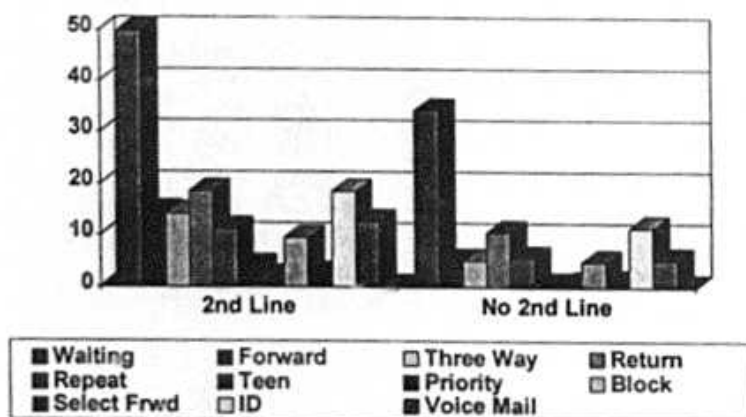
Non-Family Households



Male under 30
Male 30 and over
Female under 30
Female 30 and over

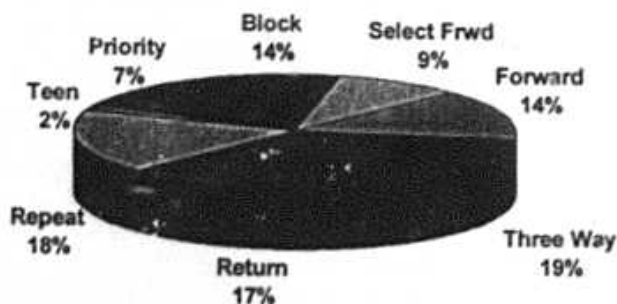
PNR and Associates Telecom Review - Sept. 1996

Feature Penetration Second Line Comparison



PNR and Associates Telecom Review - Sept. 1996

Dropped service but would consider Per Use option

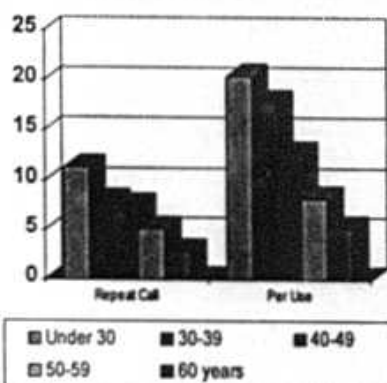


PNR and Associates Telecom Review - Sept. 1996

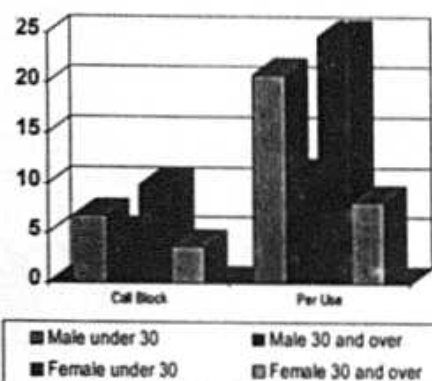


Repeat Call Penetration- By Age

Family Households



Non-Family Households

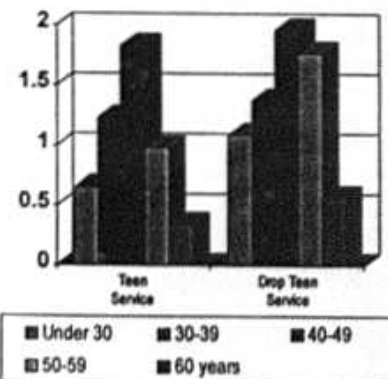


PNR and Associates Telecom Review - Sept. 1996

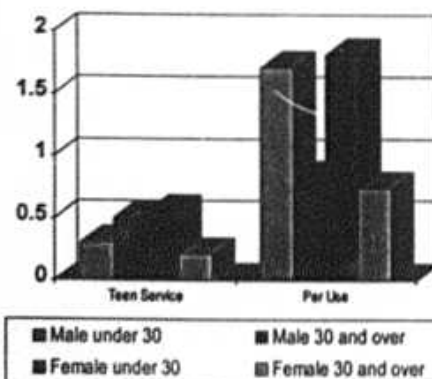


Teen Service Penetration- By Age

Family Households



Non-Family Households

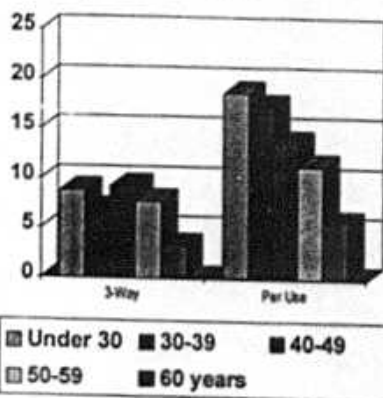


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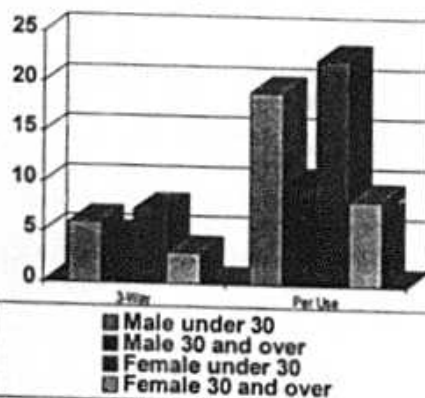


3-Way Calling Penetration- By Age

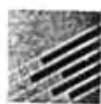
Family Households



Non-Family Households

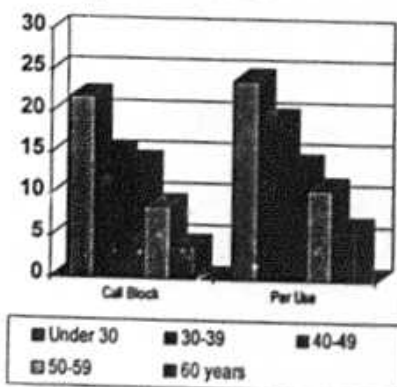


PNR and Associates Telecom Review - Sept. 1996

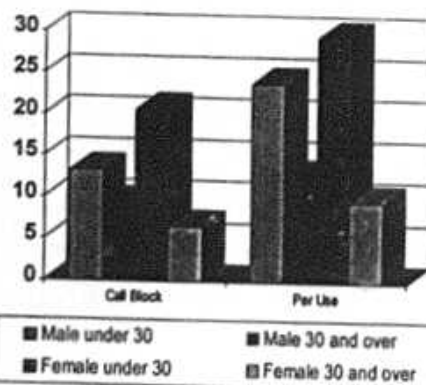


Call Block Penetration- By Age

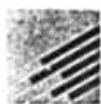
Family Households



Non-Family Households

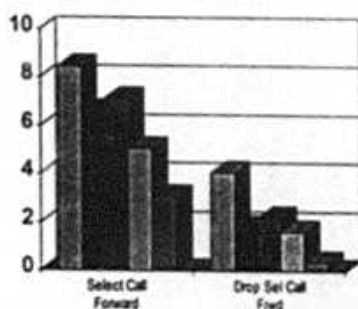


PNR and Associates Telecom Review - Sept. 1996



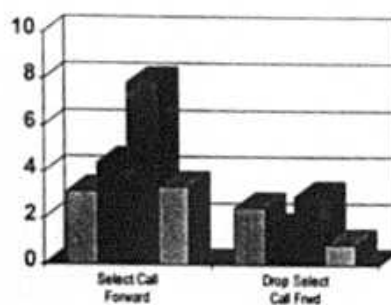
Select Call Forward Penetration- By Age

Family Households



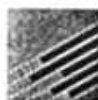
■ Under 30 ■ 30-39 ■ 40-49
■ 50-59 ■ 60 years

Non-Family Households



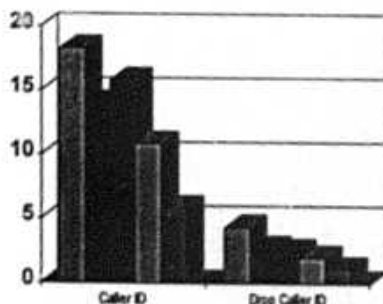
■ Male under 30 ■ Male 30 and over
■ Female under 30 ■ Female 30 and over

PNR and Associates Telecom Review - Sept. 1996



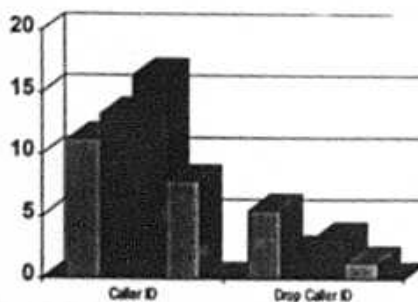
Caller ID Penetration- By Age

Family Households



■ Under 30 ■ 30-39 ■ 40-49
■ 50-59 ■ 60 years

Non-Family Households



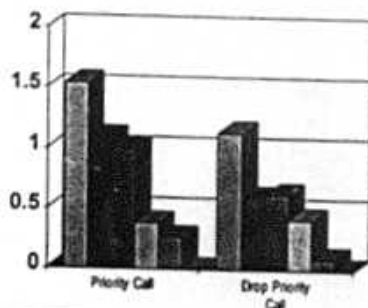
■ Male under 30 ■ Male 30 and over
■ Female under 30 ■ Female 30 and over

PNR and Associates Telecom Review - Sept. 1996



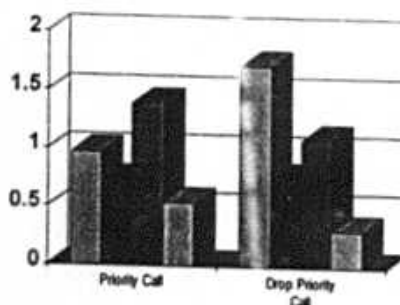
Priority Call Penetration- By Age

Family Households



Under 30 30-39 40-49
50-59 60 years

Non-Family Households



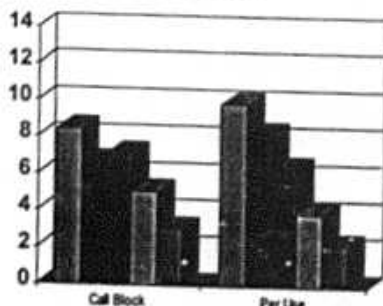
Male under 30 Male 30 and over
Female under 30 Female 30 and over

PNR and Associates Telecom Review - Sept. 1996



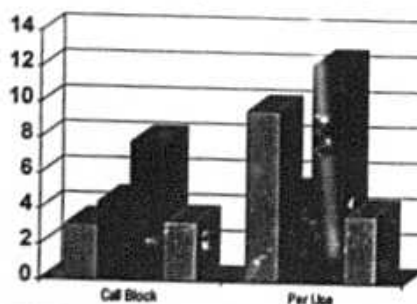
Call Block Penetration- By Age

Family Households



Under 30 30-39 40-49
50-59 60 years

Non-Family Households

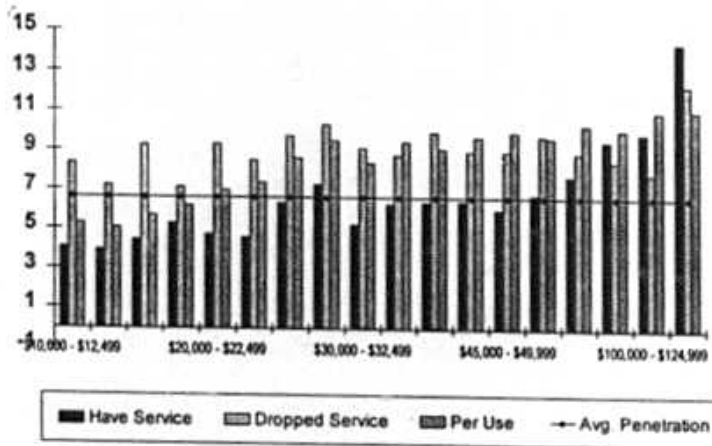


Male under 30 Male 30 and over
Female under 30 Female 30 and over

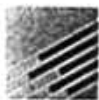
PNR and Associates Telecom Review - Sept. 1996



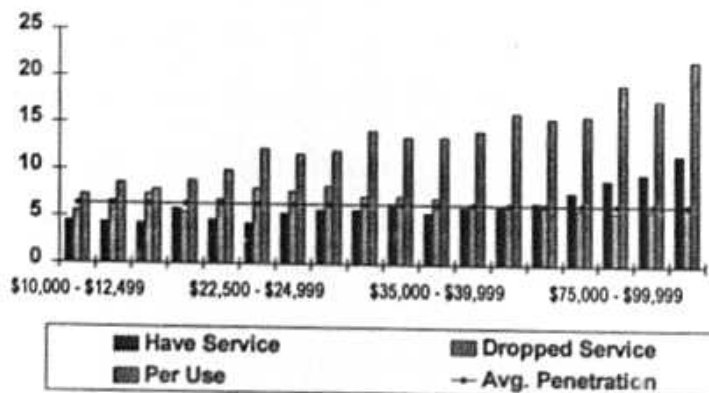
Call Forwarding Penetration



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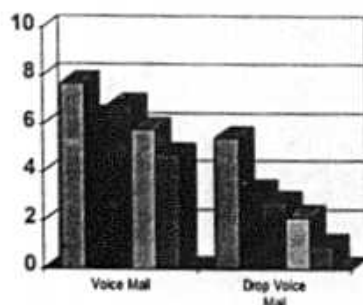
3-Way Calling Penetration



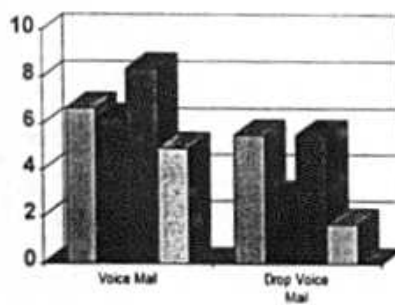
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Voice Mail Penetration- By Age

Family Households

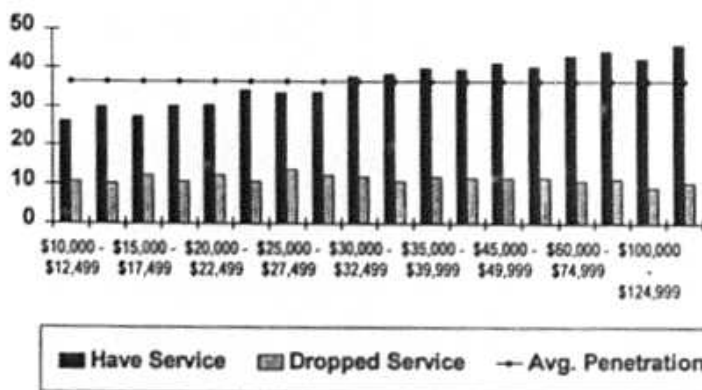


Non-Family Households



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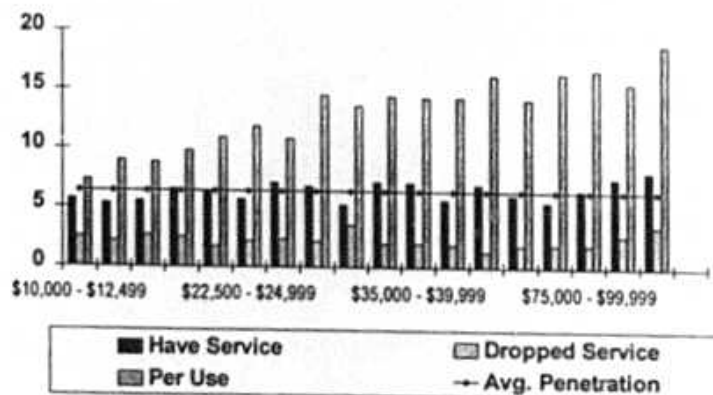
Call Waiting Penetration



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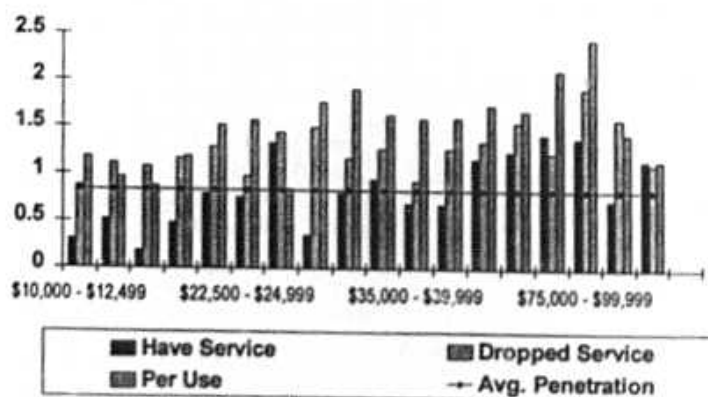
Repeat Call Penetration



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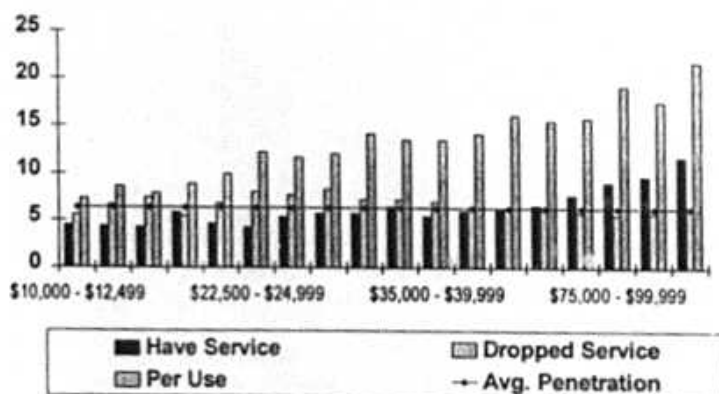
Teen Service Penetration



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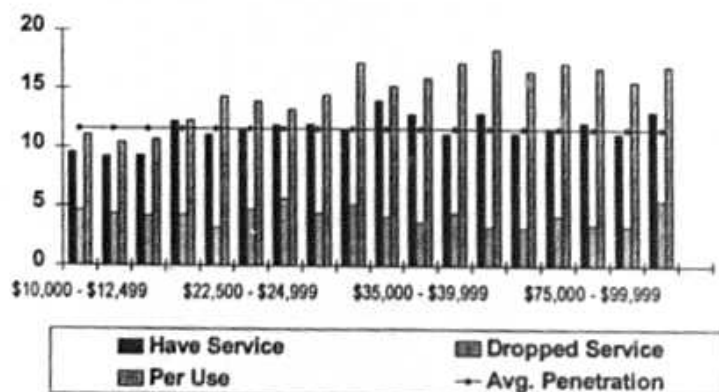
3-Way Calling Penetration



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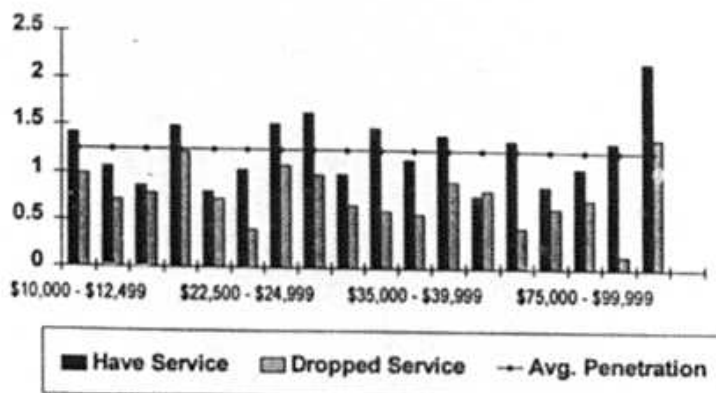
Call Return Penetration



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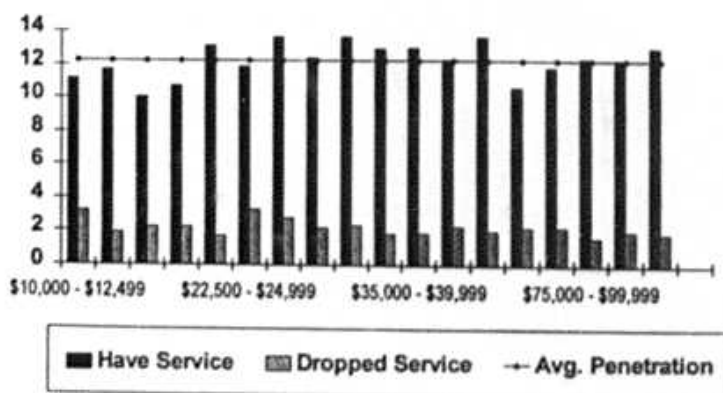
Select Call Forwarding Penetration



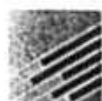
PNR and Associates Telecom Review - Sept. 1996



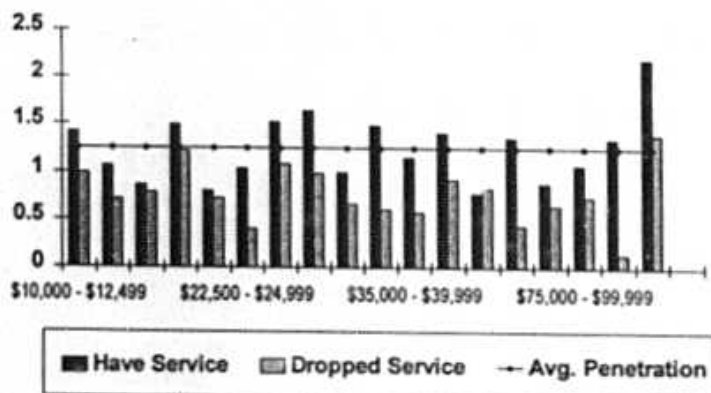
Caller ID Penetration



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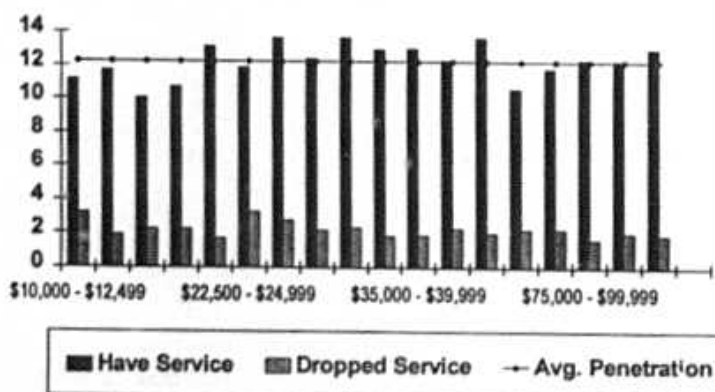
Select Call Forwarding Penetration



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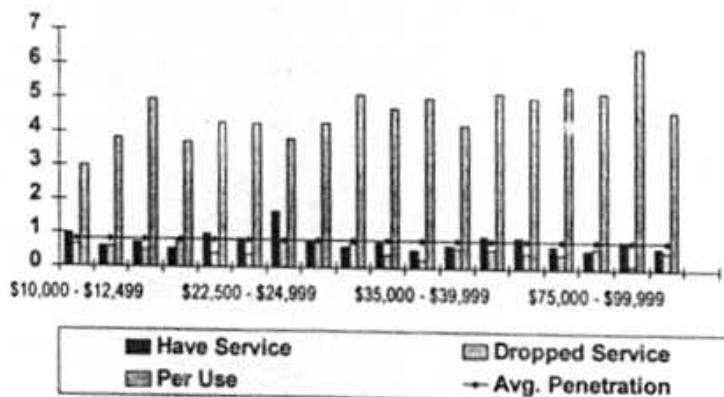
Caller ID Penetration



PNR and Associates Telecom Review - Sept. 1996



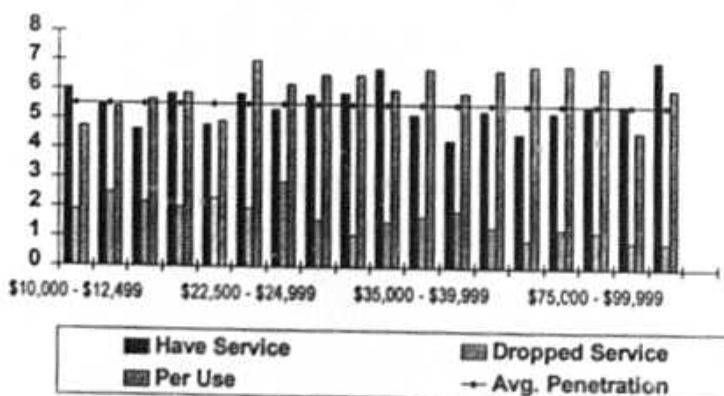
Priority Call Penetration



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Call Block Penetration



PNR and Associates Telecom Review - Sept. 1996



Custom / CLASS Models (con't)

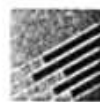
Three Way Alone

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.398	-3.22	2.69	0.01	-1.07
ReQuest 3	-0.354	-2.15	3.22	0.01	-1.13
NTDS Round 5			3.16	0.01	-1.16

Call Waiting and Call Forwarding

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.221	-3.23	5.95	0.05	-1.25
ReQuest 3	-0.181	-7.79	6.05	0.06	-1.03
NTDS Round 5			5.65	0.07	CW 0.15 -1.57

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Custom / CLASS Models (con't)

Call Waiting and Three Way

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7					
NTDS Round 5			6.04	0.04	-1.14

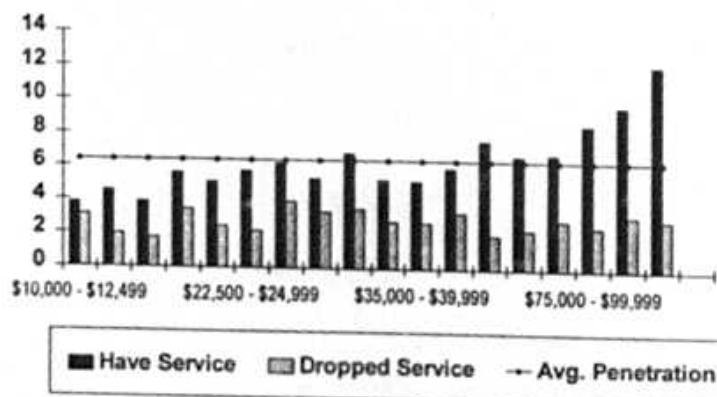
Call Waiting, Call Forwarding, Three Way and Speed Dial

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7					
NTDS Round 5			10.22	0.07	-1.20

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Voice Mail Penetration



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Custom / CLASS Models

Call Waiting Alone

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.336	-3.39	2.85	0.28	-0.69
ReQuest 3	-0.276	-8.73	3.66	0.28	-0.72
NTDS Round 5			3.22	0.25	-0.52

Call Forwarding

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.074	-1.71	2.67	.02	-0.19
ReQuest 3	-0.052	-1.24	2.88	.01	-0.14

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Custom / CLASS Models (con't)

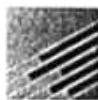
Select Call Forwarding

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.461	-1.21	3.32	0.01	-1.52

Caller ID

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.213	-9.78	6.13	0.14	-1.12
NTDS Round 5			6.83	0.06	-1.33

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Custom / CLASS Models (con't)

Voice Mail

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.205	-3.92	5.96	0.05	-1.16
NTDS Round 5					

Touch Tone

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.200	-3.64	0.93	0.78	-0.04

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Custom / CLASS Models (con't)

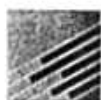
Distinctive Ring

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.115	-4.23	3.35	0.03	-0.37
NTDS Round 5			3.64	0.02	-0.36

Call Return

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.641	-2.58	3.41	0.073	-0.21
NTDS Round 5			3.76	0.083	-0.49

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Custom / CLASS Models (con't)

Repeat Call

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.405	-6.01	2.84	0.01	-1.14
NTDS Round 5			3.46	0.03	-0.92

Call Rejection

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7					
NTDS Round 5			3.60	0.02	-0.30

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Custom / CLASS Models (con't)

Per Use

	Price Coefficient	T value	Average Price	Penetration Rate	Own Elasticity	Cross Price (Monthly)
Call Forwarding	-0.237	-4.10	0.75	0.08	-0.16	0.017
Three Way	-0.153	-3.01	0.75	0.12	-0.10	0.013
Call Return	-0.441	-8.76	0.75	0.14	-0.29	0.040
Repeat Call	-0.397	-7.61	0.75	0.12	-0.26	0.020
Priority Call	-0.203	-2.74	0.75	0.04	-0.14	0.011
Select Call Forward	-0.254	-2.77	0.75	0.06	-0.13	
Call block	-0.187	-2.74	0.75	0.06	-0.14	0.023

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9/17/96



Custom / CLASS Models (con't)

Additional Listing

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.169	-3.07	1.04	0.14	-0.15
NTDS Round 5					

Inside wire

	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.227	-38.69	1.57	0.35	-0.23
NTDS Round 5					

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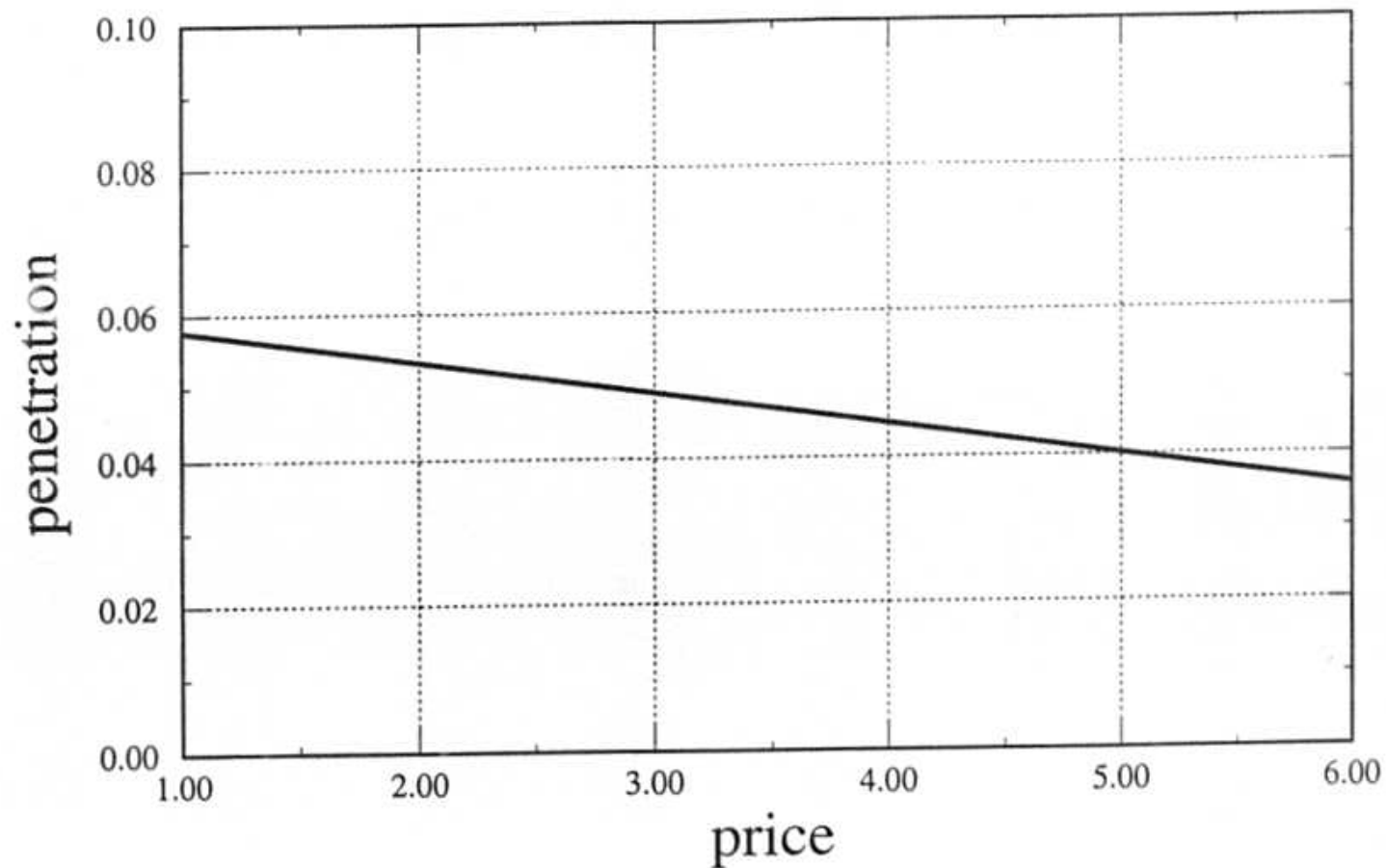
Custom / CLASS Models (con't)

Non Published

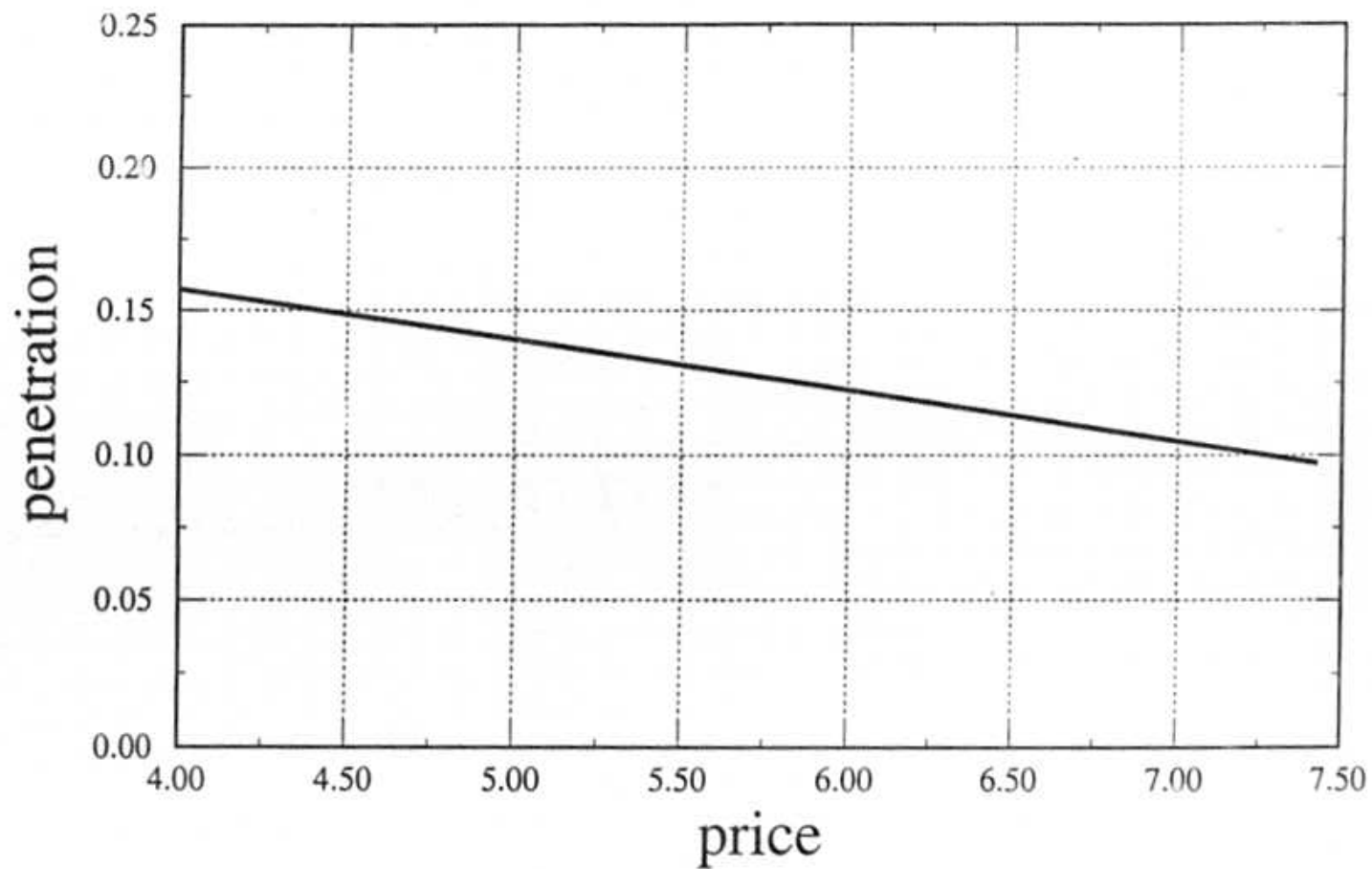
	Price Coefficient	T value	Average Price	Penetration Rate	Elasticity
NTDS Round 7	-0.292	-2.22	1.60	0.34	-0.29
NTDS Round 5					

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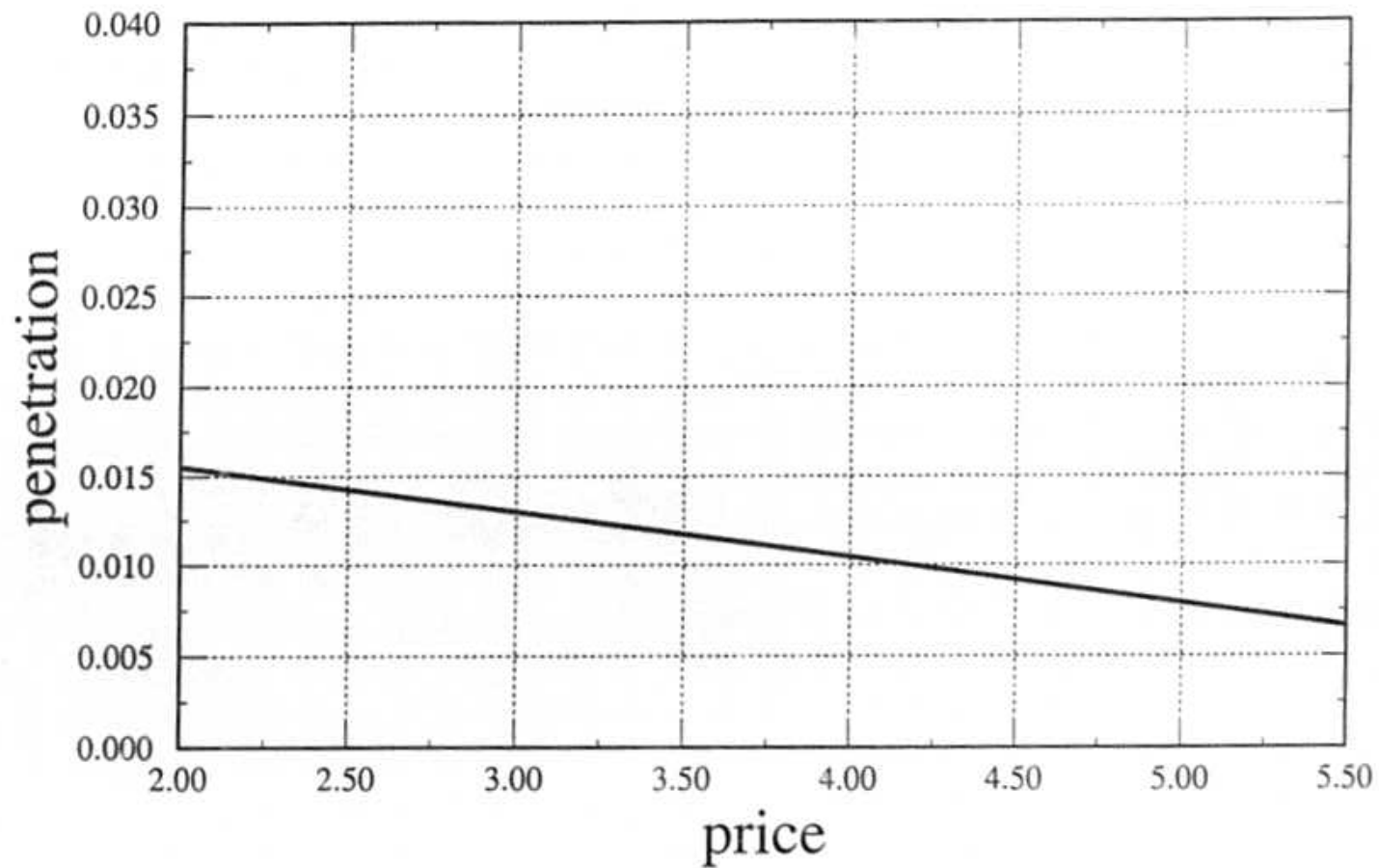
Three-way Calling



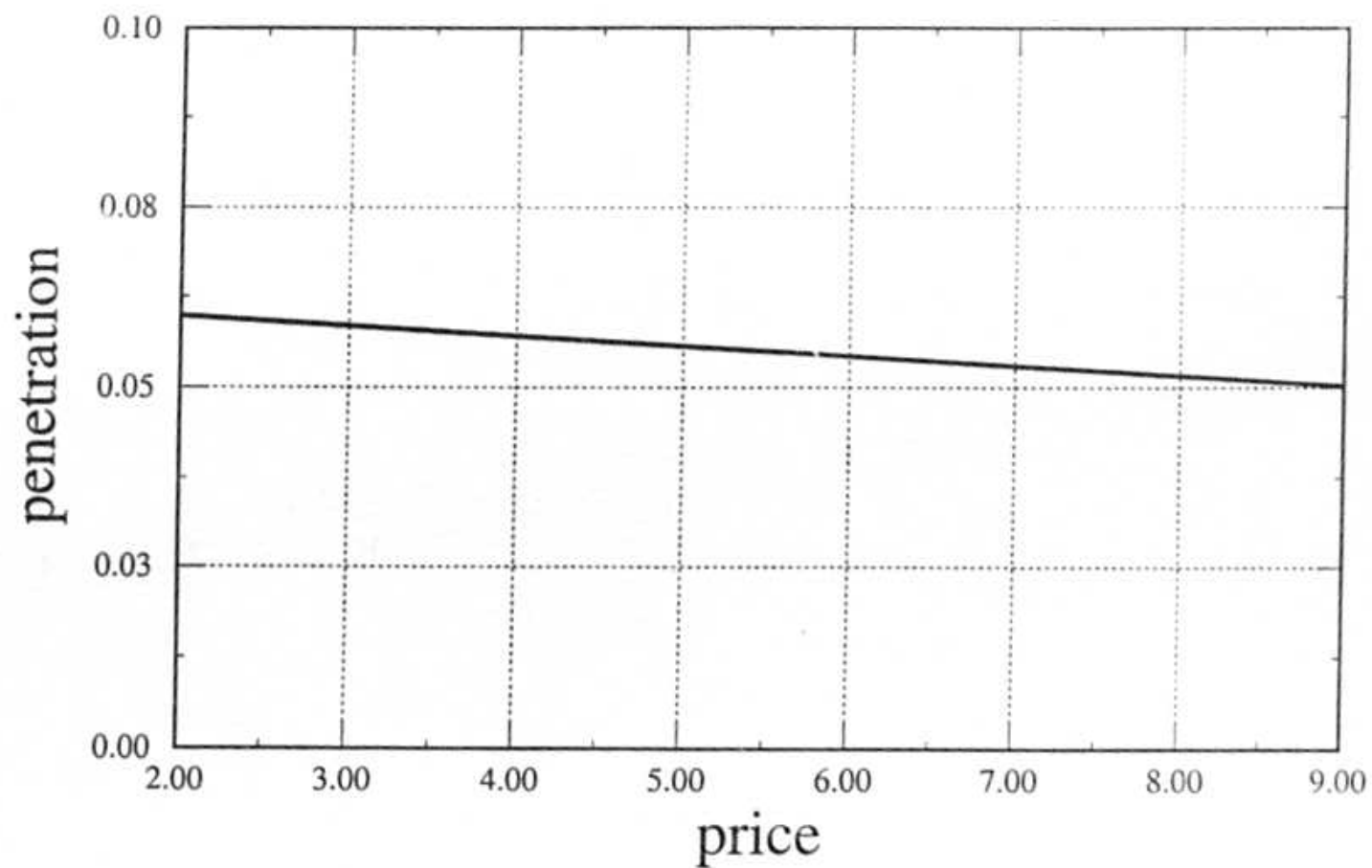
Caller ID



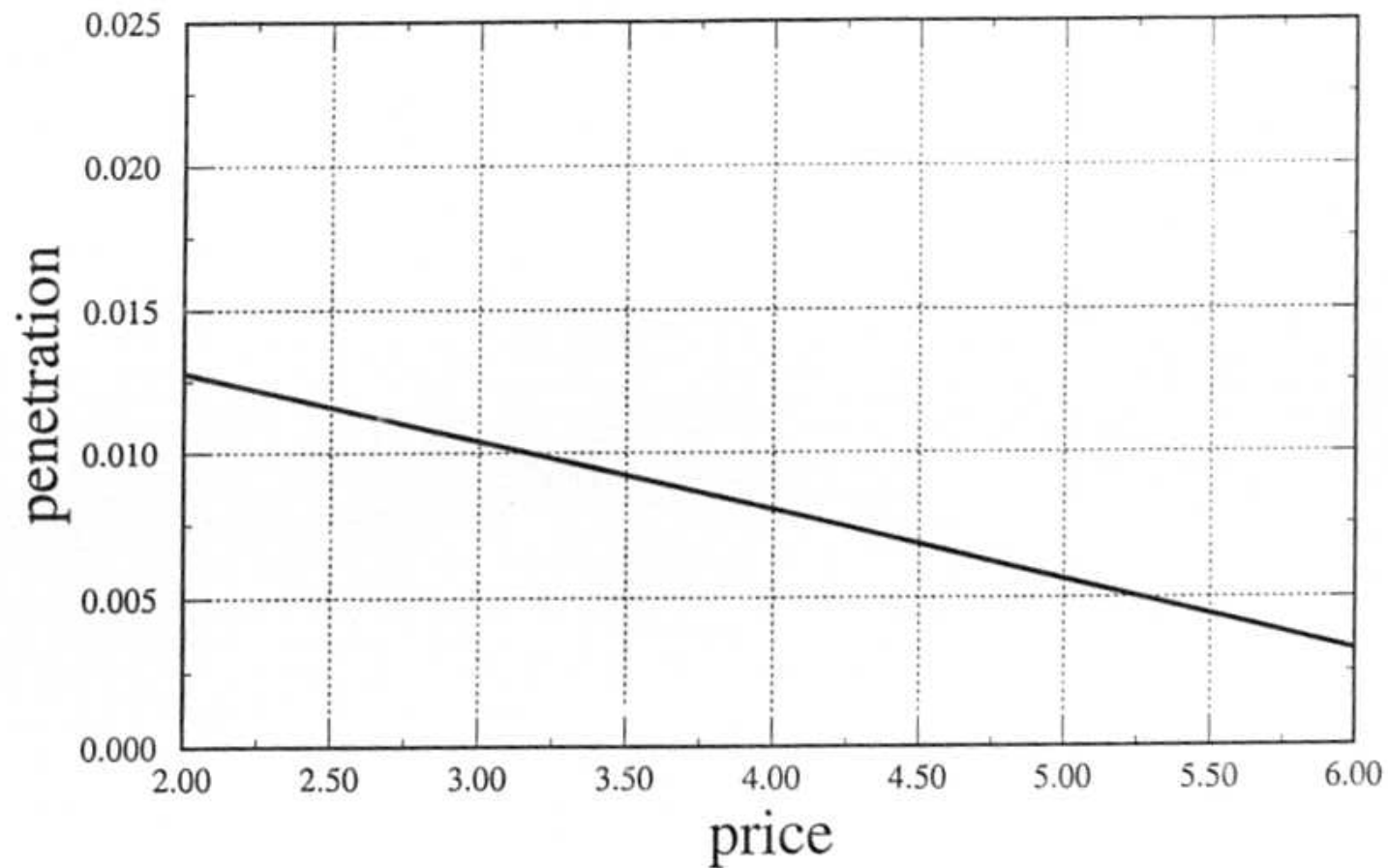
Select CF



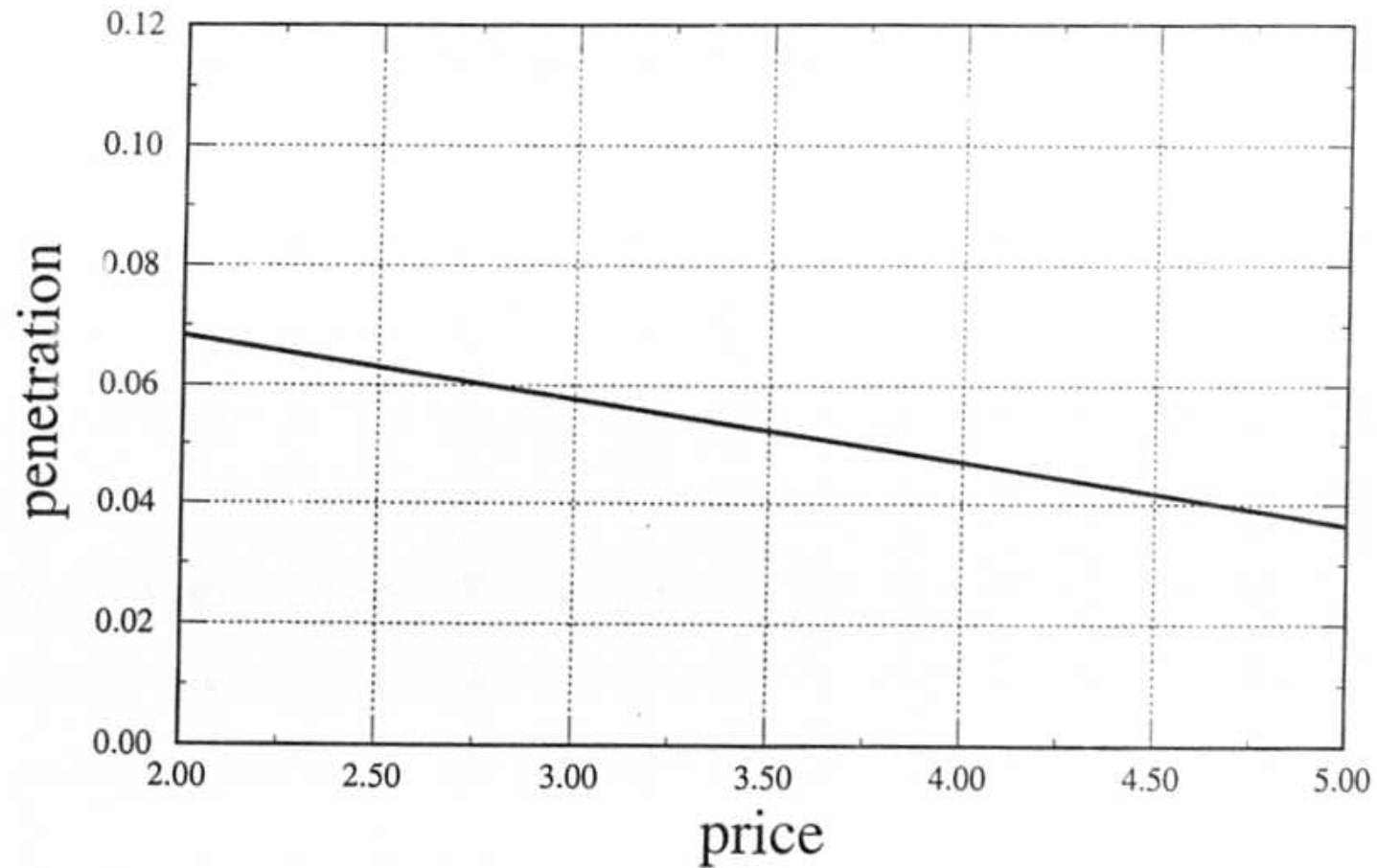
Voice Mail



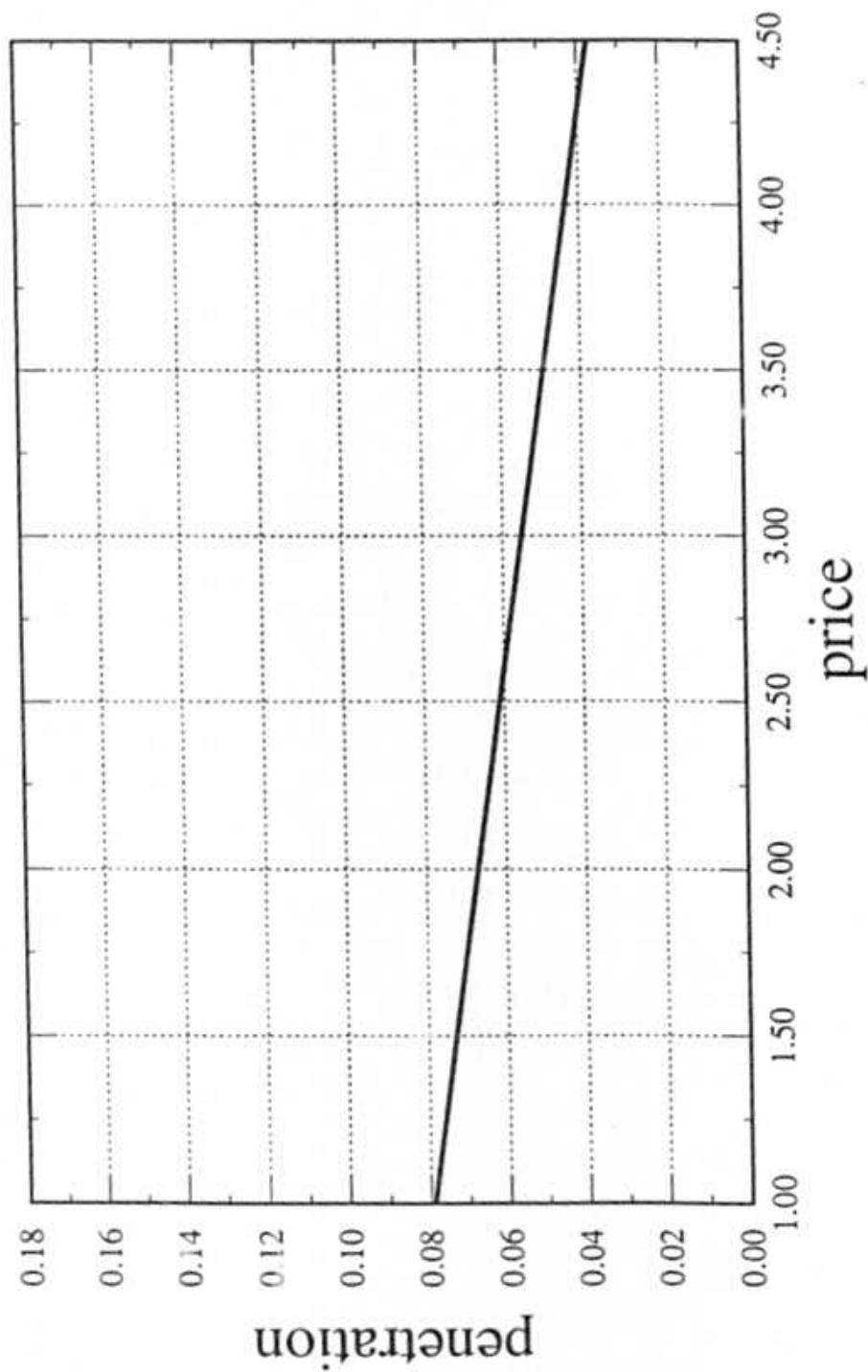
Priority Call



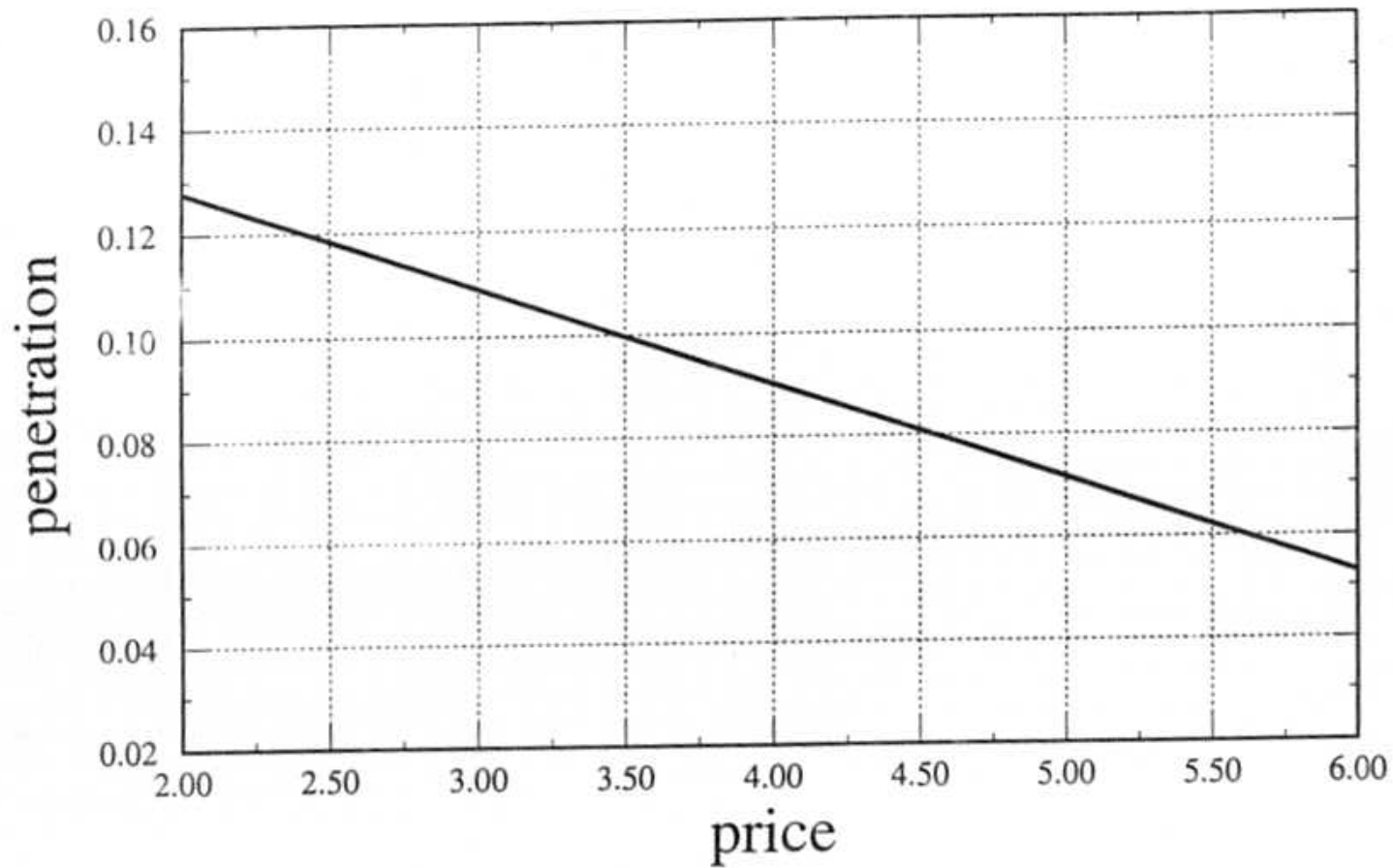
Repeat Call



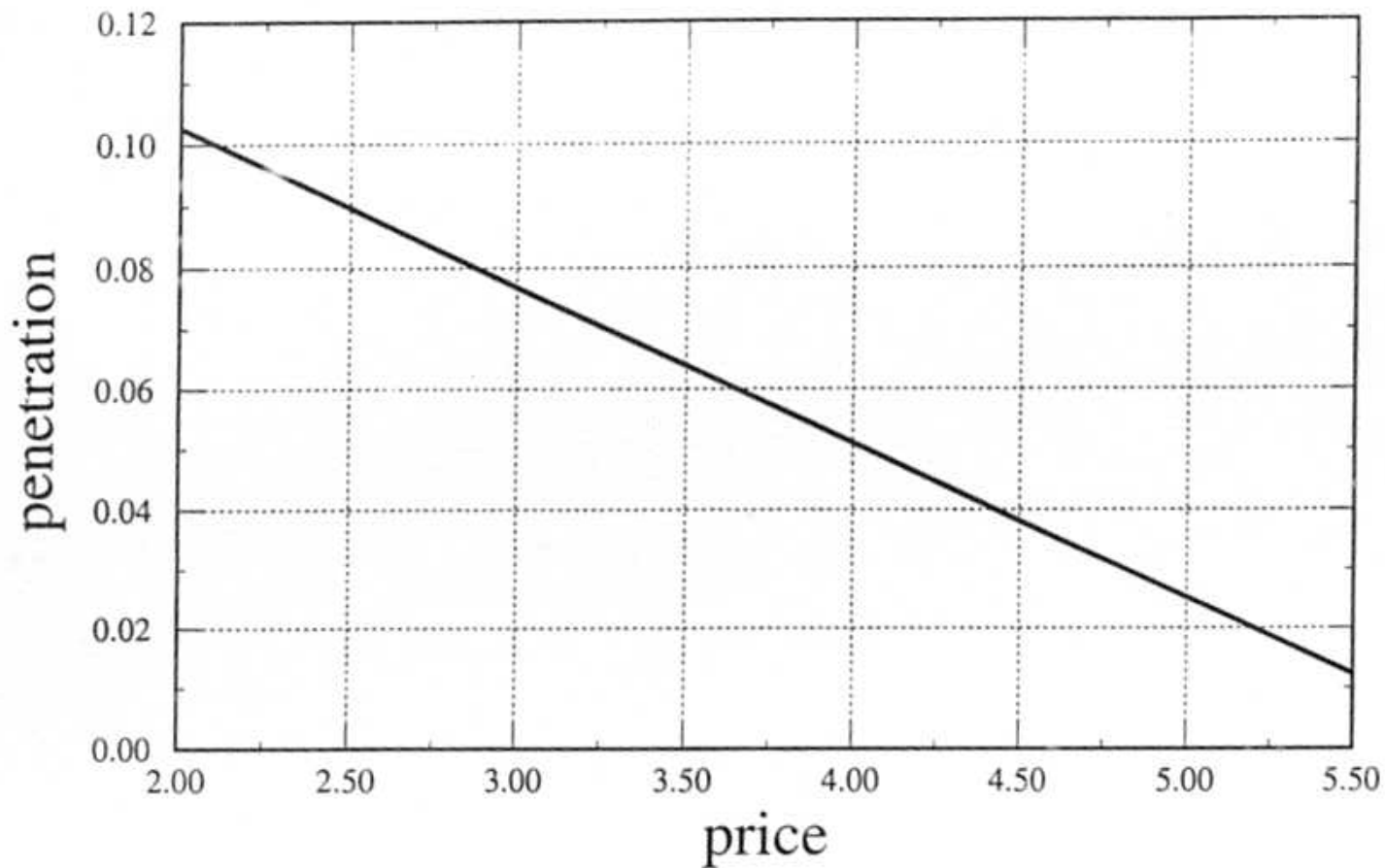
CF



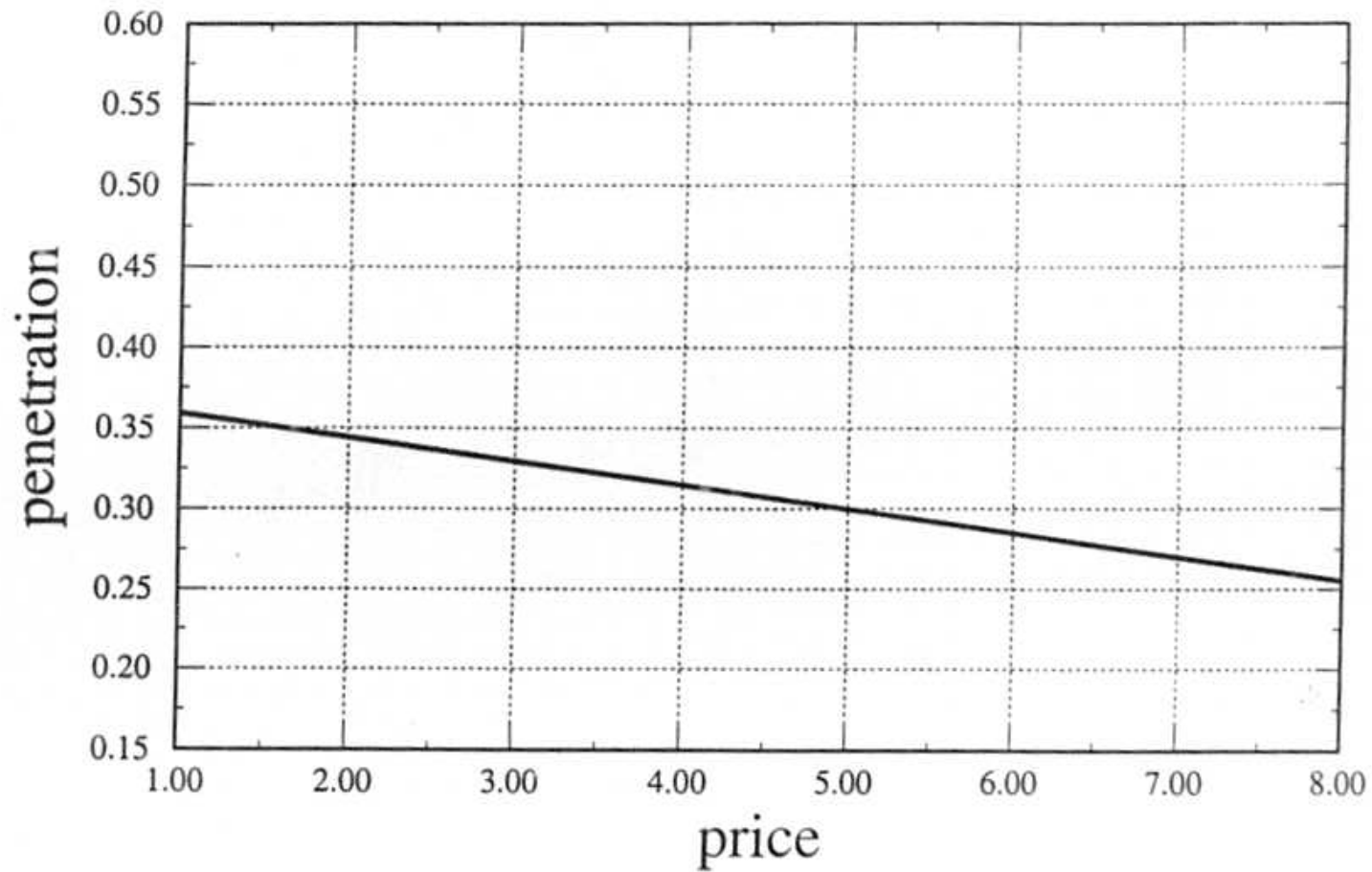
Call Return



Call Block



CW





Average Local Bill Amounts

Legal Status

	Average Local Bill
Proprietorship	\$78.07
Partnership	\$289.94
Corporation	\$424.40

Is Location Owned or Rented?

	Average Local Bill
Own	\$527.01
Rent	\$345.56

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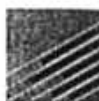


Average Local Bill Amounts

Long Distance Provider

	Average Local Bill
AT&T	\$251.64
MCI	\$313.80
Sprint	\$288.05
Other	\$406.06

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Business Profiles *"A NTDS Look"*

Bill Newman
PNR and Associates

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Average Local Bill Amounts

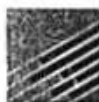
Number of Locations

	Average Local Bill
Single Location	\$229.05
Headquarters	\$751.58
Branch	\$440.86

Is Location a Subsidiary?

	Average Local Bill
Yes	\$288.66
No	\$964.11

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Business Distributions

Legal Status

	Expected No. Lines
Proprietorship	3.5
Partnership	26
Corporation	39

Is Location Owned or Rented?

	Expected No. Lines
Own	55
Rent	28

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Business Distributions

Long Distance Provider

	Expected No. Lines
AT&T	21
MCI	26
Sprint	26
Other	36

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Average Local Bill Amounts

Population Density

	Average Local Bill
Less than 2,500	\$66.47
2.5K - 5K	\$79.28
5K - 10K	\$82.14
10K - 25K	\$159.47
25K - 50K	\$215.21
50K - 100K	\$269.09
100K - 250K	\$295.59
250K - 500K	\$298.81
Over 500K	\$437.42

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Business Profiles

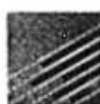
Number of Locations

	Expected No. Lines
Single Location	18
Headquarters	79
Branch	40
Overall Average	26

Is Location a Subsidiary?

	Expected No. Lines
Yes	24
No	112

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NTDS Business Models

	Model	price coefficient	T value	Average price	Elasticity
ISDN - BRI	Choice	-0.011	-2.53	40.74	-0.448
ISDN - PRI	choice	-0.007	-1.83	497.21	-0.232
Digital Data Services	Choice	-0.006	-4.06	112.45	-0.220
Digital Lines	Choice	-0.008	-4.57	-0.059	-0.059
Frame Relay	Choice	-0.0017	-1.519	146.30	-0.023
HICAP		-0.0086	-3.437	359.68	-0.194
Private Line Analog	OLS	-21.244	-5.711	9.34	-1.291
Private Line	OLS	-0.0193	-9.333	69.45	-1.292

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NTDS Business Models - intraLATA minutes

Variable	Coefficient	T value
Price	-115.71	-7.42
Call concentration	-1.05	-17.09
Total lines	8.12	13.38
Employment	1.25	11.24
Own premise indicator	-5.28	-0.92
Rent premise indicator	-15.80	-2.94
PBX or Centrex indicator	34.67	1.82
Headquarters indicator	16.39	1.75
Branch indicator	-1.03	-0.18
Price * Call Concentration	1.39	2.47
Mills Ratio	2.75	0.77

Elasticity at the mean CCI (of 64%) is -0.39. At CCI of 0, the implied elasticity is -0.49

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Business Call Distributions By Mileage Bands

Calls by Miles	% of Calls interLATA	% of Calls interLATA Intrastate	% of Calls interLATA Interstate
1 - 22	1.06	2.21	0.80
23 - 55	4.51	14.81	2.46
56 - 124	13.20	46.98	7.00
125 - 292	30.36	34.01	19.25
293 - 430	17.09	1.94	17.19
431 - 925	26.36	0.05	37.44
926 - 1910	6.92		14.71
1911 - 3000	.46		1.08
3001 - 4250	.03		0.05
4251 - 5750	.01		0.02

PNR and Associates Telecom Review - Sept. 1996



Lines per Employee By Size By Selected SIC

Employment Group	SIC 27	SIC 48	SIC 61	SIC 56
A. Agr., Forest, Fish	1.13	2.75	1.67	1.25
B. Mining	1.34	2.42	1.60	1.15
C. Construction	0.74	1.59	1.21	1.01
D. Manufacturing	0.69	1.23	1.09	.90
E. Trans., Public Utility	0.52	0.96	1.01	0.61
F. Wholesale Trade	0.45	0.71	0.89	0.42
G. Retail Trade	0.39	0.63	0.85	0.41
H. Finance, Ins, RE	0.31	0.63	0.78	0.26
I. Services	0.30	0.33	0.75	0.14
J. Public Admin	0.13	0.19	0.71	0.11

SIC 27: Printing & Publishing

SIC 61: Credit Agencies

SIC 48: Communications

SIC 56: Apparel Stores

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NTDS Business Models - Overall interLATA minutes

Variable	Coefficient	T value
Price	-280.22	-1.15
Call concentration	-5.21	-8.74
Total lines	30.60	17.29
Employment	5.48	10.65
Own premise indicator	4.82	0.28
Rent premise indicator	2.96	0.19
PBX or Centrex indicator	185.54	2.83
Headquarters indicator	172.80	6.80
Branch indicator	106.37	5.26
Price * Call Concentration	1.30	0.19
Mills Ratio	2.21	0.49

The implied elasticity at the mean of interLATA CCI is -0.394. The elasticity at CCI of 0 is -0.50

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Elasticity Summary

	Single	KEY	CENTREX	PBX
Overall: -0.065				
Single	-0.038	0.097		
KEY	0.155	-0.301		0.02
CENTREX			-0.122	0.08
PBX				-0.04

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NTDS Business Models - interLATA - intrastate minutes

Variable	Coefficient	T value
Price	-145.25	-3.66
Call concentration	-1.91	-5.75
Total lines	10.32	13.45
Employment	0.34	1.87
Own premise indicator	-3.79	-0.48
Rent premise indicator	-20.00	-2.85
Headquarters indicator	60.89	5.09
Branch indicator	67.12	7.20
Price * Call Concentration	1.91	3.61
Mills Ratio	0.44	0.11

Elasticity computed at the mean of interLATA CCI (83%) is -0.40. At CCI of 0 the implied elasticity is -0.53

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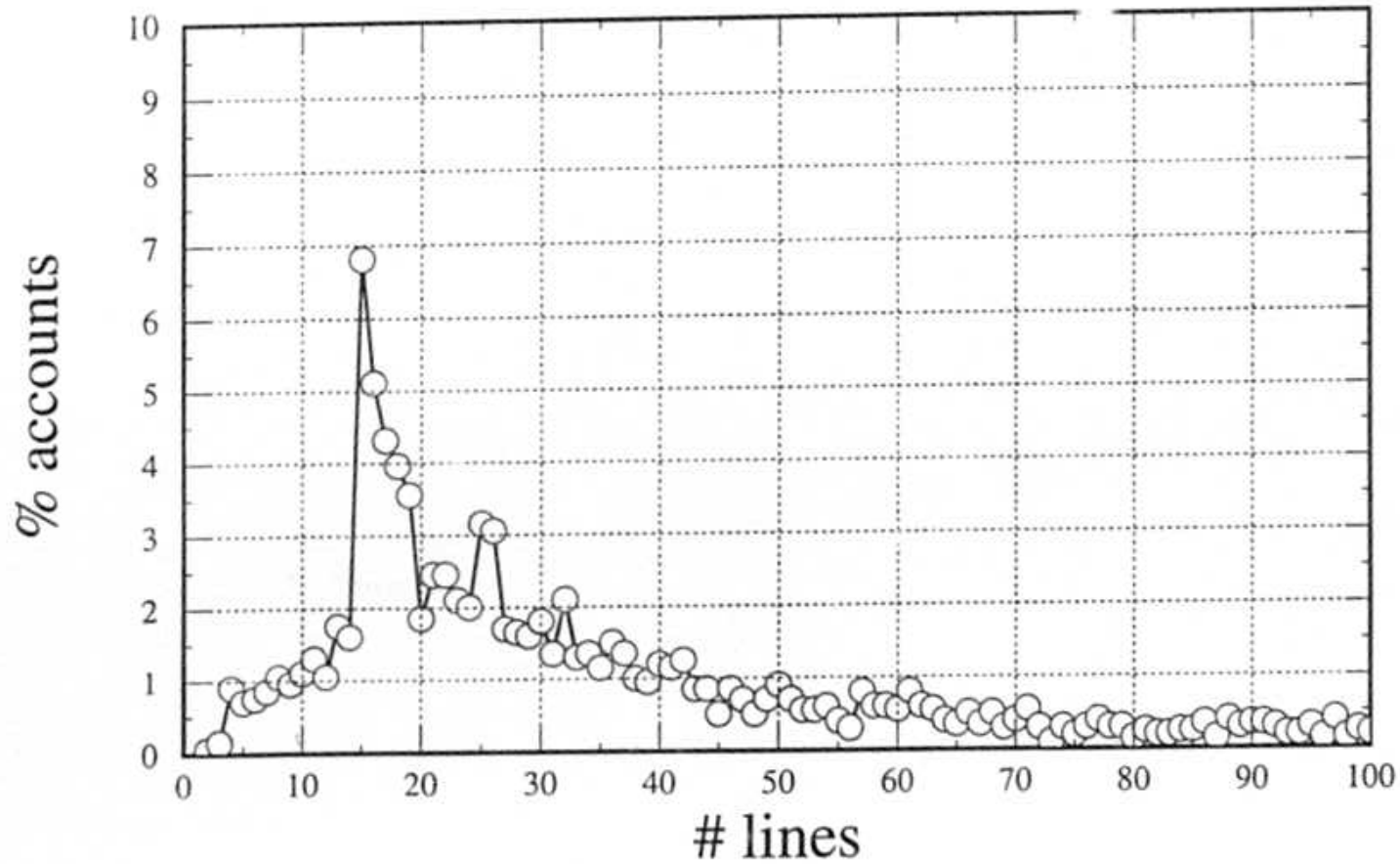
NTDS Business Models - interLATA - interstate minutes

Variable	Coefficient	T value
Price	-203.22	-2.09
Call concentration	-3.51	-6.22
Total lines	23.19	13.84
Employment	3.39	10.99
Own premise indicator	-24.09	-1.55
Rent premise indicator	2.55	0.18
PBX or Centrex indicator	232.09	3.72
Headquarters indicator	135.48	5.59
Branch indicator	89.94	4.70
Price * Call Concentration	1.18	0.87
Mills Ratio	-14.58	-1.79

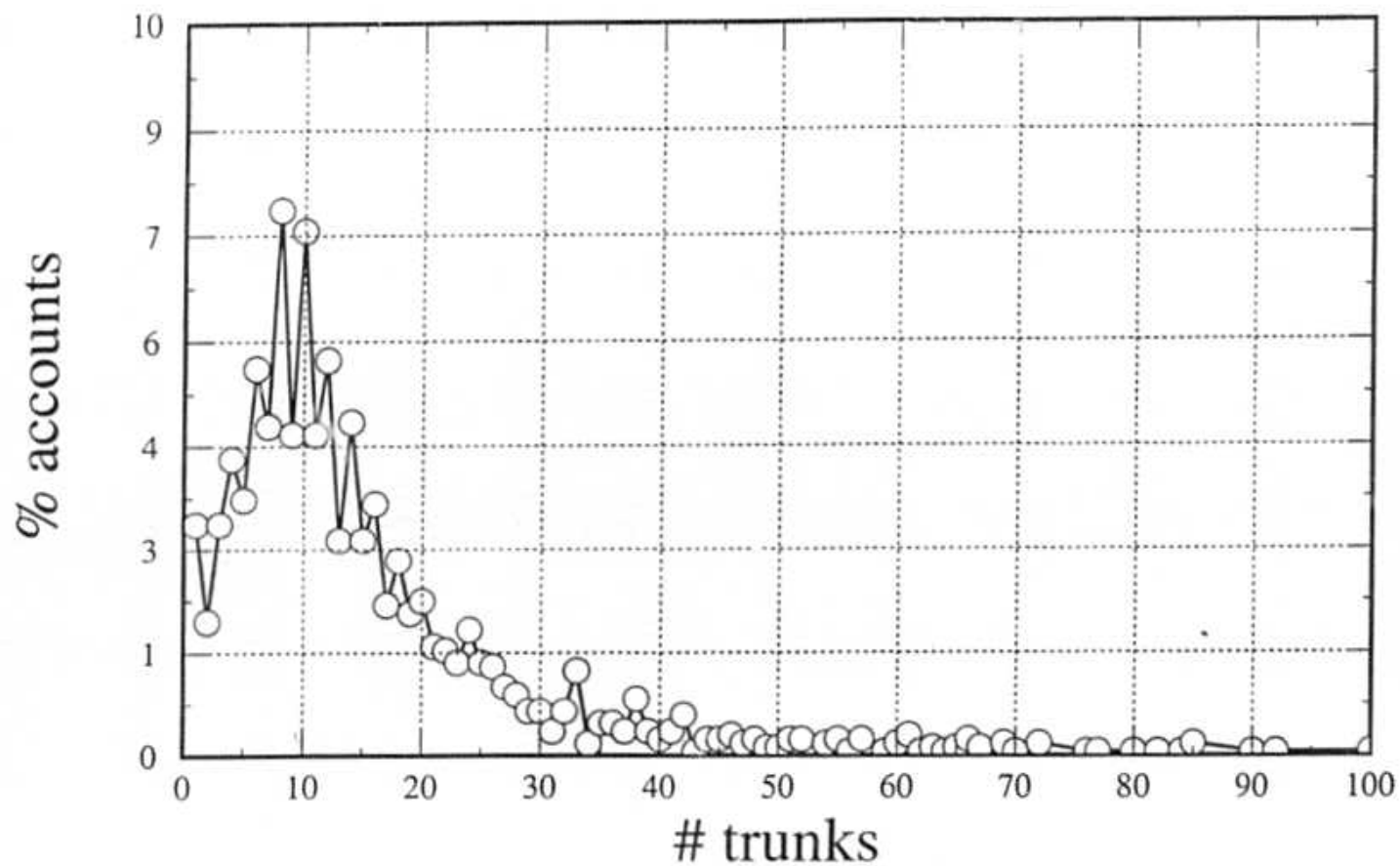
The implied elasticity at the mean of interLATA CCI (83%) is -0.43. The elasticity at CCI of 0 is -0.49.

PNR and Associates Telecom Review - Sept. 1996

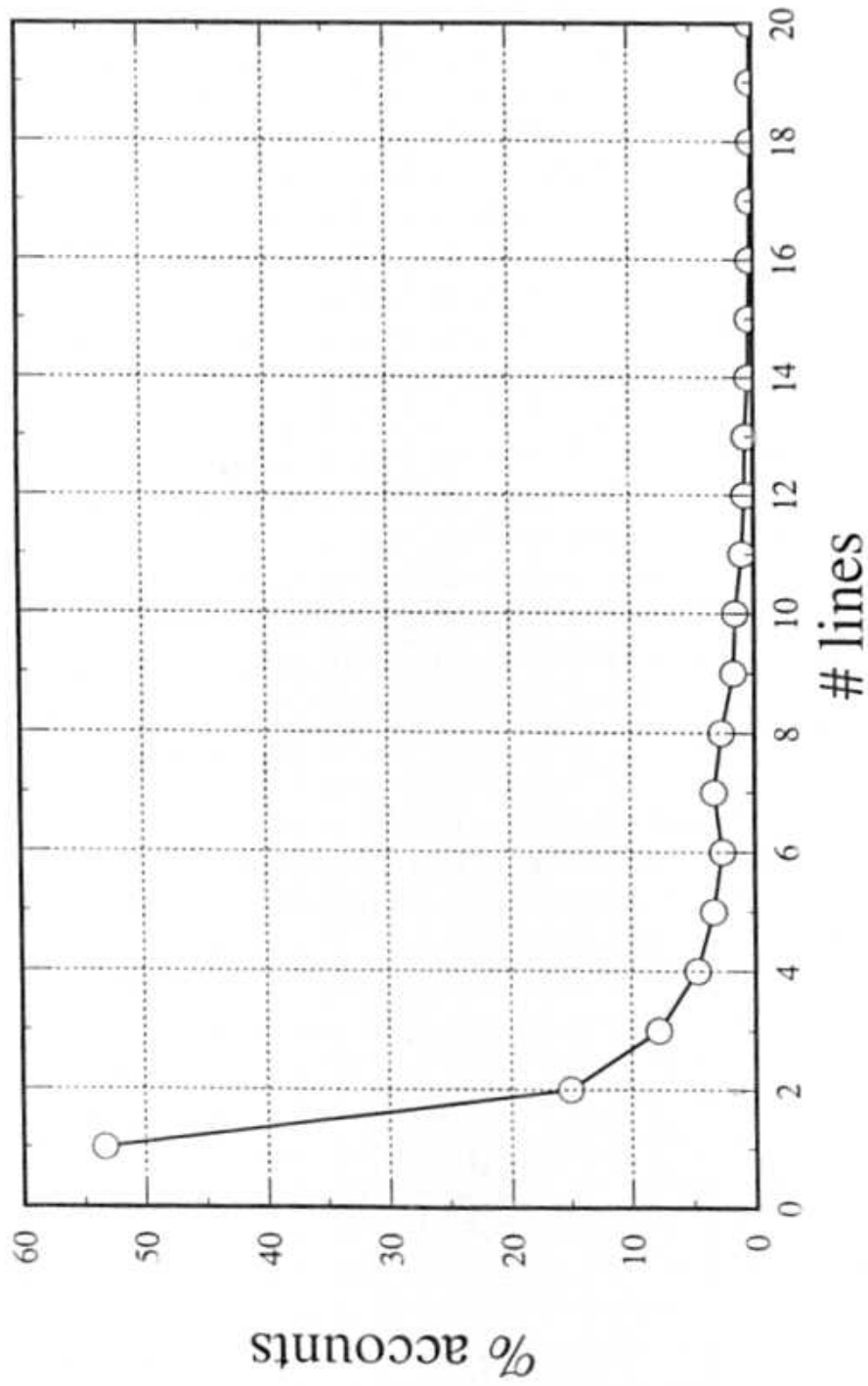
Centrex Lines



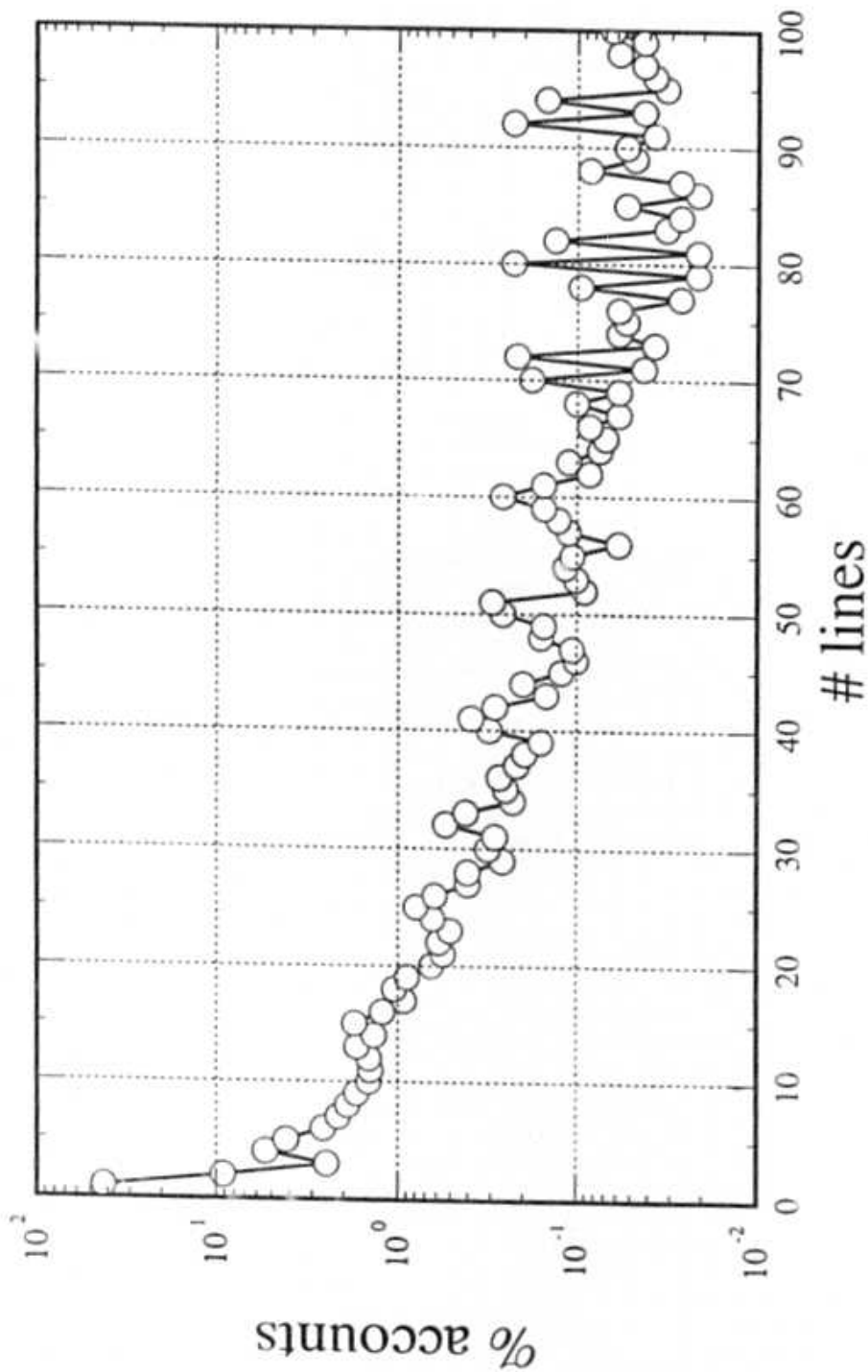
PBX trunks



Business Lines



Total Lines



Long Distance Calling Distributions

Percent of InterLATA Business Minutes

<i>hour</i>	<i>Total</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>	<i>Sunday</i>
all	100.00	19.74	19.65	22.10	19.43	12.43	3.78	2.87
0 to < 1	0.21	0.13	0.17	0.20	0.22	0.14	0.84	0.52
1 to < 2	0.08	0.09	0.07	0.06	0.06	0.05	0.35	0.29
2 to < 3	0.07	0.01	0.06	0.06	0.04	0.05	0.39	0.22
3 to < 4	0.06	0.03	0.03	0.04	0.05	0.08	0.29	0.18
4 to < 5	0.05	0.03	0.04	0.05	0.06	0.06	0.10	0.10
5 to < 6	0.08	0.06	0.05	0.07	0.06	0.09	0.40	0.11
6 to < 7	0.34	0.25	0.31	0.31	0.43	0.42	0.48	0.28
7 to < 8	1.57	1.38	1.57	1.52	1.58	1.80	2.10	1.51
8 to < 9	6.06	5.71	6.23	6.26	6.38	6.56	5.00	2.88
9 to < 10	10.08	9.87	10.09	10.70	10.23	10.90	8.17	4.74
10 to < 11	11.37	11.23	11.52	11.83	11.64	11.56	9.94	7.05
11 to < 12	10.09	10.64	10.05	10.22	9.77	10.69	9.73	5.77
12 to < 13	6.97	7.29	6.84	6.83	6.71	7.45	7.69	5.60
13 to < 14	9.01	9.39	9.26	8.98	8.97	9.21	7.34	6.56
14 to < 15	10.17	10.43	10.91	10.43	10.19	10.22	5.86	6.58
15 to < 16	10.11	10.77	10.55	10.41	10.13	9.87	6.15	6.43
16 to < 17	8.32	8.98	8.32	8.40	8.71	7.67	5.62	7.00
17 to < 18	4.92	4.81	4.60	4.56	5.03	4.78	7.69	6.89
18 to < 19	2.81	2.38	2.66	2.51	2.73	2.56	5.14	7.69
19 to < 20	2.41	2.13	2.27	2.15	2.36	1.70	4.32	8.07
20 to < 21	2.11	1.86	1.81	1.96	1.89	1.39	4.67	8.20
21 to < 22	1.67	1.36	1.38	1.34	1.49	1.33	4.24	7.54
22 to < 23	0.95	0.73	0.81	0.76	0.83	0.99	2.38	3.63
23 to < 24	0.49	0.47	0.38	0.36	0.46	0.42	1.13	2.16

Long Distance Calling Distributions

Percent of InterLATA Business Calls

<i>hour</i>	<i>Total</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>	<i>Sunday</i>
all	100.00	19.14	19.12	21.58	18.81	13.19	5.12	3.05
0 to < 1	0.22	0.09	0.19	0.17	0.19	0.21	0.69	0.94
1 to < 2	0.12	0.07	0.11	0.09	0.10	0.09	0.39	0.53
2 to < 3	0.11	0.07	0.08	0.08	0.08	0.09	0.34	0.51
3 to < 4	0.09	0.05	0.06	0.07	0.07	0.11	0.29	0.45
4 to < 5	0.09	0.06	0.07	0.07	0.09	0.10	0.23	0.22
5 to < 6	0.20	0.18	0.14	0.18	0.20	0.23	0.43	0.39
6 to < 7	0.54	0.49	0.46	0.51	0.59	0.57	0.73	0.92
7 to < 8	1.82	1.71	1.76	1.89	1.88	2.01	1.72	1.42
8 to < 9	5.96	6.00	6.07	6.24	6.30	6.33	4.09	2.35
9 to < 10	9.55	9.63	10.00	10.28	9.87	9.78	6.26	3.73
10 to < 11	10.87	11.21	11.37	11.30	11.23	10.95	8.04	4.75
11 to < 12	10.16	10.69	10.28	10.42	10.12	10.28	9.13	5.55
12 to < 13	7.72	7.95	7.50	7.50	7.57	7.92	8.64	7.64
13 to < 14	9.32	9.64	9.41	9.15	9.13	9.49	8.34	9.80
14 to < 15	10.31	10.50	10.75	10.33	10.28	10.42	7.99	9.83
15 to < 16	10.11	10.37	10.48	10.42	10.03	9.77	7.91	9.68
16 to < 17	8.59	9.18	8.61	8.44	8.80	7.90	7.60	9.38
17 to < 18	4.78	4.57	4.58	4.51	4.75	4.32	6.53	8.39
18 to < 19	2.89	2.53	2.63	2.63	2.72	2.77	5.04	6.61
19 to < 20	2.22	1.83	1.91	1.98	2.12	2.09	4.58	5.44
20 to < 21	1.84	1.38	1.55	1.63	1.71	1.89	4.32	4.65
21 to < 22	1.32	0.90	1.12	1.14	1.18	1.34	3.56	3.49
22 to < 23	0.73	0.48	0.53	0.60	0.65	0.87	2.04	2.01
23 to < 24	0.45	0.41	0.33	0.36	0.36	0.48	1.10	1.33

Long Distance Calling Distributions

Percent of IntraLATA Business Minutes

<i>hour</i>	<i>Total</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>	<i>Sunday</i>
all	100.00	18.80	18.61	21.49	18.54	14.01	5.20	3.35
0 to < 1	0.41	0.19	0.41	0.28	0.38	0.23	1.22	2.23
1 to < 2	0.21	0.11	0.14	0.22	0.17	0.20	0.60	0.81
2 to < 3	0.29	0.20	0.22	0.23	0.26	0.22	0.94	1.16
3 to < 4	0.09	0.02	0.06	0.08	0.08	0.08	0.26	0.60
4 to < 5	0.03	0.02	0.03	0.02	0.03	0.02	0.04	0.09
5 to < 6	0.07	0.06	0.04	0.07	0.05	0.10	0.14	0.14
6 to < 7	0.45	0.30	0.29	0.48	0.39	0.71	0.84	0.58
7 to < 8	2.01	1.98	1.81	2.01	1.83	2.26	2.64	2.19
8 to < 9	6.59	6.43	6.68	6.87	6.40	7.23	6.20	4.17
9 to < 10	10.04	9.96	10.26	10.12	10.05	10.84	9.47	6.24
10 to < 11	10.55	10.62	10.37	10.96	11.17	10.85	10.40	4.17
11 to < 12	9.54	10.35	9.28	9.64	9.51	9.99	9.35	4.37
12 to < 13	6.76	6.86	6.83	6.99	6.38	6.80	8.04	4.27
13 to < 14	8.14	8.65	8.34	8.29	8.20	8.25	6.51	4.87
14 to < 15	9.61	10.36	10.11	9.68	9.49	10.08	6.30	5.96
15 to < 16	9.35	9.86	9.78	9.80	8.91	9.97	6.29	5.98
16 to < 17	7.96	8.17	8.42	8.20	8.39	7.34	6.02	5.92
17 to < 18	4.57	4.62	4.53	4.43	4.57	3.91	4.61	8.06
18 to < 19	3.42	3.09	3.26	3.00	3.48	2.82	5.17	8.26
19 to < 20	3.06	2.67	2.89	2.55	3.41	2.37	5.03	7.35
20 to < 21	2.84	2.62	2.66	2.25	3.15	2.00	3.64	9.56
21 to < 22	2.27	1.45	1.83	2.30	2.16	2.09	3.88	7.84
22 to < 23	1.16	0.98	1.03	1.14	1.06	1.00	1.68	3.44
23 to < 24	0.57	0.44	0.72	0.37	0.48	0.65	0.75	1.75

Long Distance Calling Distributions

Percent of IntraLATA Business Calls

<i>hour</i>	<i>Total</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>	<i>Sunday</i>
all	100.00	19.56	18.58	21.37	18.67	14.85	4.67	2.29
0 to < 1	0.20	0.11	0.16	0.15	0.18	0.15	0.82	1.20
1 to < 2	0.12	0.06	0.08	0.08	0.10	0.08	0.43	0.84
2 to < 3	0.13	0.12	0.08	0.10	0.10	0.09	0.53	0.68
3 to < 4	0.05	0.02	0.03	0.05	0.05	0.06	0.17	0.42
4 to < 5	0.07	0.04	0.05	0.06	0.07	0.06	0.13	0.40
5 to < 6	0.10	0.10	0.09	0.10	0.07	0.10	0.24	0.32
6 to < 7	0.45	0.40	0.36	0.41	0.46	0.59	0.71	0.52
7 to < 8	2.17	2.27	2.00	2.18	2.12	2.37	2.20	1.90
8 to < 9	7.16	7.20	7.23	7.34	7.05	7.59	6.46	3.99
9 to < 10	10.67	10.73	11.04	10.68	10.79	11.11	9.49	5.57
10 to < 11	11.40	11.58	11.65	11.61	11.34	11.48	11.47	5.78
11 to < 12	10.37	10.64	9.96	10.57	10.40	10.67	10.77	6.50
12 to < 13	7.44	7.18	7.45	7.52	7.24	7.43	9.23	6.88
13 to < 14	8.97	9.13	9.30	9.02	9.04	8.89	7.60	7.38
14 to < 15	10.02	10.34	10.12	10.45	10.00	10.17	7.28	7.12
15 to < 16	9.74	10.13	10.25	9.81	9.77	9.64	7.08	7.26
16 to < 17	8.46	8.89	8.76	8.65	8.89	7.77	5.85	6.78
17 to < 18	4.44	4.43	4.23	4.35	4.24	4.32	5.14	8.06
18 to < 19	2.59	2.36	2.39	2.24	2.83	2.35	3.90	6.54
19 to < 20	1.89	1.58	1.67	1.57	2.00	1.67	3.34	6.66
20 to < 21	1.56	1.32	1.42	1.31	1.58	1.28	2.84	6.00
21 to < 22	1.14	0.84	0.98	1.10	0.99	1.06	2.17	4.95
22 to < 23	0.57	0.32	0.50	0.44	0.51	0.68	1.42	2.77
23 to < 24	0.29	0.19	0.23	0.22	0.21	0.40	0.73	1.48

Modified Stage 1 Firms

Average number of employees	6.5
Percent of firms with < 5 employees	54.7%
Percent of firms with < 10 employees	71.1%
Average number of telephone lines	3.4
Percent single line (B1)	78.1%
Percent KEY	15.1%
Percent other	7.8%
Average local bill	\$285.75
Average intraLATA minutes	61.69
Average interLATA minutes	171.70
Percent that own their facility	20.1%
Percent proprietorships	33.3%
Percent partnerships	17.1%
Percent corporations	49.4%

For this analysis, Stage 2 firms are large (employees over 10) or firms that are not a single location.

Modified Stage 2 Firms

Average number of employees	21.7
Percent of firms with < 5 employees	32.2%
Percent of firms with < 10 employees	61.9%
Average number of telephone lines	18.1
Percent single line (B1)	33.7%
Percent KEY	19.1%
Percent other	47.2%
Average local bill	\$712.72
Average intraLATA minutes	91.5
Average interLATA minutes	416.2
Percent that own their facility	49.6%
Percent proprietorships	4.4%
Percent partnerships	4.5%
Percent corporations	91.1%

The differences in the Stage 1 and Stage 2 profiles support Professor Taylor's segmentation approach. Stage 1 firms are much more likely to have either single business lines or small key systems. Their local bills are significantly lower as is their toll traffic. In the absence of other information that links a particular firm to other sites, toll traffic might be a proxy for multi-location or multi-localities.

Business Telecommunications Demand Models

A general business access and usage demand framework is discussed in Chapter 4 of Telecommunications Demand in Theory and Practice, by Lester Taylor (Kluwer Academic Publishers, 1994). In that chapter, Professor Taylor outlined a framework of stages which can be used to 1) trace business requirements as they evolve over time or 2) construct business telecommunications access and usage segments. Modeling business demand for telecommunications services and products is extremely complex, since the underlying theoretical framework must deal with investment decisions (customer premise equipment), network products and services (special access, private lines, data channels and so forth), features (caller id, voice mail) and usage (toll, optional calling plans). Compounding the modeling is the seemingly continuous introduction of new products and services including new cellular services, pcs services, paging and most recently, internet and intranet services. Even with these complexities the Taylor framework appears to be a good starting point from which to envision the demand for telecom products and services.

Stage 1 firms are characterized as requiring a small number of access lines which can be supplied by small pbx systems, key systems or small centrex systems. The firms in this segment are "small" and with no complex telecommunications requirements. Firms in Stage 2 are identified as having multiple locations in the same locality. The assumption is that firms with multiple locations in the same locality have expanded requirements for telecommunications services as reflected in the use of private line for voice or data. Foreign exchange or interest in special access services is a possibility for firms in this segment. Stage 3 firms are characterized by having multiple locations in multiple localities. Examples of firms in this segment would include firms with many sales offices, subsidiaries or production facilities. Firms in Stage 3 are assumed to be larger (in terms of sales or employees).

For the discussion that follows, we utilize a slightly modified version of the framework provided by Professor Taylor. Not surprisingly, the modifications are due to limitations in information. We define Stage 1 firms as firms which are small and which have a single location. The business "firmographic information" was obtained by linking Dun & Bradstreet information to the records in the business database. The characteristics of firms in this modified Stage 1 are:

The second stage of the access line analysis involves estimating the share of lines by access type. Three share equations were constructed. Total lines for a firm was defined as the sum of the firm's single B1 lines, their KEY lines, their PBX and CENTREX lines. Prices for each access type were derived by computing state averages. These averages were compared to information provided by the FCC (1995 Reference Book) and to published tariffs.

The models were estimated using the probit routine in SORITEC. Separate models were not derived for each Stage. Rather, business information such as SIC code, employment, legal status and location type was used to infer the correct stage.

The following tables summarize the results of this estimation.

Single Business Lines

Variable	Coefficient	T value	Discussion
Price of B1	-0.015	-9.05	Elasticity -.038
Price of Key	0.014	22.66	Cross price Elasticity 0.097
Headquarters	-0.428	-19.08	Expected for Stage 1
Branch	-0.246	-8.16	Expected for Stage 1
Employment size 1	0.771	17.09	Expected for Stage 1
Employ size 2-4	0.731	19.42	Expected for Stage 1
Employ size 5-9	0.674	16.99	Expected for Stage 1
Employ size 10-24	0.488	12.32	Expected for Stage 1
Employ size 25-49	0.125	2.94	
Employ size 50-99	-0.160	-3.57	Expected for Stage 1
Employ size 100-249	-0.379	-8.26	Expected for Stage 1
Employ size 250-499	-0.683	-10.86	Expected for Stage 1
Employ size 500-999	-0.744	-9.90	Expected for Stage 1
Proprietorship	0.030	3.13	Expected for Stage 1
Partnership	-0.095	-2.38	
Corporation	-0.060	-19.09	Expected for Stage 1

Access Line Model

A two part approach was used to construct a model for access line demand. In the first part, a model was constructed which estimated the demand for all lines as a function of a weighted price, business demographics and SIC indicators. The total access line model was estimated as a poisson regression. That form was chosen since the line distribution is highly skewed to the left and has very long tails. An average price was constructed using the average prices of each access type times the percent of total lines in that access type category.

Results for total access lines are summarized below. The Poisson regression model is used when the dependent variable is discrete (i.e. lines) and where the focus of interest is in the probability that $Y = y_i$.

Variable	Coefficient	b/S.E.	Mean of X
Weighted price	-0.006	-18.665	34.80
Branch indicator	0.911	41.01	0.066
HQ indicator	0.377	22.50	0.052
Proprietorship indicator	-0.251	-10.58	0.166
Partnership indicator	0.196	5.965	0.251
Corporation indicator	0.479	22.558	0.103
Own	0.496	29.637	0.403
Rent	0.321	18.061	0.147
SIC0	0.228	4.786	0.400
SIC1	-0.432	-8.546	0.045
SIC2	-0.144	-2.697	0.018
SIC3	0.168	0.032	0.016
SIC4	0.217	4.330	0.023
SIC5	-0.192	-4.240	0.180
SIC6	0.259	5.523	0.051
SIC7	-0.201	-4.307	0.113
SIC8	0.133	2.937	0.143
Employees	0.244	35.117	8.358

The elasticity of lines with respect to the weighted price is given by the coefficient of price * (p / Lamda_i) where Lamda_i is the sum of the coefficients in the model at their respective means. The interpretation to be given to this elasticity is the elasticity with respect to adding an additional line, given the current number of lines.

Based on the model given above, the estimate elasticity is -0.065

Key

Variable	Coefficient	T value	Discussion
Price of Key	-0.009	-44.35	Own elasticity -0.301
Price of B1	0.006	3.50	Cross price 0.155
Price PBX	0.010	11.43	Cross price 0.029
Headquarters	-0.109	-2.76	
Branch	0.624	11.80	
Employment size1	-1.277	-14.07	
Employ size 2-4	-0.609	-9.36	
Employ size 5-9	-0.159	1.98	
Employ size 10-24	0.133	0.32	
Employ size 25-49	0.022	-0.14	
Employ size 50-99	-0.079	-0.73	
Employ size 100-249	-0.056	-0.46	
Employ size 250-499	-0.049	-2.73	
Employ size 500-999	-0.266	-1.28	
Proprietorship	0.064	1.27	
Partnership	0.341	4.93	
Corporation	-0.104	-9.24	

Since these equations were estimated as part of a simultaneous system, the conditional model of PBX share was also estimated.

CENTREX

Variable	Coefficient	T value	Discussion
Price of CENTREX	-0.018	-2.66	Own price elasticity -0.122
Price of PBX	0.032	6.89	Cross price 0.086
Headquarters	0.533	16.18	
Branch	0.064	1.97	
Employment size 1	-0.411	-6.77	
Employ size 2-4	-0.261	-7.44	
Employ size 5-9	-0.131	-5.85	
Employ size 10-24	-0.005	-0.09	
Employ size 25-49	0.456	7.42	Expected
Employ size 50-99	0.609	9.14	Expected
Employ size 100-249	0.971	5.55	Expected
Employ size 250-499	0.138	3.49	Expected
Employ size 500-999	0.105	3.38	
Proprietorship	-0.134	-1.16	
Partnership	0.065	2.64	Expected
Corporation	0.355	4.46	Expected

PBX

Variable	Coefficient	T value	Discussion
Price of PBX	-0.001	-0.993	Own elasticity -0.046
Headquarters	0.275	5.683	
Branch	0.555	5.447	
Employment size1	-1.649	-9.990	
Employ size 2-4	-1.483	-15.735	
Employ size 5-9	-1.443	-14.495	
Employ size 10-24	-1.033	-12.271	
Employ size 25-49	-0.586	-7.051	
Employ size 50-99	0.242	2.877	
Employ size 100-249	0.205	2.477	
Employ size 250-499	0.678	6.299	
Employ size 500-999	0.788	6.193	
Branch	0.555	5.444	
Headquarters	0.275	5.684	
Corporation	-0.104	-9.24	

Elasticity Summary

	Single	KEY	CENTREX	PBX
Overall: -0.065				
Single	-0.038	0.097		
KEY	0.155	-0.301		0.029
CENTREX			-0.122	0.086
PBX				-0.046

These elasticities reflect adding another line at the margin.

RECENT STUDIES OF RESIDENTIAL ACCESS DEMAND

In this chapter, we shall take a detailed look at four recent studies of the demand for access to the telephone network by households. The four studies are Perl (1983), Taylor and Kridel (1990), Bell Canada (Bodnar *et al.* 1988), and Train, McFadden, and Ben-Akiva (1987). The early 1980s saw a shift in focus from toll demand to access demand, particularly residential access demand. Competition in the toll market was shrinking the pool of revenue that for many years had been subsidizing residential local rates. The consequent upward pressure on local rates was causing concern that a large number of households would be forced to give up telephone service. There was especially concern that certain socio-demographic groups – low income, the elderly, black, hispanic – would be burdened disproportionately. Tiny access elasticities for the population at large might mask much larger values for specific groups.

It was with this in mind that in early 1983 the about-to-be-divested Bell Operating Companies approached Lewis Perl of National Economic Research Associates through the then Central Services Organization of Bell Communications Research to update and expand Perl's 1978 study. The study was completed in late 1983 to the accompaniment of immediate, widespread attention. Perl subsequently extended the analysis to GTE, United Telecommunications, and Continental, but only the Bell results will be discussed here.

The second study to be discussed was initiated in early 1984 at Southwestern Bell under the direction of myself and Donald Kridel. The Southwestern Bell study was prompted by two concerns with the Perl study. The first was that the socio-demographic detail of the Perl model was not sufficiently specific to Southwestern's subscribers, while the second concern related to the matching of rates with households in rural areas. Census rules preclude identifying the location of individual households in areas of less than 100,000 populations, which means that all that can be known of some rural households is that they live in some 20-county area in west or north Texas. Matching households to the rates they faced in these circumstances is problematic at best.

The third study to be discussed was undertaken by Bell Canada to analyze

the likely effects of rate "rebalancing" in the jurisdictions served by Bell Canada in Ontario and Quebec. Although telecommunications in Canada is characterized by different market and regulatory structures than in the U.S., rate structures are essentially the same in that residential access is heavily subsidized by toll users. In recognition of the distortions that such a pricing structure entails, Bell Canada has proposed to its regulator, the Canadian Radio-television and Telecommunications Commission (CRTC) that it be allowed to "rebalance" rates. Toll rates would be reduced toward cost. A residential access-demand model along the lines of Perl's was developed to assist in assessing the effects of such a rebalancing.

The fourth, and final, model to be discussed was developed by Cambridge Systematics Incorporated of Berkeley, California for an eastern Bell Operating Company. The study was authored by Kenneth Train, Daniel McFadden, and Moshe Ben-Akiva. The TMB study differs from the other three studies in that the focus is not on access *per se*, but on the type of access – i.e., flat-rate, measured, or flat-rate/measured – given that access is demanded. A conditional nested logit model is specified in which a household is assumed to select a local-calling portfolio in which a portfolio is defined in terms of type of access and the number, duration, and length-of-haul calls.

I. THE 1983 PERL STUDY¹

In his 1978 study, discussed in Appendix 1, Perl used data for individual households from the Public Use Sample of the 1970 U.S. Census to analyze residential access to the telephone network. The decision to have or not to have access was analyzed in a discrete choice framework in which the presence or absence of telephone service was related to the cost of the monthly service, income, and a host of socio-demographic factors. The 1983 study extends the analysis to data from the 1980 Public Use Sample.

Beside being based on more recent data, the 1983 study offers several important innovations over the 1978 study, including an improved treatment of the price of access and greater socio-demographic detail. The price of access in the 1978 study was defined in terms of average rates for 100 Bell System Revenue Accounting Offices (RAOs). Each household in the sample was assigned the rate for the RAO in whose geographic area the household was located. The 1983 study attempts to match households with exchanges.

¹ The discussion in this section is based upon Perl (1983), which was completed in December 1983. The model was subsequently re-estimated, with similar results, using a revised data set. The re-estimated model is given in Perl (1984).

The matching is good in dense urban areas, but less so in rural areas because of the need to protect against disclosure.

The 1980 Public Use Sample contains information on 80,428 households (a 1-in-1000 sample of all U.S. households) assigned to one of 1154 geographic areas. The geographic areas are either cities, counties, or country groups selected so that each area contains at least 100,000 households. Unlike in the 1970 census in which households were asked whether they simply had access to a telephone (irrespective of whether they were subscribers), the 1980 census targeted actual subscription. The analysis proceeds in a logit framework in which the logarithm of the odds of having a telephone is related to a long list of price variables, household characteristics, and area characteristics. Many of the variables are dummy (i.e., 0-1 indicator) variables. Estimation is by maximum likelihood. The independent variables with their estimated coefficients and asymptotic standard errors are given in Table 1.

Access in 1980 was offered in a variety of forms. Traditional flat-rate service was available to nearly all households in the sample. Many households had a choice between flat-rate and measured service, while most had an option of single- or multi-party service. In view of this, the price of access is measured by four different variables:

1. The flat-rate price in flat-rate only areas.
2. The flat-rate price in areas with a measured option.
3. The measured-rate access price.
4. The measured-rate calling price.

The installation charge is also included as a predictor, as is a variable which measures the availability of measured service. The model thus allows for price to operate in three dimensions, through an access charge (whether service is flat-rate or measured), through a usage charge (when measured service is an option), and the installation charge. That measured service when it is available as an option may not be available to all of the households in a geographic area to which a household is assigned is taken into account by the variable which measures the proportion of households (in the geographic area) for which measured service is an option. Finally, the model allows for the effect of the access charge to be different depending upon whether or not measured service is available as an option.²

The variables relating to household characteristics include income, age of head of household, education, race, sex of head, and employment status, size and age distribution of household, language spoken other than English, and

² The price variables are constructed from rates that were in effect at the time that the 1980 Census was taken. 7260 Bell Operating Company exchanges are represented in the prices in contrast with the 1978 study which used average revenue data for 100 RAOs.

TABLE 1

1983 Nera telephone access demand equation: Parameters and mean values of variables.

	Units	1980 Mean Values ¹	Coefficient ²	t-Statistic ³
	(1)	(2)	(3)	(4)
Intercept			-1.8125	9.54
<i>Price Variables</i>				
Flat Rate Price (Flat Rate Area only)	Dollars	9.051	-0.0492	4.46
Flat Rate Price (Measured Rate Area)	Dollars	9.679	-0.0173	2.30
Measured Rate Access Price	Dollars	5.695	-0.0414	2.13
Measured Rate Calling Price	Dollars	0.096	-1.7179	1.92
Installation Price	Dollars	28.304	-0.0034	1.25
Proportion with Measured Rate Service	Decimal	0.543	0.1526	0.82
<i>Household Characteristics</i>				
Household Income	\$1,000	20.026	0.1296	20.83
Household Income Squared	\$1,000,000	621.158	-0.0011	13.67
Age of Householder	Years	47.156	0.0446	26.31
Income* Age	\$1,000- Years	917.958	-0.0003	2.55
Education of Householder	Years	12.125	0.1489	26.52
Race of Householder	Indicator ⁴	0.102	-0.5133	11.24
Employment Status	Indicator ⁵	0.697	0.3874	9.29
Persons in Household	Number	2.764	-0.0503	3.26
Proportion Less Than 6	Decimal	0.070	-0.7417	6.29
Proportion 6-12	Decimal	0.061	0.4242	2.86
Proportion 65+	Decimal	0.042	1.3412	6.61
Language Other Than English Spoken	Indicator	0.107	-0.3920	7.07
English Spoken Poorly Or Not At All	Indicator	0.018	-0.1477	1.50
Partially Household, No Wife Present	Indicator	0.073	-0.8722	10.18
Family Household, No Husband Present	Indicator	0.102	0.1102	2.06
Nonfamily Household, Male Householder	Indicator	0.107	-1.2436	22.26
Nonfamily Household, Female Householder	Indicator	0.152	0.1453	2.20
<i>Area Characteristics</i>				
Nonfarm Area	Indicator	0.827	0.1096	2.51
South	Indicator	0.328	-0.3588	8.20
Phone Density 1 (1-100)	Indicator ⁶	0.336	-0.247	3.43
Phone Density 4 (1,000-2,500)	Indicator ⁶	0.120	0.2516	3.10
Phone Density 5 (2,501-5,000)	Indicator ⁶	0.083	-0.2189	2.61
Phone Density 6 (5,001+)	Indicator ⁶	0.034	-0.3344	3.67
Number of Subscribers in Local Calling Area (in Natural Logs)	ln-1,000	4.693	0.0990	4.91
Number of Observations		71,979	71,979	
R ²			0.099	

Notes to Table 1:

¹ The mean values are the means for the sample used to estimate this equation, i.e., for the 71,979 households for which rate data were available.² Coefficients measure the change in the natural log of the odds of a household having a telephone for a 1 unit change in the variable.³ The t-statistic is the ratio of the coefficient to its standard error. Since parameter estimates are normally distributed, these t-statistics can be used to test hypotheses about the true value of each coefficient.⁴ Race = 1 if the householder is black, and 0 otherwise.⁵ Employment = 0 if the householder is unemployed or not in the labor force and 1 otherwise.⁶ The ranges for the phone density indicators are in numbers of mains per square mile. The range 101-1000 phones per square mile is the reference group.

Source: Perl (1983, Figure 1)

whether the household is family or nonfamily. Both the level and square of income is included to allow for the effect of income to be nonlinear. Income is also interacted with the age of the head of household. With regard to area characteristics, account is taken of whether a household is rural or urban and resides in the South. Four density variables (defined in terms of the number of main-stations per square mile) and the number of subscribers in the local-calling area complete the list of predictors. These last five variables are intended to capture the network (or subscriber) externality.

Perl summarizes the results of his 1983 study as follows:

First, the new study suggests that there has been a substantial increase in demand for telephone service between 1970 and 1980. As a result, increasing access prices will have a *smaller* effect on access demand than indicated by [the] earlier study. Price elasticity as estimated from the 1983 model is about 60 percent of that derived from the 1978 model.

Second, the 1983 model confirms the assumption which was implicit in the 1978 model that access demand is primarily a function of minimum rather than average access charges. This result suggests that the provision of measured-rate service, with relatively low access but high usage charges or the provision of low-priced two-party service can be expected to maintain relatively high levels of access demand even in the face of substantial increases in the prices of flat-rate service.

But, third, demand also depends on local-calling prices and even at very low access prices *some* households will not subscribe to telephone service unless they can make a large number of local calls at a low price. Thus, any increases in local-service charges, whether for access or local usage

TABLE 2

1978 Netra telephone access demand equation: Parameters and mean values of variables

Variable	Units	1980 Mean Value ^a	Coefficient ^b	t-Statistic ^c
Intercept	(1)	(2)	(3)	(4)
Price Variables				
Flat Rate Price (Flat Rate Area only)	Dollars	11.907 ^d	-0.0624	5.37
Flat Rate Price (Measured Rate Area)	Dollars			
Measured Rate Access Price	Dollars			
Measured Rate Calling Price	Dollars	13.566	-0.0105	2.21
Installation Price	Dollars	0.348	0.2425	5.25
Proportion with Measured Rate Service	Decimal			
Household Characteristics				
Household Income	\$1,000	18.782	0.0778	12.31
Household Income Squared	\$1,000,000	582.997	-	-
Age of Householder	Years	48.207	0.0350	19.14
Income ^e Age	\$1,000- Years	872.925	-0.0003	2.36
Education of Householder	Years	11.960	0.1164	22.10
Race of Householder	Indicator ^f	0.097	-0.5953	13.23
Employment Status	Indicator ^g	0.736	0.2337	5.07
Persons in Household	Number	3.110	-0.0486	4.12
Proportion Less Than 6	Decimal	NA	-	-
Proportion 6-12	Decimal	NA	-	-
Proportion 65+	Decimal	NA	-	-
Language Other Than English Spoken	Indicator	NA	-	-
English Spoken Fluently Or Not At All	Indicator	NA	-	-
Family Household, No Wife Present	Indicator	NA	-	-
Family Household, No Husband Present	Indicator	0.025	-0.6235	6.32
Nonfamily Household, Male Householder	Indicator	0.088	-	-
Nonfamily Household, Female Householder	Indicator	0.073	-1.2900	22.09
Area Characteristics				
Nonfarm Area	Indicator	0.124	-0.1900	3.10
South	Indicator	0.803	0.3351	7.64
Phone Density 1 (1-100)	Indicator ^h	0.902	-0.3480	7.62
Phone Density 4 (1,000-2,000)	Indicator ⁱ	NA	-	-
Phone Density 5 (2,501-5,000)	Indicator ^j	NA	-	-
Phone Density 6 (5,001+)	Indicator ^k	NA	-	-
Number of Subscribers in Local Calling Area (in Natural Logs)	In 1,000	NA	-	-
Number of Observations		63,444	36,703	
R ²			0.146	

Notes to Table 2:

¹ The mean demographic values are the means for the entire sample, including households for which rate data were not available, whereas the model was estimated using only those households for which data were available.

² Coefficients measure the change in the natural log of the odds of a household having a telephone for a 1 unit change in the variable. The coefficients of price and income variables have been adjusted for inflation to make them comparable with the new model.

³ The t-statistic is the ratio of the coefficient to its standard error. Since parameter estimates are normally distributed, these t-statistics can be used to test hypotheses about the true value of each coefficient.

⁴ In the 1978 model, the access price was an estimate of the lowest available rate prevailing in each of the areas sampled. Where measured rate service was available, these estimates were based on the rate data which included some people subscribing to measured rate services.

⁵ Rate = 1 if the householder is black, and 0 otherwise.

⁶ Employment = 0 if the householder is unemployed or not in the labor force and 1 otherwise.

⁷ This ranges for the phone density indicators are in numbers of mains per square mile. The range: 101-1000 phones per square mile is the reference group.

NA = Not Available.

Source: Ped (1983, Figure 2)

will cause some decreases in the percentage of households with phones (telephone penetration). This result suggests that decreases in telephone penetration do not necessarily reflect decreases in the affordability of access to telephone service.

Fourth, there has been a marked narrowing in income-related differences in telephone penetration from 1970 to 1980. Nevertheless, there is still a significant disparity in penetration between the lowest and highest income households and this disparity will widen if prices increase markedly. This widening can be avoided by providing a low-cost "life-line" service to low-income households. Revision of life-line service is also a relatively effective way to assure high telephone penetration and still charge most subscribers cost based prices.

Fifth, the market for telephone service is characterized by an externality. The value of telephone service to each subscriber increases as the number of subscribers on the network increases. This suggests that the price of telephone access should be set somewhat below the cost of access to promote the optimal-sized network. But, the welfare gains from subsidizing access are quite small and may not justify the efficiency losses that would result from any practical subsidy program. (Ped 1983, pp. 2-3),

Italics in original.)

From Table 1, we see that the price of access has an expected negative effect on the probability of having a telephone, while income, age, education, and size of household have positive effects. Income becomes less important as the level of income increases and also as a household ages. Households with female heads are more likely to have a telephone than households with husband present or a male head. Unemployment or absence from labor force depresses the probability of having a telephone, as does also being black, having English as the non-primary language, or having pre-school children. With regard to the area characteristics, urban households are more likely than rural households to have a telephone, while households in the South are less likely to have one than households elsewhere in the country. Density (as measured by the number of telephones per square mile) is seen to have a mixed effect, while the number of main stations in the local-calling area has a positive effect. Finally, a glance at the column of *t*-ratios shows that household characteristics are the strongest predictors by a wide margin.

Besides being based on 1980 data, the 1983 study differs from the 1978 study in the use (as noted) of more precise price data and in the inclusion of prices for both flat-rate and measured service. The 1983 model also takes into account the size of the local-calling area, which the 1978 model did not. Finally, the 1983 includes some household characteristics not examined in the 1978 study. The parameters of the 1978 model are presented in Table 2 for reference.

Since the model is logit, elasticities vary both with the level of penetration and with the level of the predictor. Some representative access price elasticities are given in Table 3 for penetration rates of 88, 93, and 97% and for flat-rate/measured-rate access charges of \$10/\$6, \$20/\$16, and \$30/\$26. Elasticities are shown for the 1978 model as well as for the 1983 model.³ Although small in absolute value, the elasticities are seen to increase sharply with the level of access prices and to decrease sharply with the level of penetration. The elasticities in the 1983 are smaller than in the 1978 model.

Because telephone penetration is lower at low-income levels, low-income households are also more sensitive to price changes. This is illustrated in Table 4, which uses the 1983 model to predict telephone penetration at different income levels at different levels of flat-and measured-rate access prices. Dropoff is seen to be much larger at low income than at high income.

³ The price elasticity in this context is defined as the elasticity of the probability of having a telephone with respect to the price of access. In calculating the elasticities, it is assumed that flat-rate and measured-rate access prices change in the same proportion. Also, it is assumed in the 1983 model that 54% of the population have measured service available as an option.

TABLE 3

Price elasticity at alternative prices and telephone penetration rates, Perl study

Telephone Penetration	Access Price ¹	Price Elasticity	
		1983 Model	1978 Model
(1)	(2)	(3)	(4)
88.0%	\$ 10/6	-0.0654	-0.0749
	20/16	-0.1307	-0.1498
	30/26	-0.1961	-0.2246
93.0	10/6	-0.0381	-0.0437
	20/16	-0.0763	-0.0874
	30/26	-0.1144	-0.1310
97.0	10.6	-0.0163	-0.0187
	20/16	-0.0327	-0.0374
	30/26	-0.0490	-0.0562

¹ The access price shown in column (2) are flat rate/measured rates. The computed elasticities assume the same percentage increase in all access prices. In computing these effects using the 1983 model, 54 percent of the population was assumed to have access to measured rate service.

Source: Perl (1983, Figure 5)

The elasticities in Table 3 are calculated on the assumption that flat-and measured-rate access charges vary in the same proportion. Table 3 shows what could be expected to happen to penetration rates if the flat-rate price were increased at different levels of the measured-rate access charge and at different prices per call. In making the calculations, it is assumed that measured service is universally available. The results indicate that about half of the dropoff that would be expected by a doubling or tripling of the flat-rate charge from \$10 per month could be avoided by keeping the measured-rate access charge at \$5 per month but increasing the calling price to 20 cents per call. This is the basis for Perl's conclusion that the level of penetration depends more on the minimum price of access than on the average price. The policy implications of this will be discussed below.

One of Perl's most interesting findings is that the value of having a telephone appears to have increased between 1970 and 1980. Holding all other

TABLE 4

Telephone penetration rates at alternative flat and measured rate prices; Perl study

Access Price	Measured Rate Calling Price	Flat Rate Access Price		
		\$10	\$20	\$30
(1)	(2)	(3)	(4)	(5)
\$ 5	\$ 0.05	93.99%	93.05%	92.01%
	0.10	93.54	92.55	91.45
	0.20	92.57	91.47	90.23
10	0.05	92.87	91.80	90.60
	0.10	92.36	92.13	89.97
	0.20	91.25	89.99	88.60
15	0.05	91.59	90.37	89.02
	0.10	91.01	89.72	88.30
	0.20	89.75	88.33	86.77

Assumes 100 percent measured rate availability.

Source: Perl (1983, Figure 8)

factors constant, households appeared willing to pay more to have a telephone in 1980 than in 1970. This is shown in Figure 1, which describes the relationship between the price of access and the percentage of households that would have access at that price. The curve for 1980 is seen to lie everywhere above the curve for 1970. In 1970, for example, 73% of households were willing to pay \$30 or more to have a telephone, whereas in 1980 84% were willing to pay \$30 or more.

Perl notes that this increase in demand for access is primarily attributable to changes in the economic and demographic variables included in the model:

... decreases in access price, increases in income, and changes in other household characteristics occurring over the decade of the 1970s would account for about a 2.0 percentage point increase in telephone demand. But over this period the percentage of households with phones increased by 7.0 percentage points. Thus, taste changes and other variables excluded from the model account for a 5.0 percentage point increase. (Perl 1983, p. 13.)

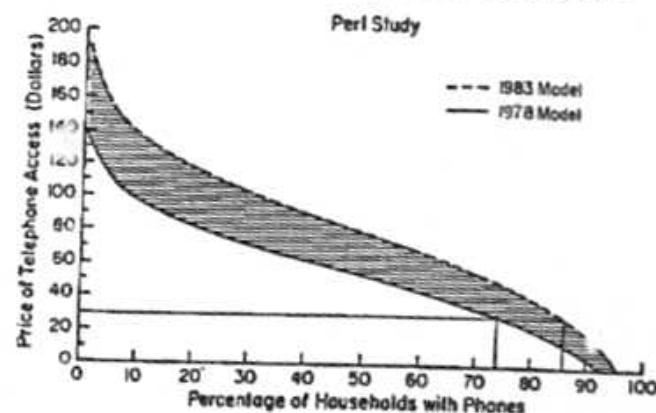


Fig. 1. Access price and demand for telephone service 1983 and 1978 models; Perl study. Source: Perl (1983, Figure 4).

Perl mentions several factors that could have led to the increased value of telephone service: increased prices for other forms of communication, reduced long-distance toll rates, increases in the number of services available by phone, and an increased need for the phone as a source of security. Reduced toll prices led to increased toll calling and thus to increased consumer surplus from usage, while increased prices of alternative forms of communication – especially the cost of face-to-face contact which was increased sharply by the 1973 and 1979 energy crises – shifted calling demands to the right.⁴ The last two factors – shopping by phone and security concerns – are perhaps most usefully seen as operating on option demand.

The increase in the willingness-to-pay to have a telephone in 1980 over 1970 is presented in a different light in Table 5, which shows penetration rates by income group for the 1983 and 1978 models. As in Table 4, income is measured in terms of multiples of the poverty level. The 1983 model predicts higher penetration at every income level, but the differences are seen to be greatest at the low-income levels. At the poverty level or below, the 1983 model predicts a penetration rate nearly nine percentage points higher than the 1978 model, 80.2% versus 71.5%. At the highest levels of income, the

⁴ The substitution of telephone for face-to-face contact may be even more pronounced for local calling as a result of urban congestion. Congestion not only accompanies economic growth and development but also increases the cost of coping with it.

TABLE 5

Telephone penetration by income group 1983 and 1978 models; Perl study

Income Group	Telephone Penetration	
	1983	1978
	(1)	(2)
Below Poverty	80.22%	71.45%
1-2 Times Poverty	89.79%	81.34%
2-3 Times Poverty	93.90%	86.89%
3-4 Times Poverty	96.26%	90.79%
4-5 Times Poverty	97.38%	93.01%
5-6 Times Poverty	96.15%	94.74%
Above 6 Times Poverty	98.95%	97.59%
All	93.39%	87.54%

Source: Perl (1983, Figure 1)

difference is only 1.4 percentage points.

The size and density variables are included in the model for the purpose of controlling for a network externality. Returning to Table 1 for a moment, density is seen to have a positive effect for densities up to 2,000 telephones per square mile, but a negative effect for densities greater than 2,000 telephones per square mile. The size of the local-calling area (as measured by the number of subscribers) is seen to have a positive effect. The implications of these results will be discussed in Chapter 9.

II. SOUTHWESTERN BELL'S RESIDENTIAL ACCESS DEMAND MODEL: TAYLOR AND KRIDEL (1990)

In the discussion of Perl's model we noted that there is a problem with Census data in matching up individual households and rates. To forestall the identifying any individual household, the Census Bureau discloses place of residence only for areas of at least 100,000 population. This creates major problems in matching rates with households, as in virtually all cases areas of 100,000 or more contain several wire centers. Since rate data refer to wire centers, this means that it is impossible with the Public Use Sample to get an accurate matching of households and rates. The consequences of this may be

unimportant when the focus is national, but problems clearly emerge when attention shifts to specific socio-demographic groups and areas.

An alternative to Perl's procedure is to use data aggregated to the level of a census tract. The census tract is the smallest geographical area that can be analyzed with census data, and provides a better match between rates and place of residence than is possible using data for individual households. Although aggregation leads to loss of information, census tracts are sufficiently diverse in income levels and socio-demographic characteristics that the parameters of most interest can continue to be isolated.

The present section, accordingly, reports on a model of residential access demand that uses census tracts as the unit of observation. The model was developed at Southwestern Bell for use in estimating the impacts of higher local-service rates on its residential customers. The model that is estimated is a model similar to Perl's, but with an extension that takes into account differences in the distribution of income across census tracts. The model is estimated from a data set consisting of 8423 census tracts in the five states (Arkansas, Kansas, Missouri, Oklahoma, and Texas) served by Southwestern Bell. The results corroborate existing views concerning the price elasticity for residential access demand. Perl's finding with regard to the importance of socio-demographic factors are also confirmed, but the present model provides a better vehicle for quantifying specific effects.

Following Perl (1983), we assume that the demand for use is given by

$$q = Ae^{-\alpha p} y^{\beta} e^u, \quad (1)$$

where q denotes use of the telephone network, p denotes the price of use, y denotes income, and u denotes a random error term.⁵ We ignore at this point complications of network and call externalities, and we also ignore for now socio-demographic factors.

The consumer's surplus from q units of use will be given by

$$CS = \int_0^q Ae^{-\alpha x} y^{\beta} e^u dx = \frac{Ae^{-\alpha p} y^{\beta} e^u}{\alpha} \quad (2)$$

or in logarithms,

$$\ln CS = a - \alpha p + \beta \ln y + u, \quad (3)$$

where $a = \ln A/\alpha$. Let π denote the price of access. In line with earlier discussion, access will be demanded whenever

$$\ln CS > \ln \pi, \quad (4)$$

⁵ Use for present purposes refers to local calling. The demand function in (1) accordingly allows for both flat-rate ($p = 0$) and measured ($p > 0$) service.

i.e., when

$$a - \alpha p + \beta \ln y + u > \ln \pi, \quad (5)$$

or alternatively when

$$u > \ln \pi - a + \alpha p - \beta \ln y. \quad (6)$$

If u is $N(0, \sigma^2)$, the probability of access will accordingly be given by

$$P(\text{access}) = 1 - \Phi(\ln \pi - a + \alpha p - \beta \ln y), \quad (7)$$

where Φ denotes the distribution function for the normal distribution. In probit form, this is essentially the model applied by Pelt to individual households.

With census tracts as the unit of observation, equation (6) must be aggregated over the households in a tract. Our procedure will be to aggregate equation (6) over the joint distribution of u and y , where assume that y is lognormally distributed, independent of u , with mean μ_y and variance σ_y^2 . Let

$$v = u + \beta \ln y. \quad (8)$$

Under our assumption, it follows that v will be $N(\mu_v, \sigma^2 + \beta^2 \sigma_y^2)$. Let P_j denote the proportion of households in census tract j that have a telephone. This proportion will be given by

$$P_j = P(u_j > \ln \pi_j - a + \alpha p_j), \quad (9)$$

or equivalently,

$$P_j = P(w_j > w_j^*) = 1 - \Phi(w_j^*), \quad (10)$$

where

$$w_j = \frac{v - \beta \mu_{yj}}{[\sigma^2 + \beta^2 \sigma_{yj}^2]^{1/2}} \quad (11)$$

$$w_j^* = \frac{\ln \pi_j - a + \alpha p_j - \beta \mu_{yj}}{[\sigma^2 + \beta^2 \sigma_{yj}^2]^{1/2}}. \quad (12)$$

Let F_j denote the probit for census tract j calculated from equation (10), and write:

$$F_j = \frac{\ln \pi_j - a + \alpha p_j - \beta \mu_{yj}}{[\sigma^2 + \beta^2 \sigma_{yj}^2]^{1/2}}. \quad (13)$$

Clearing the fraction, we have

$$F_j (\sigma^2 + \beta^2 \sigma_{yj}^2)^{1/2} = \ln \pi_j - a + \alpha p_j - \beta \mu_{yj} + \epsilon_j, \quad (14)$$

where

$$\epsilon_j^* = (\sigma^2 + \beta^2 \sigma_{yj}^2)^{1/2} \epsilon_j. \quad (15)$$

Equation (14) offers a number of challenges for estimation, but before discussing these the fact that customers in some areas can choose between either flat-rate or measured service must be taken into account. Three possibilities must be considered:

1. Only flat-rate service is available;
2. Only measured service is available;
3. Both flat-rate and measured service are available.

In flat-rate only areas, access will be demanded if [from equation (6), since $p = 0$]

$$u > \ln \pi_j - a - \beta \ln y, \quad (16)$$

while in measured-rate only areas, access will be demanded if

$$u > \ln \pi_m - a + \alpha p - \beta \ln y, \quad (17)$$

where π_j and π_m denote the monthly fixed charges for flat-rate and measured services, respectively. In areas where both flat-rate and measured service are options, access will be demanded if either (16) or (17) hold. From these two inequalities, it follows that access will be demanded if

$$u > \min(\ln \pi_j, \ln \pi_m + \alpha p - a - \beta \ln y). \quad (18)$$

Finally, given that access is demanded, flat-rate service will be selected if

$$\ln \pi_j < \ln \pi_m + \alpha p, \quad (19)$$

while measured service will be chosen if⁶

$$\ln \pi_m + \alpha p < \ln \pi_j. \quad (20)$$

⁶ While choice is deterministic (given α), bill minimization is not assumed. Flat-rate expenditures may exceed measured-rate expenditures, but equation (17) could still hold. Rearranging the inequality in (19), flat-rate will be chosen over measured service if $\ln \pi_j - \ln \pi_m < \alpha p$, i.e., if the difference in the logarithms of the monthly fixed charges is less than the price elasticity of usage (under measured service) with respect to the price of usage.

To incorporate these choices into the analysis, we define:

$$\delta_1 = \begin{cases} 1 & \text{if only flat-rate service is available} \\ 0 & \text{otherwise} \end{cases}$$

$$\delta_2 = \begin{cases} 1 & \text{if only measured service is available} \\ 0 & \text{otherwise} \end{cases}$$

$$\delta_3 = \begin{cases} 1 & \text{if both flat-rate and measured service are available} \\ 0 & \text{otherwise} \end{cases}$$

With these dummy variables, we can rewrite equation (14) as

$$F_j (\sigma^2 + \beta^2 \sigma_{v_j}^2)^{1/2} = \delta_1 \ln \pi_{fj} + \delta_2 (\ln \pi_{mj} + \alpha p_j) + \delta_3 \min(\ln \pi_{fj}, \ln \pi_{mj} + \alpha p_j) - a - \beta \mu_j + \epsilon_j^* \quad (21)$$

This (with the addition of socio-demographic variables) is the equation to be estimated.

Several things are to be noted regarding the estimation of equation (21):

- The equation is nonlinear in β .
- σ^2 , the variance of u is a parameter to be estimated.
- $\min(\ln \pi_{fj}, \ln \pi_{mj} + \alpha p_j)$ must be calculated for the areas in which both flat-rate and measured service are available. But to do this requires knowledge of α .

We begin by rewriting the model as follows:

$$z_j = -a - \beta \mu_{vj} - \sum_i \gamma_i X_{ij} + \epsilon_j^* \quad (22)$$

where:

$$z_j = F_j (\sigma^2 + \beta^2 \sigma_{v_j}^2)^{1/2} - \delta_1 \ln \pi_{fj} - \delta_2 \min(\ln \pi_{fj}, \ln \pi_{mj} + \alpha p_j) \quad (23)$$

and where X_{ij} denotes the socio-demographic factors thought to be relevant. As none of Southwestern Bell's service territory has mandatory measured service, δ_3 is dropped from equation (23).

If σ^2 , β and α were known, z_j could be calculated (using observed values for F_j , $\sigma_{v_j}^2$, π_{fj} , π_{mj} , and p_j) and equation (22) could be estimated as a linear regression. However, these parameters are not known, so estimation proceeds by an iterative search procedure as follows:

- The initial search is over values of σ^2 for fixed values of β and α . The value of σ^2 which is finally selected is the one which maximizes the correlation between the actual and predicted values of F_j .

- The second step is to fix σ^2 at the value obtained in step (1), keep β fixed as in step 1, and search over α . Again, the value of α selected is the one which maximizes the correlation between the actual and predicted values of F_j .
- The third and final step involves iteration of β . An iteration consists of the estimation of equation (20), with z_j [from equation (23)] calculated using the values of σ^2 and α obtained from steps 1 and 2 and β from the immediately preceding iteration. Iterations proceed until the estimate of β stabilizes.⁷

The model represented by equation (22) and (23) has been estimated from a data set consisting of 8423 census tracts from the 1980 Census in the five states served by Southwestern Bell, Arkansas, Kansas, Missouri, Oklahoma, and Texas. Written in full, the model estimated is as follows:

$$\begin{aligned} F_j (\sigma^2 + \beta^2 \sigma_{v_j}^2)^{1/2} &= \delta_1 \ln \pi_{fj} - \delta_2 \min(\ln \pi_{fj}, \ln \pi_{mj} + \alpha p_j) \\ &= -a - \beta \mu_{vj} - \gamma_1 \text{RENTER}_j - \gamma_2 \text{RURAL}_j - \gamma_3 \text{BLACK}_j \\ &\quad - \gamma_4 \text{SPANISH}_j - \gamma_5 \text{AMINDIAN}_j - \gamma_6 \text{IMMOB}_j \\ &\quad - \gamma_7 \text{AVGAGE}_j - \gamma_8 \text{MILAGE}_j - \gamma_9 \text{EMP}_j - \gamma_{10} \text{LINES}_j \\ &\quad - \gamma_{11} \text{AVESZHH}_j + v_j \end{aligned} \quad (24)$$

where:

F_j = probits corresponding to the proportion of households in a census tract that have a telephone

σ^2 = variance of error term for individual households (a nuisance parameter that must be estimated)

β = coefficient for income

$\sigma_{v_j}^2$ = within-tract variance of the logarithm income (calculated for each tract from Census data)

δ_1, δ_2 = dummy variables as defined above

$\ln \pi_j$ = logarithm of flat-rate monthly service charge

⁷ The estimation procedure was evaluated before applying it to the Southwestern Bell data set by a Monte Carlo study. The Monte Carlo results show that the estimates have a moderate bias which appears to diminish with sample size. The results also show that the variance of the error term u has little effect on the accuracy of the coefficients. For details, see Taylor and Kridel (1990) or Kridel (1987).

- $\ln \pi_m$ = logarithm of measured-rate monthly service charge
 α = coefficient for price of a local call
 p = price/minute for a local call
 a = a constant
 μ_y = geometric mean of income within a census tract
 RENTER = % of census tract that rents home
 RURAL = % of census tract that is rural
 BLACK = % of census tract that is black
 SPANISH = % of census tract of hispanic origin
 AMINDIAN = % of census tract that is American Indian
 IMMOB = % of census tract that has not moved since 1975
 AVGAGE = average age of population of census tract
 MILAGE = % of census tract that pays a local-loop mileage charge
 EMP = % of census tract that suffered no unemployment in 1979
 LINES = number of lines that can be reached in "local-calling area"
 AVESZHH = average number of people per household in census tract
 v = error term.

At the start of the empirical analysis, the three standard discrete choice models – linear probability, probit, and logit – were estimated, but without taking into account differences in the variance of income across census tracts. The results were surprising, at least with regards to the price of access. The access price was significant in the linear probability model, but not in the probit or logit models. For reasons relating to the strength of a poverty variable (defined as the percentage of households in the census tract with income below the poverty level) in these models, the simplistic treatment of income was singled out as the cause of this disturbing result, and the present model was settled on in which the full distribution of income is taken into account.

The estimated coefficients for the model in expression (24) are given in Table 6. Except for the constant, the t -ratios are seen to be well in excess of two. Mileage has the smallest t -ratio (3.8), while the proportion of households that are black has the largest t -ratio (24.9). The t -ratio for income is 19.7.

TABLE 6
Coefficient estimates; Taylor-Kridel Study

Variable	Coefficient	t -Statistic
Constant	0.43	1.2
INCOME	0.98	19.0
PRICE OF LOCAL MINUTE	-6.87	-
PRICE OF ACCESS	-1.00	-
RENTER	-1.56	14.3
RURAL	-0.82	19.0
BLACK	-1.18	12.9
SPANISH	-2.78	24.9
AMINDIAN	-7.38	14.2
IMMOB	0.51	4.7
AVGAGE	0.05	9.9
MILAGE	-0.45	3.8
EMP	2.88	14.3
LINES	0.37	4.8
AVESZHH	0.55	10.3
Nuisance Variance (σ^2)	5.60	-
$R^2 = 0.420^*$		

* The R^2 is calculated as the square of the correlation between the actual and predicted values for P_j .
Source: Taylor and Kridel (1990, Table 1)

ratios for the price of a local call and the "nuisance" variable (σ^2) cannot be obtained directly because of the way they are estimated. Standard errors for these parameters could in principle be obtained by a jackknife technique, but efforts to do so got sidetracked.

As expected, the sign for income is positive, while the sign for price terms are negative. Mileage charges also have a negative effect. As regards the socio-demographic factors, penetration is lower for blacks, hispanics, or American Indians, lower for renters than for homeowners, and lower in rural areas than in urban. Unemployment also has a negative effect, while residence longevity (IMMOB) has a positive effect, as do average age and the number of lines in the local-calling area.

Care is required in interpreting the coefficients, however. The coefficient

for income, 0.98, represents the elasticity for usage with respect to income. Likewise, 0.51 times the mean (0.52) of IMMOB is the usage elasticity with respect to mobility, and similarly for the other variables. The access elasticity, on the other hand, cannot be observed directly, but must be induced by changing a variable and then calculating the resulting change in penetration. For example, consider a 10% increase in income. This yields 0.42% increase in penetration, and hence an access elasticity of 0.042 with respect to income.⁸

Of special interest is the elasticity of access with respect to the number of lines in the local-calling area, for this is usually interpreted as a measure of the subscriber (or network) externality. While the elasticity is positive, any suggested externality is tiny at present levels of development, for an increase of 10% in the number of (local) lines implies an increase of only 0.027% in penetration. We will take up the implications of this result in Chapter 9.

The main purpose of the Southwestern Bell study was to quantify the impact on development in Southwestern's jurisdictions of higher access charges. To this end, Tables 7 to 9 show the predicted effects on development of some of the most widely discussed pricing scenarios. Table 7 shows that predicted effects of a doubling of flat-rate and measured-rate access charges in each of the five states served by Southwestern Bell. The predicted impacts across several socio-economic-demographic groups in Texas are shown in Table 8.⁹ Finally, Table 9 shows predicted impacts on penetration of the FCC-mandated end-user subscriber-line charge (EULC) of \$1 that went into effect June 1, 1986.

Tables 7, 8 and 9 make several points. In the first place, it is clear that access repression, while small, is not zero. In Table 7, we see that the predicted effect across all five states of a doubling of access charges is to reduce development from 92.5 to 88.8. Arkansas, because of low income levels and socio-demographic factors, has the largest predicted repression, while Kansas has the least.

As noted earlier, tiny elasticities applied to huge bases give large numbers, and this is what alarms those concerned with universal service. In Texas, for example, the predicted decrease in development of 3.7 percentage points from a doubling of access charges translates into more than 200,000 households,

⁸ Two points must be kept in mind in making this calculation. First, since the variance of income is also an argument in the model, only small changes in income should be considered. Second, the implied income elasticity may seem small at first glance. However, since 93% of households (on the average) already have access, an increase in income can have no effect on their access decision.

⁹ Texas has been singled out because it had the highest measured-service availability of the five states. The effect of having a lower-priced alternative to flat-rate service can accordingly be more easily seen.

TABLE 7
Development and repression for 100% access price increases*; Dry-
for-Kridel study

	100% Increase Actual Development	with Lower Priced Alternative**	100% Increase All Prices***
AR	89.1	83.6 (-5.5)	83.2 (-5.9)
KS	95.3	-	93.0 (-2.3)
MO	95.4	92.3 (-3.1)	92.3 (-3.1)
OK	92.7	-	89.3 (-3.4)
TX	91.4	89.3 (-2.1)	87.7 (-3.7)
SWBT	92.5	89.6 (-2.9)	88.8 (-3.7)

Numbers in parentheses are repression estimates in basis points.

* No measured service was available in Kansas or Oklahoma.

Measured availability for the other three states was as follows:

AR: 10.48%; MO: 2.2% and TX: 58.4%.

** Measured service, where available, is the lower priced alternative and its price is unchanged.

*** Both flat rate and measured rate, where available are doubled.

Source: Taylor and Kridel (1990, Table 2)

which is a frighteningly large number. Numbers like this are grist to consumer groups, congressmen, state legislators, and regulators who are opposed to higher access charges, and attempts by telephone companies to increase local rates not surprisingly trigger choruses of emotional responses.

The 200,000-plus Texas households predicted to be affected by a doubling of access charges assumes a doubling of all local rates, measured as well as flat-rate. In Table 8, we see that the availability of a lower-price alternative substantially lessens the predicted impact of higher access charges. This is in keeping with the results that Perl obtained in his 1983 model. If only flat

TABLE 8

Development and repression for 100% access price increases for Texas; Taylor-Kridel study

	Actual Development	100% Increase for Lower Priced Alternative	100% Increase All Prices*
Poor, Rural**	80.4	73.9 (-6.5) [-6,400]	73.3 (-7.1) [-6,900]
Poor, Urban	83.1	79.6 (-3.5) [-24,000]	75.4 (-7.7) [-53,300]
Poor, Nonwhite Rural	75.5	67.5 (-8.0) [-3,800]	66.6 (-8.9) [-4,200]
Not Poor, Not Nonwhite, Urban	94.6	93.7 (-0.9) [-20,300]	92.0 (-2.6) [-60,200]

Numbers in parenthesis are repression estimates in basis points. Numbers in brackets are estimates of number of households affected.

* Same definition as in Table 2.

** "Poor" refers to the poorest 25% of the tracts, "Not poor" refers to other 75%, while "rich" would refer to the richest 25% of the tracts and all rural tracts.

The other groups are defined similarly.

Source: Taylor and Kridel (1990, Table 3)

rates are doubled, with no changes in measured rates, the predicted decrease in penetration, in the five Southwestern Bell states combined, is 2.9 percentage points rather than 3.7. In Texas, the predicted decline is even smaller - 2.1 percentage points vs. 3.7 - because of the greater availability of measured service.

The importance of a lower-priced alternative is even more sharply delineated in Table 8. Again, the reference is to Texas. While measured service was most widespread in Texas in 1980 for the five Southwestern Bell states, only 58% of households had access to it, and this mostly in urban areas.

TABLE 9

Impact of "current" FCC access charge plan Southwestern Bell; Taylor-Kridel study

	Actual Predicted	\$1 EUCL	\$1 EUCL Poor Exempted
Total # Subscribers	6,608,500	6,569,300	6,579,900
ALL development (change)	92.5	92.0 (-0.5)	92.1 (-0.4)
POOR, RURAL development (change)	83.7	82.6 (-1.1)	82.9 (-0.8)
POOR, URBAN development (change)	85.0	84.0 (-1.0)	84.3 (-0.7)
POOR, NONWHITE, RURAL development (change)	78.5	77.0 (-1.5)	77.5 (-1.0)
NOT POOR, NOT NONWHITE, URBAN development (change)	95.3	95.0 (-0.3)	95.1 (-0.2)

Source: Taylor and Kridel (1990, Table 4)

Comparing column 3 with column 2 in Table 8 and urban with rural, the availability of measured service is seen to make a dramatic difference.

What this exercise emphasizes is that, with properly structured lower-priced alternatives, higher local-service charges need not be a threat to universal service. While the Southwestern Bell study confirms Perl's findings that development has racial and ethnic dimensions, it also confirms that income is the most important factor and that its scarcity can be overcome with low-priced measured offerings that target the poor.

III. BELL CANADA'S RESIDENTIAL ACCESS DEMAND MODEL

Telephone rates that are out of line with costs is not exclusive to the United States, but is a concern also in Canada. In early 1987, Bell Canada petitioned

the Canadian Radio-television and Telecommunications Commission for permission to begin a "rebalancing" of rates. Toll rates would be reduced, while local rates would be increased. Fears in Canada are the same as in the United States, the higher local rates will cause a substantial number of households to give up telephone service. In anticipation of these concerns, Bell Canada (Bodnar *et al.* 1988) developed a model of residential access demand that could be used to predict the impact of the proposed rate rebalancing. As South of the Border, fears were that certain socio-demographic groups would bear the brunt of the impact.

The Bell Canada study is based upon household survey data for 1985 that were collected by Statistics Canada.¹⁰ Information on 34,262 Canadian households is contained in the microdata files that were analyzed; 34,168 of these are in the sample used in estimation. A binary logit model along the line of the Perl model is specified in which the logarithmic odds in favor of a household having telephone service are related to a long list of economic, socio-demographic, and regional factors. The estimated coefficients for the variables in the model are given in Table 10. Definitions of the variables are given in Table 11.

The coefficients in Table 10 provide nothing by way of surprise. The probability of having a telephone varies negatively with price and positively with income, age and education. Single male-headed households are less likely to have a telephone than other types of households, those who rent are less likely to have a telephone than those who own their homes, and the self-employed, unless they fish or farm, are more likely to have a telephone than those who work for others. The recently-moved have a lower probability of having a telephone than those who have been at the same address for more than three years. The probability of having a telephone is higher in urban than in rural areas and increases monotonically with urban size. Finally, holding all else constant, the probability of having a telephone is higher in Ontario and Quebec and lower in Newfoundland and New Brunswick than elsewhere in Canada.

As in the Perl and Southwestern Bell models, the price elasticity varies with the point at which it is calculated and depends upon price and the predicted probability of subscription, which in turn depends upon all of the

¹⁰ See Statistics Canada (1986). The HIFIS data set was created by Statistics Canada by linking the contents of four surveys: Household Facilities and Equipment Survey (HIFES), Labour Force Survey (LFS), Survey of Consumer Finances, and the Rent Survey. These surveys were conducted in April 1985 except for the HIFES, which was conducted over the same sample as a supplement to the LFS in May 1985. Accordingly, the data refer to April or May 1985 except for household income and income-related measures, which refer to 1984 annual values.

TABLE 10

Estimation Results: Bell Canada Study

Variable	Coefficient	Asymptotic t-Statistic
CONSTANT	0.87	2.7
PRICE	-0.045	-2.4
INCOME	0.045	15.3
HOUSE	0.017	6.4
HHED1	0.34	3.4
HHED2	0.87	7.9
HHED3	1.44	9.9
HHED4	1.82	7.3
MALR	-1.33	-14.7
MOBILE	-0.55	-6.0
RENT	-0.78	-7.6
AREA1	1.96	13.7
AREA2	1.45	8.3
AREA3	1.24	9.3
AREA4	0.79	7.5
ROOMS	0.42	14.1
SELF-EMP	0.56	2.8
FARM/FISH	-0.32	-2.6
MIN INCOME	-0.10	-8.1
ONT + QUEB	0.73	7.1
NFLD + NB	-0.37	-3.5

Adjusted likelihood ratio index (χ^2) 0.272.

Likelihood ratio test statistic 2590.4.

Sources: Bodnar *et al.* (1988, Table 2)

independent variables in the model.¹¹ A variety of results are presented in Tables 12 and 13. In Table 12, we see that the price elasticity for Canada as a

¹¹ Bell Canada encountered the same problem in constructing a price variable as did Perl. Because of possible problems with disclosure, domicile is only known by size of residence area, so that households could only be assigned a price that represented a weighted average price for the size of residence area in the province in which they reside. Price, accordingly, only varies across sizes of residence areas across provinces. This could lead to an errors-in-variables problem.

TABLE 11
Description of explanatory variables, Bell Canada study

Microcode	Description
PRICE	Weighted average price of residence single party service including the rental charge for one basic set and any applicable provincial sales tax
INCOME	1984 after-tax household income (in thousands of dollars)
AGE	Age of household head (in years)
EDUCATION	
EDUC1	1 if the household head has 9-10 years of schooling; and 0 otherwise
EDUC2	1 if the household head has 11-12 years of schooling; and 0 otherwise
EDUC3	1 if the household head has some post secondary education or has an associated certificate or diploma; and 0 otherwise
EDUC4	1 if the household head has a university degree; and 0 otherwise
HOUSEHOLD COMPOSITION	
MARR	1 if the household head is a single male and (with or without children; and 0 otherwise)
MOBILITY	
MOB1	1 if the household moved into its residence within 3 years of the survey; and 0 otherwise
TENURE	
RENT	1 if the household rents its dwelling; and 0 otherwise
SIZE OF AREA	
AREA1	1 if the household resides in a large urban centre with a population greater than 1,000,000; and 0 otherwise
AREA2	1 if the household resides in a large urban centre with a population between 100,000-499,999; and 0 otherwise
AREA3	1 if the household resides in a minor urban centre with a population between 50,000-99,999; and 0 otherwise
AREA4	1 if the household resides in a small urban centre with a population under 50,000; and 0 otherwise
ROOMS	the number of rooms in the household's dwelling
OCCUPATION	
SELF-EMP	1 if the household's major source of income is not income from self-employment; and 0 otherwise
PARADITION	1 if the household head is employed in farming, horticultural and animal husbandry, logging, fishing, trapping, forestry or logging; and 0 otherwise
MIN INCOME	the 1984 low income cut-off value for households of size k in area i ; where k represents the number of persons in the household and i represents the size of area of residence (in thousands of dollars)
PROVINCE	
ONT + QUE	1 if the household resides in Ontario or Quebec; and 0 otherwise
MTLD + NB	1 if the household resides in Newfoundland or New Brunswick; and 0 otherwise

Source: Rodnar et al. (1988, Table 3)

whole, calculated at 1985 predicted penetration rates and prices, is estimated to be -0.009, which might seem almost too small to be noticed. By province, the elasticity varies from -0.03 for New Brunswick to -0.005 for Ontario. In Table 13, we see that the size of the price elasticity decreases (in absolute value) with size of urban area, age, and income. For Canada as a whole, the elasticity for households residing in cities of 500,000 or more is only half the elasticity for households living in rural areas (-0.007 vs. -0.014). In the basis of these tables, it is clear that the Canadian households that would be most vulnerable to rate rebalancing would be young, low-income, rural households.

In comparing the Bell Canada model with the Perl and Southwestern Bell models, the most notable difference is the relative strengths of the price effects. However, it does not follow from this that price is more important in the U.S. than in Canada, for the difference simply reflects the fact that penetration rates are higher in Canada than in the U.S. For whatever reason, the overall penetration rate is about four percentage points higher in Canada than in the U.S. When calculated using the 1980 U.S. penetration rate of 93.4% (but 1985 Canadian values for all the other variables), the price elasticity in the Bell Canada model turns out to be -0.034. This compares with -0.032 in the Perl model.

IV. TRAIN, MCFADDEN, AND BEN-ALTYA (1987)

The final study to be discussed in this chapter is a study of the demand for local service (Train, McFadden, and Ben-Alyta 1987) undertaken for a large east coast local exchange company by Cambridge Systematics, Inc.¹² Unlike in the three preceding studies where the focus is on the choice of access/no access, the TMB study focuses on the choices of class of service given that access of some form is already demanded. What sets the TMB study apart is that the class of service is determined jointly with a portfolio of calls. Calls are distinguished according to number, duration, distance, and time-of-day, and a portfolio of calls accordingly consists of a particular number of calls of a particular duration to a set of specific locations at specific times of the day. Households in the data set analyzed faced a variety of service options ranging from budget-measured to metropolitan-wide flat-rate, so that the cost of a portfolio varies with the particular service option selected.

TMB proceed in a conditional (i.e., nested) logit framework in which the choice of service is assumed to be conditional on the portfolio of calls that

¹² See also Train, Ben-Alyta, and Alhertson (1989) wherein the TMB model is applied to similar data for Delaware.

TABLE 12

Penetration elasticities by province*; Bell Canada study

Province	Elasticity
NFLD	-0.028
PEI	-0.021
NS	-0.021
NB	-0.030
QUE	-0.009
ONT	-0.005
MAN	-0.007
SASK	-0.010
ALTA	-0.010
BC	-0.012
CANADA	-0.009

* Calculated at 1985 predicted penetration rates and prices.

Source: Bodnar *et al.* (1988, Table 5)

is selected. With this structure, the probability of a household choosing a particular service option can be interpreted as depending upon the household's expected portfolio of calls (reflecting, for example, the tendency of households that place many calls to choose flat-rate service). Since usage is in turn conditional on access, however, the portfolio that a household will actually choose in a month will depend upon the service option that has been selected as this determines the cost per call.

Turning now to a description of the model, let the distinct times of the day that calls can be made be denoted by $t = 1, \dots, T$ and let the geographic areas (or zones) to which calls can go be denoted by $z = 1, \dots, Z$. Let N_{tz} represent the number of calls to zone z during time period t and let D_{tz} represent the average duration of these calls. A portfolio, accordingly, can be written as the vector with elements $(N_{11}, \dots, N_{TZ}, D_{11}, \dots, D_{TZ})$. Denote the set of all possible portfolios by A and a particular portfolio by $i \in A$. Finally, index the available service options by $s = 1, \dots, S$. In the data set analyzed, three service options are available to all households and two additional services are available to some households. The options are listed in Table 14. Portfolios are defined for the 21 time-zones listed in Table 15.

The probability of observing a particular (s, i) service-portfolio combina-

TABLE 13

Penetration price elasticities by size of area of residence, age and income*; Bell Canada study

Size of Area	Canada	Ont & Que
Urban		
> 499,999	-0.007	-0.006
100,000-499,999	-0.006	-0.006
30,000-99,999	-0.010	-0.006
< 30,000	-0.013	-0.009
Rural	-0.014	-0.009
Age (in years)	Canada	Ont & Que
< 25	-0.024	-0.016
25-44	-0.009	-0.006
45-64	-0.007	-0.005
> 64	-0.008	-0.006
Income**	Canada	Ont & Que
1st Quintile	-0.026	-0.019
2nd Quintile	-0.012	-0.008
3rd Quintile	-0.006	-0.004
4th Quintile	-0.002	-0.002
5th Quintile	-0.0005	-0.0004
Low Income Cut-Off	Canada	Ont & Que
Below	-0.025	-0.019
At or Above	-0.005	-0.004

* Calculated at 1985 predicted penetration rates and prices.

** The 1984 after-tax household incomes that correspond to these quintiles for Canada and for Ontario and Quebec are as follows:

Quintile	Canada	Ont & Que
	(\$)	(\$)
First	< 12270	< 12580
Second	12270-20159	12580-20619
Third	20170-28139	20620-28169
Fourth	28340-38509	28620-38709
Fifth	> 38509	> 38709

Source: Bodnar *et al.* (1988, Tables 6-8)

TABLE 14
Service options in TMB study

Service	Availability	Charges for Calls to Nearest Zone	Charges for Calls to Other Zones
Budget Measured	Available to all customers.	Each call charged seven cents.	Each call charged at rate that varies with time, distance, and duration of call.
Standard Measured	Available to all customers.	\$4.00 worth of calling is at no extra charge, then each call is charged as under budget measured service.	
Local Flat-Rate	Available to all customers.	No extra charge.	Each call charged at rate that varies with time, distance, and duration of call.
Extended Local	Available to customers in only some exchanges.	No extra charge.	No extra charge for calls to some exchanges; charged as under local flat-rate service for calls to other exchanges.
Metropolitan Area Flat Rate	Available to nonlocal customers.	No extra charge.	No extra charge.

Source: Train, McFadden, and Ben-Akiva (1987, Table 1)

tion, given available service and portfolio options, is assumed to be nested logit. In the nesting, alternatives (where an alternative is an (s, i) combination) are nested together with the same portfolio but different service options.¹³ Let P_{si} denote the probability of observing the combination (i, s) .

¹³ TMB provide an excellent discussion of the considerations that determine an appropriate nesting. The key consideration is the pattern of correlations among the unobserved factors. For local calling, most of the specific factors that determine portfolio choice—such as where the household's friends and relatives live, the time and location of activities that require use of the telephone, etc.—are not observed. These factors, however, are similar across all service offerings for any portfolio. This leads to nesting together alternatives with the same portfolio but different service options. On the other hand, the primary factor affecting the choice of service is price which is observable. (The price of a portfolio under a particular service option is simply the cost of the portfolio under the rate schedule associated with that option.) Since alternatives with the same service option but not the same portfolio of calls can be similar with respect to observed factors, but not (at least relatively) with respect to unobserved factors,

TABLE 15

Time & Zone Categories in TMB study

Number	Zone/Description	Times	
		Times of Week during which Different Rates Are Charged for Calls to that Zone	Rates during Time
1	Zone immediately surrounding the household's residence.	9 A.M.-9 P.M., Monday-Friday 7 A.M.-9 A.M. and 9 P.M.-midnight, Monday-Sunday Midnight-7 A.M., Monday-Sunday	Full tariff 50% off 80% off
2-6	Geographic bands successively more distant from household's residence.	9 A.M.-9 P.M., Monday-Friday All other times	Full tariff 50% off
7	Specific exchanges of zones 1-6, applicable only to households in certain exchanges within a metropolitan area.	9 A.M.-9 P.M., Monday-Friday 7 A.M.-9 A.M. and 9 P.M.-midnight, Monday-Sunday Midnight-7 A.M., Monday-Sunday 9 A.M.-9 P.M., Saturday-Sunday	12% off, on average 48% off, on average 60 off, on average 50% off, on average
8	Remainder of metropolitan area in which household resides, applicable only to households in certain exchanges within a metropolitan area.	9 A.M.-9 P.M., Monday-Sunday 7 A.M.-9 A.M. and 9 P.M.-midnight, Monday-Sunday Midnight-7 A.M., Monday-Sunday 9 A.M.-9 P.M., Saturday-Sunday	12% off, on average 48% off, on average 60% off, on average 50% off, on average

Source: Train, McFadden, and Ben-Akiva (1987, Table 2)

let P_{si} denote the conditional probability of choosing service option s given portfolio i , and let P_i denote the marginal probability of selecting portfolio i , so that (from the definition of conditional probability):

$$P_{si} = P_i P_{s|i} \quad (25)$$

these are not nested.

In particular, it is assumed that

$$P_{si} = \frac{e^{y_{si}}}{\sum_j e^{y_{sj}}} \left(\frac{\sum_j e^{y_{sj}}}{\sum_k \sum_j e^{y_{skj}}} \right)^\lambda, \quad (26)$$

where:

$$P_{s|i} = \frac{e^{y_{si}}}{\sum_j e^{y_{sj}}} \quad (27)$$

$$I_i = \left(\frac{\sum_j e^{y_{sj}}}{\sum_k \sum_j e^{y_{skj}}} \right)^\lambda, \quad (28)$$

and where y_{si} is a parametric function of factors specific to service option s and portfolio i . Without loss of generality, y_{si} can be written as the sum of two terms,

$$y_{si} = w_{is} + v_i/\lambda, \quad (29)$$

where w varies with both i and s , but v varies only with i . Consequently, we will have for $e^{y_{si}}$,

$$e^{y_{si}} = e^{(w_{is} + v_i/\lambda)} = e^{v_i/\lambda} e^{w_{is}}. \quad (30)$$

Similarly, for $\sum_j e^{y_{sj}}$

$$\sum_j e^{y_{sj}} = \sum_j e^{(w_{ij} + v_i/\lambda)} = e^{v_i/\lambda} \sum_j e^{w_{ij}}, \quad (31)$$

so that

$$P_{s|i} = \frac{e^{w_{is}}}{\sum_j e^{w_{sj}}}. \quad (32)$$

Next, let

$$I_i = \ln \left(\sum_j e^{w_{ij}} \right). \quad (33)$$

$\sum_j e^{w_{ij}}$ can then be written as

$$\sum_j e^{w_{ij}} = e^{I_i}. \quad (34)$$

Consequently, for P_i :

$$P_i = \left(\frac{\sum_j e^{y_{sj}}}{\sum_k \sum_j e^{y_{skj}}} \right)^\lambda = \left(\frac{e^{v_i/\lambda} \sum_j e^{w_{sj}}}{\sum_k e^{v_k/\lambda} \sum_j e^{w_{skj}}} \right)^\lambda = \frac{e^{v_i + \lambda I_i}}{\sum_k e^{v_k + \lambda I_k}}. \quad (35)$$

The term I_i is interpreted as the "inclusive price" of portfolio i , and its coefficient λ measures the substitutability across portfolios. For $0 < \lambda < 1$, substitution is greater within nests than across nests, while for $\lambda > 1$, substitution is greater across nests than within nests. Given the nesting structure, the parameter will be less than one if households shift to different service options more readily than they shift to different portfolios. It will be greater than one if they shift to different portfolios more readily than if they shift to different service options.

TMB note that the specification contained in expressions (32), (33), and (35) have several advantages:

First, since P_i and $P_{s|i}$ are both logit, the model is relatively inexpensive to estimate and easy to interpret. Second, the cost of any portfolio under any service option is simply the bill that the household would receive if it made that portfolio of calls and chose that service option. (Since cost varies over i and s , it enters as an element of w_{is} . We estimate its impact on choice of portfolio and service option in $P_{s|i}$.) Threshold values for calling at no extra charge, which are based on either the number or the dollar value of calls, enter the calculation of the cost of a portfolio under a service option in the same way as in the telephone company's calculation of bills. Consequently, we can readily and consistently examine the impact of changes in tariffs and thresholds. Finally, this specification incorporates interrelations among calling patterns and service option choices. The probability of a household's choosing any particular portfolio changes as the tariffs or thresholds associated with any service option change and depends on the portfolio of calls that the household makes. (Train, McFadden, and Ben-Akiva 1987, p. 114.)

It remains to specify forms for v_i and w_{is} . As the only difference among service offerings is in the billing procedure, w_{is} is assumed to depend only on the cost to the customer of portfolio i under option s and option-specific constants. The specification of v_i is more complex. To begin with, it is assumed that a portfolio yields benefits through the information transmitted in calls and extracts opportunity costs through the time spent on the telephone. Suppressing for the moment variations in coefficients across time and zone categories and households, TMB specify v_i for a portfolio of N_i calls of

average duration N_i (with the i deleted to simplify notation) as:

$$v = \theta N \ln \phi D - \alpha ND = \theta N \ln D - \gamma N - \alpha ND, \quad (35)$$

where $\gamma = -\theta \ln \phi$.

The first term on the right-hand side in this expression measures the benefits of the portfolio. Each call provides a benefit, $\theta \ln \phi D$, which is assumed to increase at a decreasing rate with duration. The parameter ϕ can be interpreted as measuring the rate of information transfer. It is expected to be positive, but can be either greater or less than one. As θ can be interpreted as measuring the benefits from the information that can be transferred by a call, this is necessarily positive. Consequently, γ can be either negative or positive. The model assumes that the benefits from N calls is simply N times the benefits from a single call. The term αND measures the opportunity cost of the portfolio. ND represents the total amount of time spent in calling, while α measures the opportunity cost per minute.

The parameters are allowed to vary in two ways. Benefits depend upon the destination of a call, while the opportunity cost depends upon the time of day. θ accordingly, is allowed to vary over distance zones and α over time periods. In addition, θ is assumed to vary with income and the number of telephone users in the household. Income is also assumed to affect α , the time opportunity cost of calling.

TMB note that estimation of the parameters entering P_i is complicated by the large number of possible portfolios. As enumeration of every possible portfolio is out of the question, estimation proceeds on the basis of a sample of portfolios for each household. The sample includes the portfolio chosen by the household plus a subset of portfolios that the household did not choose. Samples are constructed by drawing from the set of all possible portfolios and then adding each household's chosen alternative. Let B denote the sample of portfolios constructed for a particular household, and let $\pi(B|i)$ denote the conditional probability of constructing subset B given that the chosen alternative is i . [Since B necessarily includes the chosen portfolio, $\pi(B|i) = 0$ for $j \notin B$.]

The joint probability of drawing a chosen alternative i and a subset of alternatives B is

$$\pi(i|B) = \pi(B|i)P_i. \quad (37)$$

Consequently, from Bayes theorem, the conditional probability of i being chosen, given B , is

$$\pi(i|B) = \frac{\pi(B|i)P_i}{\sum_{j \in B} \pi(B|j)P_j}, \quad (38)$$

which exists if $\pi(B|j) > 0$ for all $j \notin B$. Rewritten in logit form, with P_i given by equation (35), (38) becomes

$$\pi(i|B) = \frac{e^{(\alpha_i + \lambda I_i + \ln \pi(B|i))}}{\sum_{j \in B} e^{(\alpha_j + \lambda I_j + \ln \pi(B|j))}}. \quad (39)$$

McFadden (1978) has shown that under usual regularity conditions maximizing the conditional logarithmic likelihood function,

$$L = \sum_{h=1}^H \ln \pi_n(i|B), \quad (40)$$

(where h denotes particular households in a sample of H households) yields consistent estimators of the unknown parameters.

It will be noted that the logit model in (39) is the same as in equation (35) except that the summation is over the set of constructed portfolios B , rather than over the set of all possible portfolios A . Also, the exponential terms contain an additive alternative-specific factor which corrects for the bias introduced by the sampling of alternatives.¹⁴ The coefficient on this factor is constrained to be one. Estimation is based on a constructed subset of alternatives for each household that consists of ten portfolios, the one actually chosen by the household plus nine other sampled portfolios.

Empirical results for the TMB study are given in Tables 16, 17 and 18. The data set used in the analysis consists of observations on individual households in the service area of a large east coast local telephone company. The service options available to households in the sample together with the number in the sample choosing each option are given at the top of Table 16. The bottom of Table 16 gives the estimated parameters service-option choice conditional on portfolio for each of three specifications of the cost function that enters P_{ij} . In each specification, cost has an expected negative effect, with the best fit being obtained with $\ln C_{is}$, which has a coefficient of about -2. This implies that the ratio of probabilities for any two service options is essentially inversely proportional to the square of the ratio of their costs:

$$\frac{P_{di}}{P_{di'}} = k \left(\frac{C_{is'}}{C_{is}} \right)^{2.08},$$

which implies that the relative probabilities change at an accelerated rate as relative costs change. TMB note that this result is consistent with the popular view that households are relatively insensitive to small cost differences when they select service options but become increasingly sensitive as the differences become large.

¹⁴ See McFadden (1978).

Mechanically, the option-specific constants are those that result in the average probability (i.e., the predicted share) for each option being equal to the observed share in the sample. As can be seen, these constants, which capture the average option-specific effect of all excluded variables, are highly significant. TMB suggest that the most important excluded factor may be the insurance quality of the option. Under flat-rate pricing, the customer, for a fixed fee, is provided an upper limit on charges for calling within a specified geographic area. The larger the area of calling at no extra charge, the more valuable is the insurance that the option provides. The estimated coefficients, measured as deviations from budget measured service, are consistent with this: all are positive, which is consistent with budget measured service having no insurance value (since all calls are charged), and except for extended local service whose coefficient is smaller than for regular local service, the coefficients increase with the size of the free-calling area.

The estimated parameters for the model of portfolio choice are given in Table 17. All of the coefficients have the expected sign and are reasonable in magnitude. In assessing signs and sizes of coefficients in this model, it is important to keep in mind just what it is that is being predicted: namely, the probability of selection of the portfolio that the household in question actually selected. The logic of the model states that this probability ebbs and flows with the distance calls go, when they are made, how many in the household can make them, the income of the household, etc. The coefficients on the total duration of calling ($n \ln D$) accordingly indicate that the probability of selecting a selected portfolio increases with length-of-haul, as the more outlying the calling zone the larger its coefficient. A portfolio is selected with greater "tenacity" the more it is weighted to calls of longer distance.

The coefficient on the "inclusive value" of a portfolio is greater than one, which indicates that households respond to price changes more readily by adjusting their patterns of calling than by shifting to different service options. Also, it is seen that the probability of choosing portfolio i decreases with the number of calls. TMB comment on this as follows:

1. Recall that there are multiple time-of-day and destination zone categories. As the total number of calls increases, the number of portfolios that are possible with that number of calls increases. For example, there is only one portfolio of no calls, but there are 21 portfolios — when we ignore duration — associated with making a total of one call

¹⁾ However, TMB note that the coefficients for local flat-rate and extended local flat-rate are not strictly comparable because the latter is not universally available and so the excluded factors are averaged over different populations.

TABLE 16
Logit model of service choice for given portfolio; TMB study

Service Options	Number of Customers with Alternatives		Number of Customers Who Chose the Alternative	
	Available			
Budget Measured	2963		579	
Standard Measured	2963		855	
Local Flat-Rate	2963		1120	
Extended Local Flat-Rate	84		20	
Metropolitan Area Flat-Rate	1873		389	

Estimated Parameters (t-statistics in parentheses)			
	Model 1:		Model 3: C_{ij}
	$\ln C$	C_{ij}	Divided by Income of Household in Thousands of Dollars
C_{ij} : cost of portfolio under designated service option (includes monthly fixed fee and charges for calls, in 1984 dollars; specified differently in each model)	-2.081 (23.87)	-0.0111 (17.42)	-0.0138 (14.51)
Option-Specific Constants:			
Standard Measured	1.228 (17.83)	0.6135 (11.04)	0.5079 (9.282)
Local Flat-Rate	2.635 (24.74)	1.5 (30.94)	1.081 (18.07)
Extended Local Flat-Rate	2.254 (7.880)	1.123 (3.922)	0.8614 (3.279)
Metropolitan Area Flat-Rate	3.757 (21.82)	3.474 (17.23)	1.317 (13.60)
Number of Households	2963	2963	2963
Initial Log Likelihood	-3812.4	-3812.4	-3812.4
Log Likelihood at Convergence	-3356.0	-3487.8	-3562.3

Source: Train, McFadden, and Ben Akiva (1987, Table 3)

TABLE 17

Logit model of service option choice conditional on portfolio; TMB study
 Alternative Set: The household's chosen portfolio plus nine portfolios selected randomly from the set of all available portfolios.

Explanatory Variable	Coefficient	t-Statistic
Benefits of Information (θ):		
$N \log D$ for calls to zone 1	0.0239	11.8
$N \log D$ for calls to zones 2-6	0.0410	13.10
$N \log D$ for calls to zones 7-8	0.0474	11.11
$\Sigma_{\text{zones}} (\text{pop of zone in millions}) N \log D$ for zone (Income of households in thousands of \$)	0.00752	14.58
$(N \log D \text{ for all zones})$	0.213×10^{-3}	3.13
(Number of telephone users in household) ($N \log D$ for all zones)	-0.755×10^{-9}	4.035
Rate of Information Transfer ($-\gamma$):		
Total number of Calls (N to all zones)	-0.890	8.525
Opportunity Cost of Conversation Minutes ($-\alpha$):		
Total duration 9 A.M.-9 P.M. to zone 1	-0.00472	10.11
Total duration 7 A.M.-9 A.M. and 9 P.M.-Midnight to zone 1	-0.00438	8.475
Total duration Midnight-7 A.M. to zone 1	-0.00141	1.866
Total duration for 9 P.M.-9 A.M. to zone 2-8	-0.0111	12.56
(Total income in households of \$) (Total duration all zones and times)	-0.060×10^{-3}	3.22
Other Variables:		
Inclusive value of service option choice (using model 1 of Table 3)	4.178	13.68
Sampling correction factor (coefficient is constrained to 1.0)	1.0	-
Number of households	3038	-
Log likelihood at zero	-7125.9	-
Log likelihood at convergence	-6242.8	-

Source: Train, McFadden, and Ben-Akiva (1987, Table 4)

- a portfolio for each time and zone category in which that one call could be made. Therefore, if the probability of making a certain total number of calls increases with the number of calls, but increases less rapidly than the number of portfolios that are possible with that number of calls, then the probability of each portfolio must decrease in the number of calls. This is what is occurring in the estimated model.

2. It is reasonable to expect that the probability of a household's making a particular number of calls reaches a maximum at some finite number of calls. The number of portfolios that are possible with a certain number of call increases with the number of calls, but does so at a continuously decreasing rate. Consequently, if V_i decreases linearly with the number of calls (as the estimates in Table 4 indicate), then the probability of making a certain number of calls first increases with the number of calls (with the expansion of the number of possible portfolios dominating the decrease in V_i minus the cost of each portfolio), but eventually decreases (when the decrease in V_i , which is linear in the number of calls, starts to dominate the diminishing expansion in the number of portfolios). (Train, McFadden, and Ben-Akiva 1987, p. 118.)

The estimated aggregate price elasticities for the TMB model are given in Table 18. Price elasticities in the model vary over customers and, for any customer, depend upon current prices and all other factors entering the model. Aggregate elasticities are accordingly specific to a particular population at a particular time. The numbers in the table refer to the sample used in estimation.

The own-price elasticities for the monthly fixed charge for each service are seen to be fairly large. Since all of the households in the sample had telephone service under one service option or another, these numbers do not represent access elasticities in the sense of service/no service, but rather substitution among service options. The relatively large own-price elasticities accordingly indicate a high degree of substitutability among services. The size of both the own- and cross-price elasticities depend upon market share. Consider local flat-rate service whose market share (74%) is large in relation to the other service options. Because of this, its own-price elasticity (at -0.46) is smallest of all the service options, yet the shift in demand that results from an increase in the local flat-rate access charge represents a relatively high percentage increase in the demand for other service options, as evidenced by the substantial cross elasticities for the other options with respect to the flat-rate price. In contrast, the extended flat-rate option has only 1% of the market, so that an increase in its fixed charge has a relatively small effect

TABLE 18
Estimated price elasticities, TMB study

	Monthly Fixed Charges for Service (initial shares in parentheses)						Charge for Calls to Zone 1	Charge for 1st Min. for Calls to Zones 2-8	Charge for Addl. Mins. for Calls to Zones 2-8
	Budget Measured (0.05)	Standard Measured (0.15)	Local Flat-Rate (0.74)	Extended Local Flat-Rate (0.01)	Metropolitan Area Flat-Rate (0.05)				
Number of Households Choosing:									
Budget Measured	-1.06	0.16	1.52	0.02	0.11	-0.41	-0.04	-0.04	-0.04
Standard Measured	0.05	-1.38	1.36	0.01	0.14	-0.26	-0.04	-0.04	-0.03
Local Flat	0.07	0.25	0.46	0.01	0.11	0.08	0.00	0.00	-0.01
Extended Local Flat	0.11	0.11	0.45	-0.91	0.34	0.08	0.00	0.00	0.06
Metro Flat	0.04	0.22	1.07	0.04	-2.19	0.07	0.21	0.21	0.21
Number of Calls	0.14	0.14	-0.29	-0.00	-0.06	-0.02	-0.00	-0.00	-0.00
Average Duration	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	-0.01
Total Revenues	0.04	0.18	0.56	0.01	0.02	0.05	0.07	0.07	0.06

Source: Train, McFadden, and Ben-Akiva (1987, Table 3)

on the demand for the other options, and this is the case even though the own-price elasticity for extended flat-rate service is double the local flat-rate elasticity.

Other results of interest include:

1. Increasing the fixed charge for each service option affects the number of calls made by households in an expected way. Increase in the fixed charge for measured services shifts customers to flat-rate services, under which customers make more calls because of the marginal price of calling is zero. Conversely, increasing flat-rate charges decreases the amount of calling because it shifts customers to measured services which charges for calls.
2. Increasing the charges for marginal calls - particularly for zone 1 calls, which comprise about 80% of all local calls - shifts customers from measured to flat-rate services. The elasticities, however, are small.
3. Charges for marginal calls have a small effect on the total number of calls that households make. Largely, this is because in the great majority of cases customers are not charged for the marginal calls that they make. Zone 1 calls are free to 80% of customers (those choosing flat-rate services). All zone 8 calls are free to customers with metropolitan flat-rate service, and many of these calls are free under extended flat-rate service. Moreover, customers with standard measured service do not pay for marginal calls if they are below the threshold of calling at no extra charge.

V. EVALUATION

Of the four studies that have reviewed in this chapter, three - Perl, Taylor and Kridel, and Bell Canada - were motivated primarily by concerns with dropoff, that spiraling local rates would cause large numbers of households to give up telephone service. The three studies are similar in many respects, in the use of a binary choice logit or probit model that relates the probability of a household having a telephone to the price of access, income, and a wide range of socio-demographic variables related to particular social and ethnic groups. All three studies find that the probability of having a telephone is sensitive to price, but a sensitivity that in the aggregate is quantitatively small. All three studies also find that the households most vulnerable to dropoff from rising local rates would be young, low-income, poorly educated households living in rural areas. Actually, when all-is-said-and-done, the primary factor is really income, or rather its absence.

As noted at the beginning of this chapter, the problem with small (or even tiny) elasticities is that they can lead to large numbers when applied to a large base. In the U.S., the population of residential telephone subscribers is approaching 100 million; in Bell Canada's service territory, it is close to six million. Applied indiscriminately, an elasticity as small as -0.02 would imply a "dropoff" from a doubling of local rates of 120,000 households in Ontario and Quebec, and two million in the U.S. Absolutely, these are large numbers, and become staggeringly so if they are concentrated within disadvantaged, low-income groups.

It is important, however, that the elasticities that have been estimated in the Perl, Southwestern Bell, and Bell Canada models not be used in this manner, especially the implication that a doubling of rates would lead to dropoffs of the magnitudes indicated. To begin with, it must be kept in mind that the question being asked is essentially temporal in nature, whereas the elasticities in question are based upon parameters that are estimated from cross-sectional data. Households do not react immediately to higher access charges, but adjust over a period of time, possibly as long as several years in the unlikely event of a sudden doubling of rates. During the period of adjustment, other factors – social, demographic, and economic – will be changing that could offset the impact of the rate increase. Once adjustment is complete, the number of telephone subscribers could very well be smaller than in the absence of the rate increase, but the "shortfall" would almost certainly be smaller than the dropoff indicated by a straight-forward application of the access price elasticity.

A second point to keep in mind relates to the fact that dropoff refers to a household giving up a service that it has had as opposed to refusing to take the service in the first place. The effect could be asymmetrical. The price increase needed to cause a dropoff might need to be much larger than the price decrease that could induce another household in otherwise similar circumstances but which has never had telephone service to subscribe. All three of the models in question assume that this is not the case, but because none of the samples contains information as to whether households may once have had telephone service that was subsequently renounced, this restriction is imposed *a priori* rather than through testing. Consequently, the ultimate effects on telephone subscription of sharply higher access rates may reflect failure to "drop in" as much or more as inducement to dropoff.

In view of all this, the Perl, Southwestern Bell, and Bell Canada models are of limited usefulness in my opinion in predicting the amount of dropoff that might ensue in the event of sharp increases in residential access charges. The models are most useful in establishing that the price of access has a negative effect, albeit small, on the probability of a household having a

telephone, that income is the primary factor in determining subscription, and in identifying the socio-demographic and economic dimensions along which a targeted subsidy program, should (for whatever reason) it be decided that one is desired, could be designed. Indeed, all three models are unambiguous in identifying low-income households as the households most likely to be harmed by rising local-service rates.

The three models are also informative in identifying density and size of local-calling area as factors increasing the probability of having a telephone. That a larger system increases the value (i.e., willingness-to-pay) of belonging to the system, there is little doubt. Significant positive coefficients for size and density accord with common sense on this score. However, one must be careful in concluding from this the existence of a network externality that would support, on social-welfare grounds, an access price that is less than cost. As was noted in Chapter 2, whether a network externality supports a subsidized access price depends upon the willingness-to-pay of those not on the system in relation to the benefits that their presence would confer on the subscribers already on the system. At present sizes of systems, it is not clear that these benefits are all that large. We will examine this question in detail in Chapter 9.

In contrast with the Perl, Southwestern Bell, and Bell Canada studies, which focus on the access/no access decisions, the Train-McPadden-Ben-Akiva study focuses on the choice of class of service given that access is already demanded. The question that is investigated is how service choice is affected by different service options becoming available, as relative prices of the options change, and as calling patterns change. The TMB study is ambitious and highly innovative. It approaches a household's choice of service as a portfolio choice problem in which the household not only selects a service option but also a portfolio of calls. Portfolios are defined along each of the dimensions that calls are priced – time-of day, distance, and duration. The price of a portfolio under a particular service option is simply the bill that would be generated by that portfolio under the option.¹⁶ The model is formulated as a nested logit model in which the nesting proceeds from choice of portfolio to the choice of service option conditional on the portfolio.

With regard to price effects, the conclusion which emerges from the four studies is that, in the aggregate and at present levels of development, the decision to access the telephone network is relatively insensitive to price, but not the form. For the TMB results indicate substantial substitution among service

¹⁶ This way of defining price avoids the usual problems presented by a multi-part tariff. Simultaneity bias is avoided, also the need to reduce a complicated tariff to a few parameters. Responses to changes in access and usage charges, pricing periods, and the number of "free" calls are easily estimated by simulation.

options in response to changes in relative prices. This is an important result for policy purposes, for it provides strong support for the view, discussed at length by Perl, that the threat to universal service caused by elimination of the toll-to-local subsidy can be contained by a carefully designed budget measured-service.

RECENT STUDIES OF TOLL DEMAND

As noted in Chapter 1, concerns with the effect on residential subscribers of rising local-service rates led to a sharp shift in emphasis in the early 1980s to research on access demand. The analysis of toll demand not only ceased being center stage in terms of resources devoted to it, but the nature of toll-demand research shifted as well. Prior to divestiture, the toll market in the U.S. was split, for regulatory reasons, between intrastate and interstate. Intrastate rates were regulated by state PUCs, while interstate rates were regulated by the FCC. With divestiture came the creation of LATAs (local access transport areas), which are within-state geographical areas consisting of a single population center and its environs. The terms of the divestiture stipulated that the only toll service that local exchange carriers can provide is in the LATAs within which they operate. The post-divestiture toll market thus came to entail three segments: intraLATA, interLATA-intrastate, and interLATA-interstate. Intrastate rates (both intraLATA and interLATA) continued to be regulated by the states, while interstate rates continued under FCC jurisdiction.

Even before the divestiture, emergent competition in the toll market was causing toll price elasticities for the long-distance carriers to become increasingly proprietary. As MCI, Sprint, and other IX carriers acquired market share, the price elasticities faced by AT&T ceased referring to the industry at large, but became AT&T specific. Not surprisingly, AT&T – as also the other carriers – viewed these elasticities as important company secrets, to be revealed only in regulatory proceedings on a proprietary basis. The result has been that research on toll demand at AT&T no longer finds its way into the open literature, and has not since 1980.¹

A consequence of the divestiture for the analysis of toll demand was to create two wholly new markets, namely, the market for "access" to the interLATA toll network(s) and the market for "bypass" of the LECs on the part of toll users. In an important sense, both markets were creatures of the toll-to-local subsidy that had evolved historically through the separations

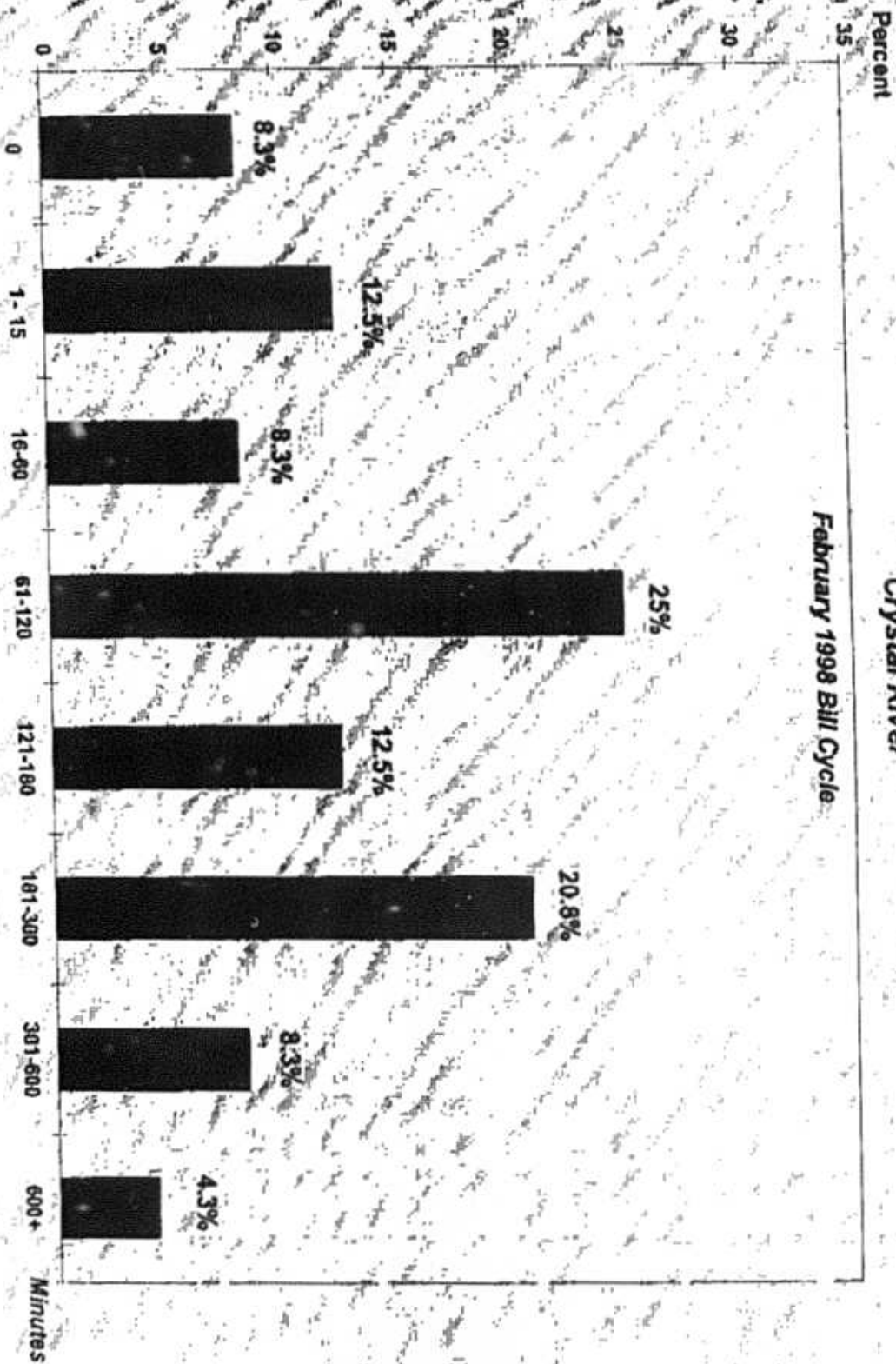
¹ Two exceptions to this are Gatto, Kelejian, and Stephan (1988) and Gatto *et al.* (1988). The former is described briefly in Chapter 11, while the latter is discussed later in this chapter. In keeping with the point just made, the price elasticities presented by Gatto, Kelejian, and Stephan are highly aggregated and camouflaged as to state.

SPRINT – FLORIDA, INC.

980000A- SP: UNDOCKETED SPEICAL PROJECT: Fair and Reasonable Rates

Data Request Cross Reference: 5. (b)

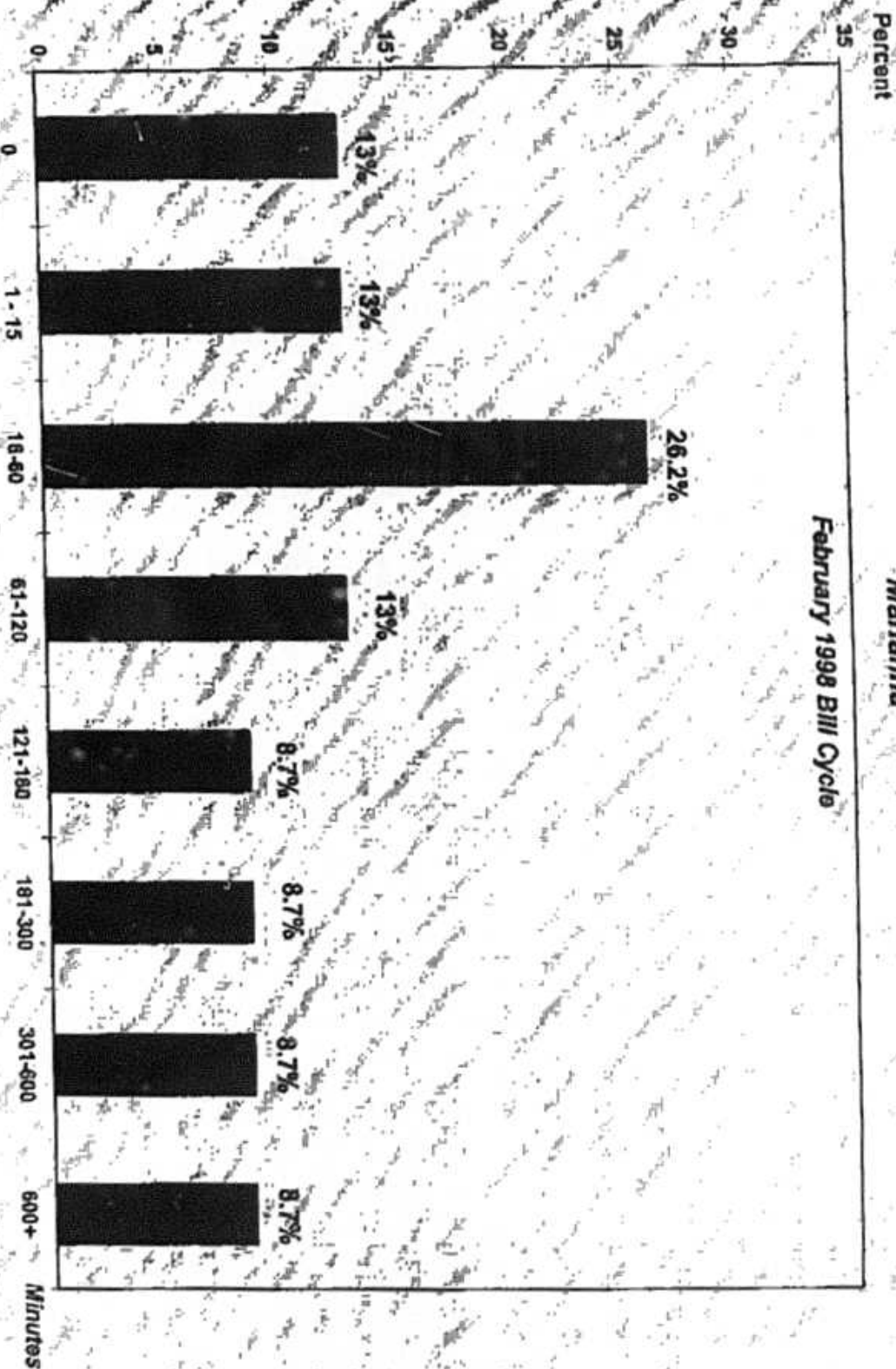
Percent of Residence Customers Making Intrastate Toll Calls
Crystal River



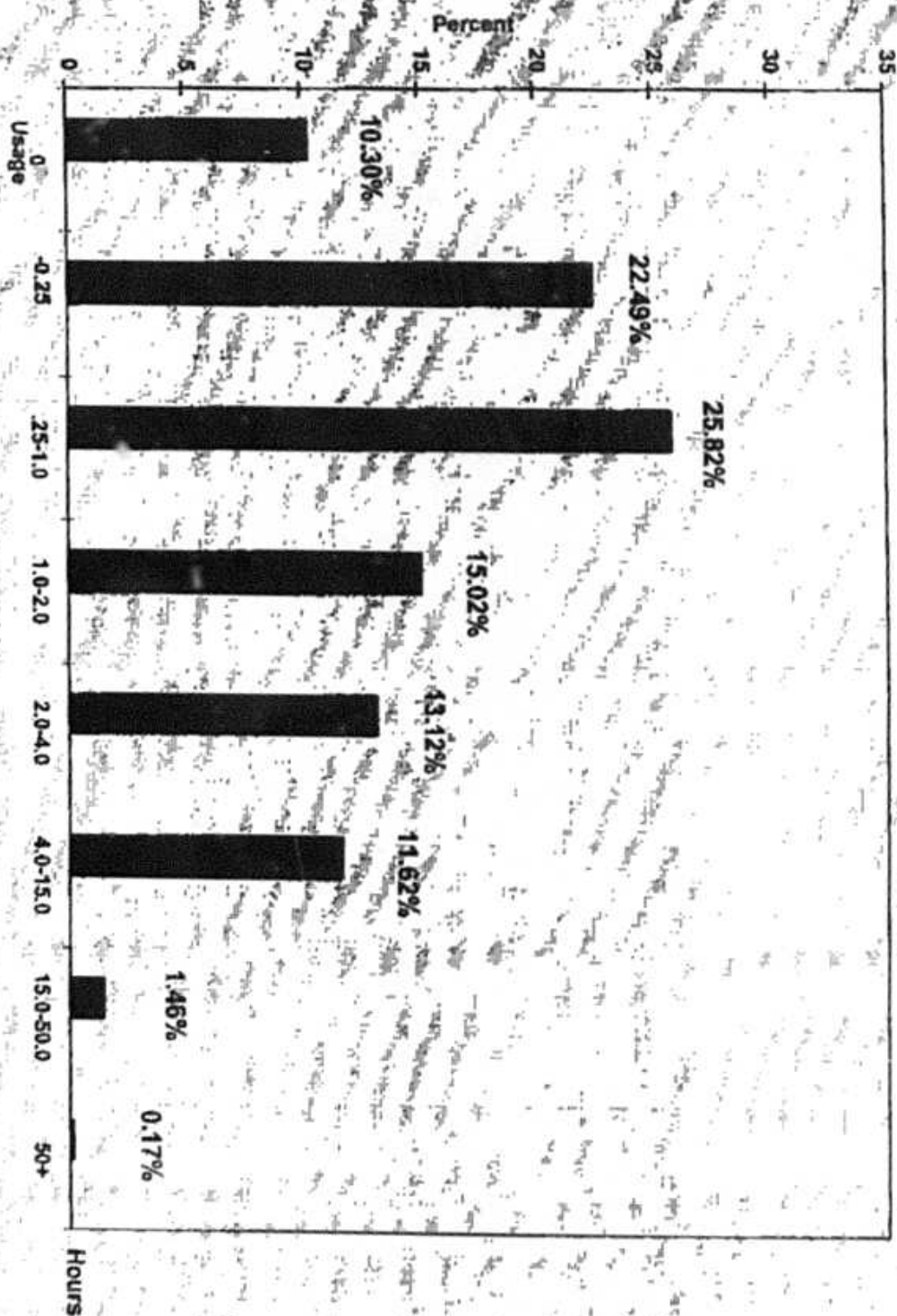
Percent of Residence Customers Making Intrastate Toll Calls

Marianna

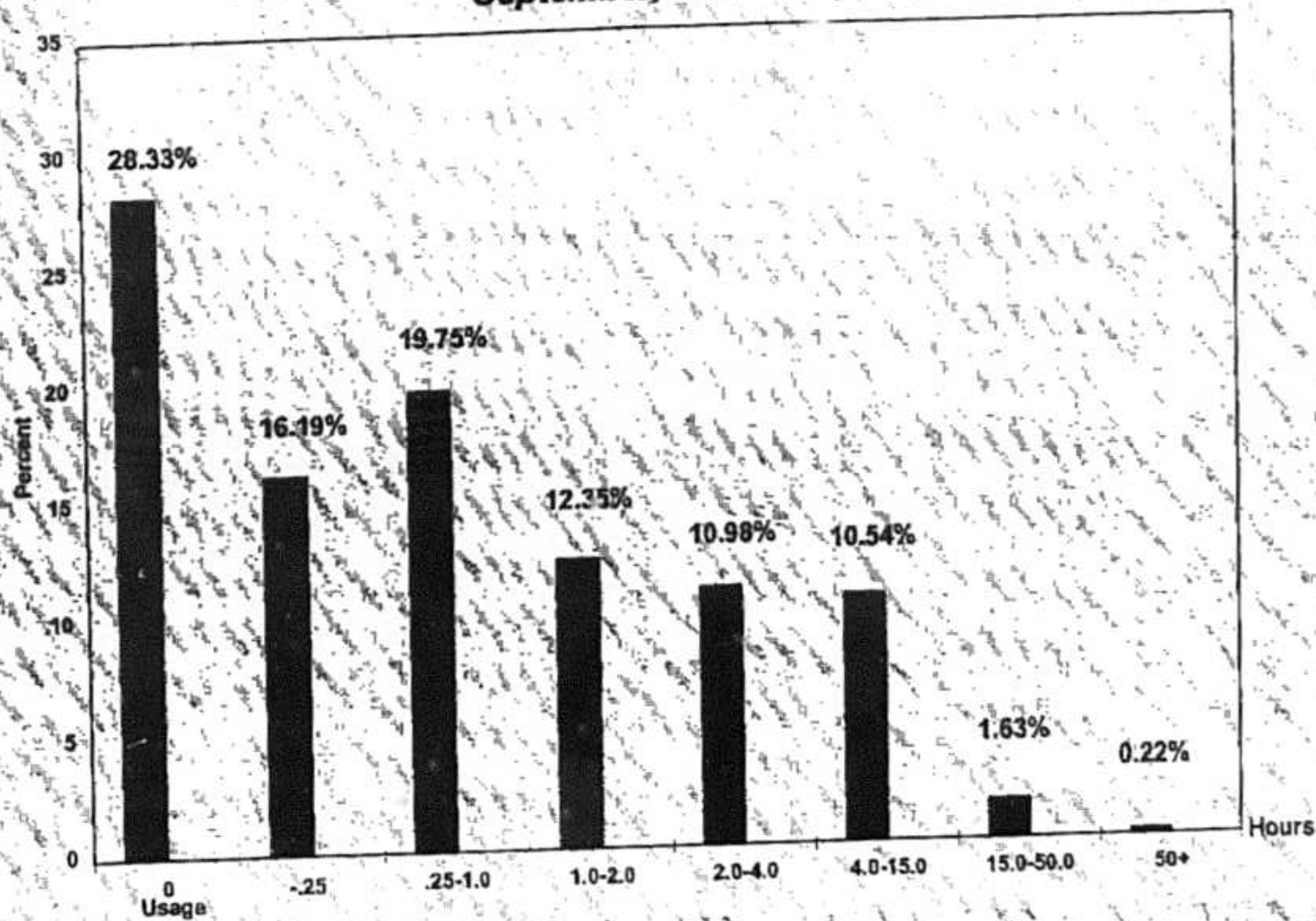
February 1998 Bill Cycle



**Percent of Residence Customers Making Intrastate Toll Calls
Five Months Cumulative**



Percent of Residence Customers Making Intrastate Toll Calls
September, 1997





FLORIDA, INCORPORATED

**CONTRIBUTION ANALYSIS AND
TOTAL SERVICE LONG RUN
INCREMENTAL COST STUDY**

For

**980000A-SP: UNDOCKETED
SPECIAL PROJECT:
Fair and Reasonable Rates**

August - 1998

Sprint – Florida
Contribution Analysis and Total Service Long Run Incremental Cost Study
980000A-SP: Undocketed Special Project
Fair and Reasonable Rates
Executive Summary

General

This package provides Sprint-Florida's response to the Florida Public Service Commission's June 19, 1998 Data Request associated with proceeding 980000A-SP (Undocketed Special Project: Fair and Reasonable Rates). Included in the package are contribution analysis for basic local service, intrastate access, intrastate toll and vertical features. The contribution analysis compares revenues for these services with their associated Total Service Long Run Incremental Costs (TSLRIC), both at a unit and total service level. The contribution analysis provides the contribution amount and contribution percentage for each service.

Overview

Sprint's filing is organized into the following components:

- Executive Summary
- Contribution Analysis
 - Residential
 - Business
 - Centrex
 - PBX
 - Key
 - Intrastate Switched Access
 - IntraLATA Toll
 - Vertical Services
- TSLRIC Cost Study
 - Local Loop
 - Switching
 - Transport
 - Annual Charge Factors

Contribution Analysis

The contribution analysis compares the revenues and their associated TSLRIC costs for the following services:

- Residential, Flat-Rate Local Exchange Service
- Business, Flat-Rate Local Exchange Service
- Centrex Service
- PBX trunk Service
- Multi-line Switched Business Services (Key)

Intrastate Switched Access Charges
IntraLATA Toll
Vertical Services
 3-Way Calling
 Call Waiting
 Call Forwarding Busy Line
 Call Forwarding Don't Answer
 Call Return
 Repeat Dialing
 Call Forwarding
 Caller ID with Name
 Custom Code Restrictions
Feature Packages

The contribution analysis compares tariff rates for these services to unit costs from the TSLRIC cost studies. In addition, to provide the contribution analysis at the total service level, 1997 actual demand units and revenues (which are proprietary and confidential and available under appropriate protective order or non-disclosure agreement at the Florida Public Service Commission) were utilized to provide the revenue information. Costs for the total contribution analysis were derived based on actual demand units multiplied by the TSLRIC unit costs. Additional information on the revenue and cost calculations is provided in the tabs for each major service category. Rates and revenues for residential and business services do not include the federal subscriber line charges and associated revenues.

TSLRIC Cost Study

In compliance with the direction established by the legislature and the FPSC, Sprint's cost studies reflect use of TSLRIC methodology. TSLRIC is a forward-looking costing approach which incorporates forward-looking technology placement and deployment guidelines in order to represent the costs incurred by an efficient firm to produce a level of output. TSLRIC represents the incremental cost of an entire product. In other words, TSLRIC represents all the costs directly caused by a service. TSLRIC includes all of the service-specific fixed costs and volume sensitive costs. It represents the total direct burden that the service places upon the resources of the company. TSLRIC does not include any allocation of shared and common costs to the service(s) being studied.

The critical element of Sprint's TSLRIC cost study is the use of Florida specific, forward-looking cost data to develop the various input information. This approach assures that the costs developed are not only forward-looking, but that they reflect the unique nature of Sprint's Florida service territory and operations.

Sprint utilized several costing systems in the development of its TSLRIC costs. The systems, and the inputs to these systems used to develop the TSLRIC costs, are described

and documented in greater detail in the tabs labeled Local Loop, Switching, Transport and Annual Charge Factors.

Study Results

The contribution analysis and the cost study documentation are included in the succeeding tabs of this binder. A summary of the contribution analysis on a unit basis is provided on the Attachment.

**SPRINT - FLORIDA
SUMMARY OF CONTRIBUTION ANALYSIS**

Attachment
Page 1 of 3

Basic Service

	Residential		Business	
	Amount	Percent	Amount	Percent
Unit Rate	\$ 9.95		\$ 22.84	
Unit Cost	\$ 26.91		\$ 18.64	
Contribution	\$ (16.96)	-63.0%	\$ 4.20	22.5%

Intrastate Access

	Intrastate Access	
	Amount	Percent
Unit Rate	\$ 0.0496560	
Unit Cost	\$ 0.0036530	
Contribution	\$ 0.0460030	1259.2%

Other Services

	Centrex		PBX	
	Amount	Percent	Amount	Percent
Unit Rate	\$ 19.42		\$ 45.27	
Unit Cost	\$ 19.18		\$ 19.70	
Contribution	\$ 0.24	1.2%	\$ 25.57	129.6%

	Key		Rotary Key	
	Amount	Percent	Amount	Percent
Unit Rate	\$ 34.69		\$ 23.34	
Unit Cost	\$ 18.40		\$ 18.40	
Contribution	\$ 16.29	88.5%	\$ 4.94	26.6%

	IntraLATA Toll	
	Amount	Percent
Unit Rate	\$ 0.1774820	
Unit Cost	\$ 0.0049557	
Contribution	\$ 0.1725264	3481.4%

SPRINT - FLORIDA
SUMMARY OF CONTRIBUTION ANALYSIS

Attachment
Page 2 of 3

Other Services

Features

	Residential		Business	
	Amount	Percent	Amount	Percent
3 Way Calling				
Unit Rate	\$ 3.00		\$ 4.50	
Unit Cost	\$0.0442		\$0.0442	
Contribution	\$ 2.96	6667.3%	\$ 4.46	10061.0%

	Residential		Business	
	Amount	Percent	Amount	Percent
Call Waiting				
Unit Rate	\$ 5.00		\$ 6.00	
Unit Cost	\$ 0.0051		\$ 0.0051	
Contribution	\$ 4.99	97939.2%	\$ 5.99	117547.1%

	Residential		Business	
	Amount	Percent	Amount	Percent
Call Forward Busy				
Unit Rate	\$ 1.00		\$ 1.00	
Unit Cost	\$ 0.0087		\$ 0.0087	
Contribution	\$ 0.99	11394.3%	\$ 0.99	11394.3%

	Residential		Business	
	Amount	Percent	Amount	Percent
Call Forward Don't Answer				
Unit Rate	\$ 1.00		\$ 1.00	
Unit Cost	\$ 0.017		\$ 0.017	
Contribution	\$ 0.98	5782.4%	\$ 0.98	5782.4%

	Residential		Business	
	Amount	Percent	Amount	Percent
Return Call				
Unit Rate	\$ 4.00		\$ 4.50	
Unit Cost	\$ 0.1875		\$ 0.1875	
Contribution	\$ 3.81	2033.3%	\$ 4.31	2300.0%

	Residential		Business	
	Amount	Percent	Amount	Percent
Repeat Dialing				
Unit Rate	\$ 3.00		\$ 3.50	
Unit Cost	\$ 0.094		\$ 0.094	
Contribution	\$ 2.91	3091.5%	\$ 3.41	3623.4%

	Residential		Business	
	Amount	Percent	Amount	Percent
Call Forwarding				
Unit Rate	\$ 4.50		\$ 4.50	
Unit Cost	\$ 0.354		\$ 0.354	
Contribution	\$ 4.15	1171.9%	\$ 4.15	1171.9%

SPRINT - FLORIDA
SUMMARY OF CONTRIBUTION ANALYSIS

Attachment
Page 3 of 3

Other Services (Continued)

Features

	Residential		Business	
	Amount	Percent	Amount	Percent
Caller ID with Name				
Unit Rate	\$ 8.00		\$ 10.00	
Unit Cost	\$ 0.868		\$ 0.868	
Contribution	\$ 7.13	821.7%	\$ 9.13	1052.1%

	Residential		Business	
	Amount	Percent	Amount	Percent
Custom Code Restrictions				
Unit Rate	\$ 2.50		\$ 4.00	
Unit Cost	\$ 0.0295		\$ 0.0295	
Contribution	\$ 2.47	8374.6%	\$ 3.97	13459.3%

	Residential		Business	
	Amount	Percent	Amount	Percent
In-Touch w/ Call Forward				
Unit Rate	\$ 7.00		\$ 9.00	
Unit Cost	\$ 0.4288		\$ 0.4288	
Contribution	\$ 6.57	1532.5%	\$ 8.57	1998.9%

	Residential		Business	
	Amount	Percent	Amount	Percent
In Touch w/ Call Return				
Unit Rate	\$ 8.00		\$ 10.00	
Unit Cost	\$ 0.2625		\$ 0.2625	
Contribution	\$ 7.74	2947.6%	\$ 9.74	3709.5%

	Residential		Business	
	Amount	Percent	Amount	Percent
Call Manager				
Unit Rate	\$ 10.00		\$ 12.00	
Unit Cost	\$ 0.7103		\$ 0.7103	
Contribution	\$ 9.29	1307.6%	\$ 11.29	1589.4%

	Residential		Business	
	Amount	Percent	Amount	Percent
Call Manager Plus				
Unit Rate	\$ 14.00		\$ 16.00	
Unit Cost	\$ 1.543109		\$ 1.543109	
Contribution	\$ 12.46	807.3%	\$ 14.46	936.9%

	Residential		Business	
	Amount	Percent	Amount	Percent
Advantage				
Unit Rate	\$ 15.00		\$ 17.00	
Unit Cost	\$ 2.58		\$ 2.58	
Contribution	\$ 12.42	482.5%	\$ 14.42	560.1%

**Sprint – Florida
Contribution Analysis
Residential Flat-Rate Local Exchange Service**

The contribution analysis for residential local exchange service reflects the following major assumptions and calculations:

1. A contribution analysis is provided on a unit and total service basis for Sprint's entire Florida operations (page 1).
2. To demonstrate the revenue/cost relationships between urban and rural areas inherent in the current rate structure, a contribution analysis was completed for each rate group. Exchange level revenue and cost information was summarized for each rate group. Because the rate groups sizes and rates differ between Sprint's (former) Centel and United companies' rate structures, a separate contribution analysis was completed for each territory (pages 2 and 3).
3. Demand for each exchange was extracted from Sprint's December 1997 records (pages 5 through 7).
4. Revenues were calculated by multiplying demand for each exchange by its respective tariff rate (pages 5 through 7).
5. Mandatory extended local calling revenues were included in the calculation of basic local service revenues (pages 5 through 7).
6. Revenue information was summarized for each rate group (separately for United and Centel), including extended calling revenues (page 4).
7. Cost information was summarized at a rate group level and provided on a unit basis (page 8).
8. Subscriber Line Charge (SLC) revenue has not been included in Sprint's contribution analysis due to the complexities involved in determining whether the primary or secondary SLC charge was applicable. If the Commission desires to understand the impacts of including SLC revenues in the contribution analysis, a special study will be required.

SPRINT - FLORIDA, INC.
Voice Grade, Flat Rate Residential Local Exchange Service
Contribution Analysis

Total Sprint

Line	R1 - Total Statewide Contribution Analysis	Source	Amount	%
1	Statewide Revenue	Page 4 of 8	\$ 12,701,982	
2	Statewide Cost	Cost x Units	\$ 34,131,190	
3	Contribution	Line 1 - Line 2	\$ (21,429,207)	-62.8%

Line	R1 - Statewide Unit Contribution Analysis	Source	Amount	%
4	Statewide Unit Revenue	Page 4 of 8	\$ 9.95	
5	Statewide Unit Cost	Page 8 of 8	26.91	
6	Contribution	Line 4 - Line 5	\$ (16.96)	-63.0%

SPRINT - FLORIDA, INC.
Voice Grade, Flat Rate Residential Local Exchange Service
Contribution Analysis

United Exchanges

Line	R1 - Rate Group 1 Unit Contribution Analysis	Source	Amount	%
1	Rate Group 1 Unit Revenue	Page 4 of 8	\$ 7.75	
2	Rate Group 1 Unit Cost	Page 8 of 8	\$ 43.02	
3	Contribution	Line 1 - Line 2	\$ (35.27)	-32.0%
R1 - Rate Group 2 Unit Contribution Analysis				
4	Rate Group 2 Unit Revenue	Page 4 of 8	\$ 8.46	
5	Rate Group 2 Unit Cost	Page 8 of 8	\$ 32.28	
6	Contribution	Line 4 - Line 5	\$ (23.82)	-73.8%
R1 - Rate Group 3 Unit Contribution Analysis				
7	Rate Group 3 Unit Revenue	Page 4 of 8	\$ 8.95	
8	Rate Group 3 Unit Cost	Page 8 of 8	\$ 27.43	
9	Contribution	Line 7 - Line 8	\$ (18.48)	-67.4%
R1 - Rate Group 4 Unit Contribution Analysis				
10	Rate Group 4 Unit Revenue	Page 4 of 8	\$ 9.78	
11	Rate Group 4 Unit Cost	Page 8 of 8	\$ 25.50	
12	Contribution	Line 10 - Line 11	\$ (15.72)	-61.7%
R1 - Rate Group 5 Unit Contribution Analysis				
13	Rate Group 5 Unit Revenue	Page 4 of 8	\$ 10.51	
14	Rate Group 5 Unit Cost	Page 8 of 8	\$ 20.59	
15	Contribution	Line 13 - Line 14	\$ (10.08)	-48.9%
R1 - Rate Group 6 Unit Contribution Analysis				
16	Rate Group 6 Unit Revenue	Page 4 of 8	\$ 11.37	
17	Rate Group 6 Unit Cost	Page 8 of 8	\$ 19.39	
18	Contribution	Line 16 - Line 17	\$ (8.02)	-41.4%
R1 - Statewide Unit Contribution Analysis				
19	Statewide Unit Revenue	Page 4 of 8	\$ 9.86	
20	Statewide Unit Cost	Page 8 of 8	\$ 25.54	
21	Contribution	Line 19 - Line 20	\$ (15.68)	-61.4%

SPRINT - FLORIDA, INC.
Voice Grade, Flat Rate Residential Local Exchange Service
Contribution Analysis

Centel Exchanges

Line	R1 - Rate Group 1 Unit Contribution Analysis	Source	Amount	%
1	Rate Group 1 Unit Revenue	Page 4 of 8	\$ 8.53	
2	Rate Group 1 Unit Cost	Page 8 of 8	\$ 50.31	
3	Contribution	Line 1 - Line 2	\$ (41.78)	-83.0%
R1 - Rate Group 2 Unit Contribution Analysis				
4	Rate Group 2 Unit Revenue	Page 4 of 8	\$ 9.14	
5	Rate Group 2 Unit Cost	Page 8 of 8	\$ 60.10	
6	Contribution	Line 4 - Line 5	\$ (50.96)	-84.8%
R1 - Rate Group 3 Unit Contribution Analysis				
7	Rate Group 3 Unit Revenue	Page 4 of 8	\$ 9.78	
8	Rate Group 3 Unit Cost	Page 8 of 8	\$ 44.43	
9	Contribution	Line 7 - Line 8	\$ (34.65)	-78.0%
R1 - Rate Group 4 Unit Contribution Analysis				
10	Rate Group 4 Unit Revenue	Page 4 of 8	\$ 10.02	
11	Rate Group 4 Unit Cost	Page 8 of 8	\$ 41.55	
12	Contribution	Line 10 - Line 11	\$ (31.53)	-75.9%
R1 - Rate Group 5 Unit Contribution Analysis				
13	Rate Group 5 Unit Revenue	Page 4 of 8	\$ 10.51	
14	Rate Group 5 Unit Cost	Page 8 of 8	\$ 18.72	
15	Contribution	Line 13 - Line 14	\$ (8.21)	-43.9%
R1 - Rate Group 6 Unit Contribution Analysis				
16	Rate Group 6 Unit Revenue	Page 4 of 8	\$ 10.92	
17	Rate Group 6 Unit Cost	Page 8 of 8	\$ 28.06	
18	Contribution	Line 16 - Line 17	\$ (17.14)	-61.1%
R1 - Statewide Unit Contribution Analysis				
19	Statewide Unit Revenue	Page 4 of 8	\$ 10.36	
20	Statewide Unit Cost	Page 8 of 8	\$ 33.10	
21	Contribution	Line 19 - Line 20	\$ (22.74)	-68.7%

Sprint - Florida, Inc.Voice Grade, flat-rate residential local exchange service
December 1997Residential
Page 4 of 8

Company	Rate Group	Monthly Units	Total Monthly Residence Revenue	Average Monthly Rate
Centel	1	14,706	\$ 125,459	8.53
	2	35,866	\$ 327,689	9.14
	3	5,945	\$ 58,126	9.78
	4	3,129	\$ 31,365	10.02
	5	62,678	\$ 658,764	10.51
	6	116,916	\$ 1,276,768	10.92
	Total	239,240	\$ 2,478,172	10.36
United	1	88,313	\$ 684,599	7.75
	2	44,590	\$ 377,032	8.46
	3	184,895	\$ 1,655,248	8.95
	4	309,440	\$ 3,025,129	9.78
	5	204,137	\$ 2,146,263	10.51
	6	205,440	\$ 2,335,540	11.37
	Total	1,036,815	\$ 10,223,810	9.86
Total Sprint		1,276,055	\$ 12,701,982	9.95

Sprint - Florida, Inc.Voice Grade, flat-rate residential local exchange service
December 1997Residential
Page 5 of 8

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Residence Revenue
Alford	2	C	1,355	\$ 7.85	\$ 1,570	\$ 12,206
Altamonte Springs	6	U	29,533	10.23	\$ 43,963	\$ 346,086
Alva	5	U	1,255	9.48	\$ 1,515	\$ 13,413
Apopka	6	U	23,510	10.23	\$ 29,468	\$ 269,975
Arcadia	1	U	9,562	6.47	\$ 12,295	\$ 74,161
Astor	4	U	1,010	8.73	\$ -	\$ 8,817
Avon Park	1	U	7,723	6.47	\$ 9,693	\$ 59,661
Baker	2	C	2,189	7.85	\$ 2,599	\$ 19,783
Bellevue	4	U	15,584	8.73	\$ 19,063	\$ 155,111
Beverly Hills	3	U	9,223	7.98	\$ 11,100	\$ 84,699
Boca Grande	1	U	1,736	6.47	\$ 2,281	\$ 13,513
Bonifay	1	C	3,495	7.40	\$ 4,705	\$ 30,568
Bonita Springs	5	U	24,608	9.48	\$ -	\$ 233,284
Bowling Green	1	U	1,209	6.47	\$ 1,522	\$ 9,338
Buenaventura	3	U	10,916	7.98	\$ 12,691	\$ 99,801
Bushnell	1	U	8,466	6.47	\$ 10,486	\$ 65,261
Cape Coral	5	U	24,040	9.48	\$ 29,100	\$ 257,000
Cape Haze	2	U	8,721	7.22	\$ 10,190	\$ 73,155
Casselberry	6	U	16,825	10.23	\$ 20,177	\$ 192,296
Chassahowitzka	3	U	3,291	7.98	\$ -	\$ 26,262
Cherry Lake	1	C	1,146	7.40	\$ -	\$ 8,480
Clermont	6	U	11,453	10.23	\$ -	\$ 117,164
Clewiston	1	U	5,965	6.47	\$ 7,816	\$ 46,410
Cottondale	2	C	1,137	7.85	\$ 1,398	\$ 10,324
Crawfordville	6	C	4,977	9.65	\$ -	\$ 48,028
Crestview	2	C	11,158	7.85	\$ 14,597	\$ 102,187
Crystal River	3	U	9,333	7.98	\$ -	\$ 74,477
Cypress Lake	5	U	23,211	9.48	\$ 29,787	\$ 249,827
Dade City	2	U	8,456	7.22	\$ 10,693	\$ 71,745
Defuniak Springs	2	C	5,641	7.85	\$ 7,571	\$ 51,853
Deltona Lakes	3	U	11,914	7.98	\$ 13,678	\$ 108,752
Destin	5	C	12,043	9.15	\$ 17,405	\$ 127,599
East Fort Myers	5	U	11,106	9.48	\$ 13,677	\$ 118,962
Eustis	4	U	13,580	8.73	\$ -	\$ 118,553
Everglades	1	U	929	6.47	\$ 1,320	\$ 7,331
Fort Meade	3	U	2,424	7.98	\$ 3,063	\$ 22,407
Fort Myers	5	U	8,862	9.48	\$ 14,028	\$ 98,040
Fort Myers Beach	5	U	8,468	9.48	\$ 10,576	\$ 90,852
Fort Walton Beach	5	C	25,272	9.15	\$ 36,214	\$ 267,453
Freeport	2	C	2,208	7.85	\$ 2,763	\$ 20,096
Glendale	1	C	740	7.40	\$ 832	\$ 6,308
Golden Gate	4	U	22,304	8.73	\$ 26,770	\$ 221,484
Goldenrod	6	U	34,160	10.23	\$ 43,065	\$ 392,522

Sprint - Florida, Inc.Voice Grade, flat-rate residential local exchange service
December 1997Residential
Page 6 of 8

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Residence Revenue
Grand Ridge	2	C	1,915	7.85	\$ 2,226	\$ 17,259
Greenville	6	C	1,084	9.65	\$ -	\$ 10,461
Greenwood	2	C	741	7.85	\$ 868	\$ 6,685
Groveland	4	U	3,841	8.73	\$ -	\$ 33,532
Highlands	4	U	4,456	8.73	\$ 5,633	\$ 44,534
Homosassa Springs	3	U	7,769	7.98	\$ -	\$ 61,997
Howey-In-The-Hills	4	U	1,216	8.73	\$ 1,521	\$ 12,136
Immokalee	1	U	3,937	6.47	\$ 5,416	\$ 30,888
Inverness	3	U	20,201	7.98	\$ -	\$ 161,204
Iona	5	U	11,205	9.48	\$ 13,441	\$ 119,664
Kenansville	3	U	493	7.98	\$ -	\$ 3,934
Kingsley Lake	2	C	254	7.85	\$ -	\$ 1,994
Kissimmee	3	U	28,578	7.98	\$ 38,387	\$ 266,439
Labelle	1	U	5,963	6.47	\$ 7,727	\$ 46,308
Lady Lake (753)	4	U	13,527	8.73	\$ 15,794	\$ 133,885
Lake Brantley	6	U	29,666	10.23	\$ 39,399	\$ 342,882
Lake Helen	3	U	1,560	7.98	\$ 1,939	\$ 14,388
Lake Placid	1	U	8,992	6.47	\$ 11,121	\$ 69,300
Lawley	2	C	944	7.85	\$ 1,159	\$ 8,569
Lee	1	C	874	7.40	\$ -	\$ 6,468
Leesburg	4	U	21,346	8.73	\$ 27,636	\$ 213,987
Lehigh Acres	4	U	12,592	8.73	\$ 15,004	\$ 124,932
Madison	1	C	3,004	7.40	\$ 4,392	\$ 26,622
Maitland Center	6	U	1,767	10.23	\$ 5,018	\$ 23,09
Malone	2	C	1,080	7.85	\$ 1,346	\$ 9,824
Marco Island	4	U	15,515	8.73	\$ -	\$ 135,446
Marianna	3	C	5,945	8.25	\$ 9,080	\$ 58,126
Mary Esther	5	C	3,795	9.15	\$ 4,535	\$ 39,259
Monticello	6	C	4,955	9.65	\$ 6,439	\$ 54,255
Montverde	6	U	1,299	10.23	\$ -	\$ 13,289
Moore Haven	1	U	1,806	6.47	\$ 2,406	\$ 14,091
Mount Dora	4	U	10,901	8.73	\$ 13,763	\$ 108,928
Murdock	3	U	2,959	7.98	\$ 3,898	\$ 27,511
Naples	4	U	54,559	8.73	\$ 73,045	\$ 549,345
Niceville	5	C	9,260	9.15	\$ 12,296	\$ 97,025
North Cape Coral	5	U	19,193	9.48	\$ 23,775	\$ 205,724
North Fort Myers	5	U	12,254	9.48	\$ 15,314	\$ 131,482
North Naples	4	U	30,867	8.73	\$ 39,581	\$ 309,050
Ocal Nat Forest	4	U	4,841	8.73	\$ -	\$ 42,262
Ocala	4	U	29,311	8.73	\$ 41,957	\$ 297,842
Ocklawaha	4	U	3,512	8.73	\$ 4,062	\$ 34,722
Okeechobee	1	U	15,303	6.47	\$ 19,765	\$ 118,776
Orange City	3	U	7,987	7.98	\$ 10,564	\$ 74,300
Panacea	6	C	752	9.65	\$ -	\$ 7,257
Pine Island	5	U	6,743	9.48	\$ -	\$ 63,924
Ponce De Leon	2	C	1,014	7.85	\$ 1,226	\$ 9,186

Sprint - Florida, Inc.Voice Grade, flat-rate residential local exchange service
December 1997Residential
Page 7 of 8

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Residence Revenue
Port Charlotte	3	U	34,888	7.98	\$ 43,234	\$ 321,640
Punta Gorda	3	U	17,585	7.98	\$ 22,133	\$ 162,462
Reedy Creek	6	U	12,203	10.23	\$ 17,876	\$ 142,713
Reg. Airport	5	U	6,277	9.48	\$ 8,459	\$ 67,964
Reynolds Hill	1	C	1,384	7.40	\$ 1,557	\$ 11,798
Rolling Green	4	U	3,528	8.73	\$ 4,170	\$ 34,969
Saint Cloud	3	U	15,774	7.98	\$ 19,098	\$ 144,975
Salt Springs	4	U	1,250	8.73	\$ -	\$ 10,913
San Antonio	2	U	2,552	7.22	\$ 3,203	\$ 21,629
San Carlos Park	5	U	7,991	9.48	\$ 9,653	\$ 85,407
Sanibel-Captiva Islands	5	U	8,183	9.48	\$ -	\$ 77,575
Santa Rosa	4	C	3,129	8.70	\$ 4,143	\$ 31,365
Seagrove Beach	1	C	3,286	7.40	\$ 4,227	\$ 28,543
Sebring	2	U	17,776	7.22	\$ 22,610	\$ 150,952
Shady Road	4	U	19,168	8.73	\$ 24,014	\$ 191,351
Shalimar	5	C	7,069	9.15	\$ 8,621	\$ 73,303
Silver Springs	4	U	4,268	8.73	\$ 5,120	\$ 42,379
Silver Springs Shores	4	U	5,668	8.73	\$ 6,586	\$ 56,068
Sneads	2	C	1,534	7.85	\$ 1,912	\$ 13,954
Sopchoppy	6	C	909	9.65	\$ -	\$ 8,772
South Fort Myers	5	U	16,458	9.48	\$ 25,330	\$ 181,352
Spring Lake	2	U	3,957	7.22	\$ 4,726	\$ 33,296
St. Marks	6	C	442	9.65	\$ -	\$ 4,265
Starke	2	C	4,696	7.85	\$ 6,907	\$ 43,771
Suncoast	5	U	14,283	9.48	\$ 16,390	\$ 151,793
Tallahassee	6	C	99,764	9.65	\$ 137,331	\$ 1,100,053
Tavares	4	U	10,223	8.73	\$ -	\$ 89,247
Trilacoochee	2	U	3,128	7.22	\$ 3,671	\$ 26,255
Umatilla	4	U	6,373	8.73	\$ -	\$ 55,636
Valparaiso	5	C	5,239	9.15	\$ 6,189	\$ 54,126
Wauchula	1	U	4,379	6.47	\$ 6,014	\$ 34,346
Westville	1	C	777	7.40	\$ 922	\$ 6,672
Wildwood	1	U	6,006	6.47	\$ 7,499	\$ 46,357
Williston	1	U	4,593	6.47	\$ 5,675	\$ 35,392
Windermere	6	U	6,987	10.23	\$ -	\$ 71,477
Winter Garden	6	U	14,811	10.23	\$ -	\$ 151,517
Winter Park	6	U	23,226	10.23	\$ 34,924	\$ 272,526
Woodville	6	C	4,033	9.65	\$ 4,760	\$ 43,678
Zolfo Springs	1	U	1,745	6.47	\$ 2,177	\$ 13,467
			1,276,055		1,426,530	12,701,982

STATEWIDE

Element	Units	Statewide Average	Central	United
Local Loop (Incl. NID)	\$/mo	21.92	28.11	20.55
Local Switching Usage	\$/mo	2.43	2.43	2.43
Port	\$/mo	1.79	1.79	1.79
EAS Switching Usage	\$/mo	0.63	0.63	0.63
EAS Transport	\$/mo	0.15	0.15	0.15
Total Service Cost	\$/mo	26.91	33.10	25.54

CENTRAL

Element	Units	Rate Group 1	Rate Group 2	Rate Group 3	Rate Group 4	Rate Group 5	Rate Group 6
Local Loop (Incl. NID)	\$/mo	45.32	55.11	39.44	36.56	13.73	23.07
Local Switching Usage	\$/mo	2.43	2.43	2.43	2.43	2.43	2.43
Port	\$/mo	1.79	1.79	1.79	1.79	1.79	1.79
EAS Switching Usage	\$/mo	0.63	0.63	0.63	0.63	0.63	0.63
EAS Transport	\$/mo	0.15	0.15	0.15	0.15	0.15	0.15
Total Service Cost	\$/mo	50.31	60.10	44.43	41.55	18.72	28.06

UNITED

Element	Units	Rate Group 1	Rate Group 2	Rate Group 3	Rate Group 4	Rate Group 5	Rate Group 6
Local Loop (Incl. NID)	\$/mo	38.03	27.29	22.43	20.51	15.60	14.40
Local Switching Usage	\$/mo	2.43	2.43	2.43	2.43	2.43	2.43
Port	\$/mo	1.79	1.79	1.79	1.79	1.79	1.79
EAS Switching Usage	\$/mo	0.63	0.63	0.63	0.63	0.63	0.63
EAS Transport	\$/mo	0.15	0.15	0.15	0.15	0.15	0.15
Total Service Cost	\$/mo	43.02	32.28	27.43	25.50	20.59	19.39

**Sprint – Florida
Contribution Analysis
Business Flat-Rate Local Exchange Service**

The contribution analysis for business local exchange service reflects the following major assumptions and calculations:

1. A contribution analysis is provided on a unit and total service basis for Sprint's entire Florida operations (page 1).
2. To demonstrate the revenue/cost relationships between urban and rural areas inherent in the current rate structure, a contribution analysis was completed for each rate group. Exchange level revenue and cost information was summarized for each rate group. Because the rate groups sizes and rates differ between Sprint's (former) Centel and United companies' rate structures, a separate contribution analysis was completed for each territory (pages 2 and 3).
3. Demand for each exchange was extracted from Sprint's December 1997 records (pages 5 through 7).
4. Revenues were calculated by multiplying demand for each exchange by its respective tariff rate (pages 5 through 7).
5. Mandatory extended local calling revenues were included in the calculation of basic local service revenues (pages 5 through 7).
6. Revenue information was summarized for each rate group (separately for United and Centel), including extended calling revenues (page 4).
7. Cost information was summarized at a rate group level and provided on a unit basis (page 8).
8. Subscriber Line Charge (SLC) revenue has not been included in Sprint's contribution analysis due to the complexities involved in determining whether the primary or secondary SLC charge was applicable. If the Commission desires to understand the impacts of including SLC revenues in the contribution analysis, a special study will be required.

SPRINT - FLORIDA, INC.
Voice Grade, Flat Rate Business Local Exchange Service
Contribution Analysis

Total Sprint

Line	B1 - Total Statewide Contribution Analysis	Source	Amount	%
1	Statewide Revenue	Page 4 of 8	\$ 5,670,207	
2	Statewide Cost	Cost x Units	\$ 4,811,423	
3	Contribution	Line 1 - Line 2	\$ 858,785	17.8%
Line	B1 - Statewide Unit Contribution Analysis	Source	Amount	%
4	Statewide Unit Revenue	Page 4 of 8	\$ 22.84	
5	Statewide Unit Cost	Page 8 of 8	\$ 18.64	
6	Contribution	Line 4 - Line 5	\$ 4.20	22.5%

SPRINT - FLORIDA, INC.
Voice Grade, Flat Rate Business Local Exchange Service
Contribution Analysis

United Exchanges

Line	B1 - Rate Group 1 Unit Contribution Analysis	Source	Amount	%
1	Rate Group 1 Unit Revenue	Page 4 of 8	\$ 17.20	
2	Rate Group 1 Unit Cost	Page 8 of 8	\$ 29.29	
3	Contribution	Line 1 - Line 2	\$ (12.09)	-41.3%
B1 - Rate Group 2 Unit Contribution Analysis				
4	Rate Group 2 Unit Revenue	Page 4 of 8	\$ 18.96	
5	Rate Group 2 Unit Cost	Page 8 of 8	\$ 24.90	
6	Contribution	Line 4 - Line 5	\$ (5.94)	-23.9%
B1 - Rate Group 3 Unit Contribution Analysis				
7	Rate Group 3 Unit Revenue	Page 4 of 8	\$ 20.71	
8	Rate Group 3 Unit Cost	Page 8 of 8	\$ 22.35	
9	Contribution	Line 7 - Line 8	\$ (1.64)	-7.4%
B1 - Rate Group 4 Unit Contribution Analysis				
10	Rate Group 4 Unit Revenue	Page 4 of 8	\$ 22.47	
11	Rate Group 4 Unit Cost	Page 8 of 8	\$ 20.04	
12	Contribution	Line 10 - Line 11	\$ 2.43	12.1%
B1 - Rate Group 5 Unit Contribution Analysis				
13	Rate Group 5 Unit Revenue	Page 4 of 8	\$ 24.28	
14	Rate Group 5 Unit Cost	Page 8 of 8	\$ 17.56	
15	Contribution	Line 13 - Line 14	\$ 6.72	38.2%
B1 - Rate Group 6 Unit Contribution Analysis				
16	Rate Group 6 Unit Revenue	Page 4 of 8	\$ 26.03	
17	Rate Group 6 Unit Cost	Page 8 of 8	\$ 15.90	
18	Contribution	Line 16 - Line 17	\$ 10.13	63.7%
B1 - Statewide Unit Contribution Analysis				
19	Statewide Unit Revenue	Page 4 of 8	\$ 22.93	
20	Statewide Unit Cost	Page 8 of 8	\$ 19.42	
21	Contribution	Line 19 - Line 20	\$ 3.51	18.1%

SPRINT - FLORIDA, INC.
Voice Grade, Flat Rate Business Local Exchange Service
Contribution Analysis

Centel Exchanges

Line	B1 - Rate Group 1 Unit Contribution Analysis	Source	Amount	%
1	Rate Group 1 Unit Revenue	Page 4 of 8	\$ 18.65	
2	Rate Group 1 Unit Cost	Page 8 of 8	\$ 24.62	
3	Contribution	Line 1 - Line 2	\$ (5.97)	-24.3%
B1 - Rate Group 2 Unit Contribution Analysis				
4	Rate Group 2 Unit Revenue	Page 4 of 8	\$ 19.65	
5	Rate Group 2 Unit Cost	Page 8 of 8	\$ 33.07	
6	Contribution	Line 4 - Line 5	\$ (13.42)	-40.6%
B1 - Rate Group 3 Unit Contribution Analysis				
7	Rate Group 3 Unit Revenue	Page 4 of 8	\$ 20.55	
8	Rate Group 3 Unit Cost	Page 8 of 8	\$ 28.25	
9	Contribution	Line 7 - Line 8	\$ (7.70)	-27.3%
B1 - Rate Group 4 Unit Contribution Analysis				
10	Rate Group 4 Unit Revenue	Page 4 of 8	\$ 21.60	
11	Rate Group 4 Unit Cost	Page 8 of 8	\$ 33.95	
12	Contribution	Line 10 - Line 11	\$ (12.35)	-36.4%
B1 - Rate Group 5 Unit Contribution Analysis				
13	Rate Group 5 Unit Revenue	Page 4 of 8	\$ 22.60	
14	Rate Group 5 Unit Cost	Page 8 of 8	\$ 16.23	
15	Contribution	Line 13 - Line 14	\$ 6.37	39.2%
B1 - Rate Group 6 Unit Contribution Analysis				
16	Rate Group 6 Unit Revenue	Page 4 of 8	\$ 23.75	
17	Rate Group 6 Unit Cost	Page 8 of 8	\$ 13.85	
18	Contribution	Line 16 - Line 17	\$ 9.90	71.4%
B1 - Statewide Unit Contribution Analysis				
19	Statewide Unit Revenue	Page 4 of 8	\$ 22.54	
20	Statewide Unit Cost	Page 8 of 8	\$ 16.55	
21	Contribution	Line 19 - Line 20	\$ 5.99	36.2%

Sprint - FloridaVoice Grade, flat-rate business local exchange service
December 1997Business
Page 5 of 8

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Business Revenue
Alford	2	C	92	\$ 17.65	\$ 184	\$ 1,807
Altamonte Springs	6	U	10,997	24.03	\$ 21,944	\$ 286,202
Alva	5	U	142	22.28	\$ 283	\$ 3,447
Apopka	6	U	3,657	24.03	\$ 7,297	\$ 95,175
Arcadia	1	U	1,773	15.20	\$ 3,538	\$ 30,487
Astor	4	U	133	20.47	\$ 265	\$ 2,988
Avon Park	1	U	1,213	15.20	\$ 2,420	\$ 20,858
Baker	2	C	207	17.65	\$ 413	\$ 4,067
Bellevue	4	U	1,990	20.47	\$ 3,971	\$ 44,706
Beverly Hills	3	U	1,010	18.71	\$ 2,015	\$ 20,912
Boca Grande	1	U	367	15.20	\$ 732	\$ 6,311
Bonifay	1	C	843	16.65	\$ 1,682	\$ 15,718
Bonita Springs	5	U	3,401	22.28	\$ 6,786	\$ 82,581
Bowling Green	1	U	195	15.20	\$ 389	\$ 3,353
Buenaventura	3	U	784	18.71	\$ 1,564	\$ 16,233
Bushnell	1	U	1,201	15.20	\$ 2,396	\$ 20,652
Cape Coral	5	U	2,788	22.28	\$ 5,563	\$ 67,680
Cape Haze	2	U	673	16.96	\$ 1,343	\$ 12,757
Casselberry	6	U	1,776	24.03	\$ 3,544	\$ 46,221
Chassahowitzka	3	U	164	18.71	\$ 327	\$ 3,396
Cherry Lake	1	C	63	16.65	\$ 126	\$ 1,175
Clermont	6	U	1,937	24.03	\$ 3,865	\$ 50,411
Clewiston	1	U	1,241	15.20	\$ 2,476	\$ 21,340
Cottondale	2	C	152	17.65	\$ 303	\$ 2,986
Crawfordville	6	C	954	21.75	\$ 1,904	\$ 22,653
Crestview	2	C	2,299	17.65	\$ 4,587	\$ 45,165
Crystal River	3	U	2,358	18.71	\$ 4,705	\$ 48,823
Cypress Lake	5	U	4,250	22.28	\$ 8,481	\$ 103,171
Dade City	2	U	1,402	16.96	\$ 2,798	\$ 26,575
Defuniak Springs	2	C	1,339	17.65	\$ 2,672	\$ 26,305
Deltona Lakes	3	U	696	18.71	\$ 1,389	\$ 14,411
Destin	5	C	4,003	20.60	\$ 7,988	\$ 90,449
East Fort Myers	5	U	1,503	22.28	\$ 2,999	\$ 36,486
Eustis	4	U	1,874	20.47	\$ 3,739	\$ 42,100
Everglades	1	U	288	15.20	\$ 575	\$ 4,952
Fort Meade	3	U	400	18.71	\$ 798	\$ 8,282
Fort Myers	5	U	4,071	22.28	\$ 8,123	\$ 98,825
Fort Myers Beach	5	U	1,282	22.28	\$ 2,558	\$ 31,121
Fort Walton Beach	5	C	8,114	20.60	\$ 16,191	\$ 183,339
Freeport	2	C	339	17.65	\$ 676	\$ 6,660
Glendale	1	C	27	16.65	\$ 54	\$ 503
Golden Gate	4	U	2,376	20.47	\$ 4,741	\$ 53,378
Goldenrod	6	U	5,542	24.03	\$ 11,059	\$ 144,233
Grand Ridge	2	C	137	17.65	\$ 273	\$ 2,691
Greenville	6	C	173	21.75	\$ 345	\$ 4,108
Greenwood	2	C	59	17.65	\$ 118	\$ 1,159
Groveland	4	U	558	20.47	\$ 1,113	\$ 12,536

Sprint - FloridaVoice Grade, flat-rate business local exchange service
December 1997Business
Page 6 of 8

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Business Revenue
Highlands	4	U	737	20.47	\$ 1,471	\$ 16,557
Homosassa Springs	3	U	983	18.71	\$ 1,961	\$ 20,353
Howay-In-The-Hills	4	U	186	20.47	\$ 371	\$ 4,179
Immokalee	1	U	1,056	15.20	\$ 2,107	\$ 18,158
Inverness	3	U	2,775	18.71	\$ 5,537	\$ 57,458
Iona	5	U	1,186	22.28	\$ 2,367	\$ 28,791
Kenansville	3	U	127	18.71	\$ 253	\$ 2,630
Kingsley Lake	2	C	70	17.65	\$ 140	\$ 1,375
Kissimmee	3	U	6,811	18.71	\$ 13,591	\$ 141,025
Labelle	1	U	1,161	15.20	\$ 2,317	\$ 19,964
Lady Lake (753)	4	U	1,034	20.47	\$ 2,063	\$ 23,229
Lake Brantley	6	U	6,656	24.03	\$ 13,281	\$ 173,225
Lake Helen	3	U	228	18.71	\$ 455	\$ 4,721
Lake Placid	1	U	1,261	15.20	\$ 2,516	\$ 21,683
Lawtey	2	C	124	17.65	\$ 247	\$ 2,436
Lee	1	C	93	16.65	\$ 186	\$ 1,734
Leesburg	4	U	4,132	20.47	\$ 8,245	\$ 92,827
Lehigh Acres	4	U	1,240	20.47	\$ 2,474	\$ 27,857
Madison	1	C	1,045	16.65	\$ 2,085	\$ 19,484
Maitland Center	6	U	2,859	24.03	\$ 5,705	\$ 74,407
Malone	2	C	161	17.65	\$ 321	\$ 3,163
Marco Island	4	U	2,193	20.47	\$ 4,376	\$ 49,267
Marianna	3	C	2,426	18.55	\$ 4,841	\$ 49,843
Mary Esther	5	C	386	20.60	\$ 770	\$ 8,722
Monticello	6	C	981	21.75	\$ 1,958	\$ 23,294
Montverde	6	U	114	24.03	\$ 227	\$ 2,967
Moore Haven	1	U	412	15.20	\$ 822	\$ 7,085
Mount Dora	4	U	1,787	20.47	\$ 3,566	\$ 40,146
Murdock	3	U	635	18.71	\$ 1,267	\$ 13,148
Naples	4	U	12,782	20.47	\$ 25,505	\$ 287,153
Niceville	5	C	2,076	20.60	\$ 4,142	\$ 46,908
North Cape Coral	5	U	2,725	22.28	\$ 5,438	\$ 66,151
North Fort Myers	5	U	1,864	22.28	\$ 3,719	\$ 45,249
North Naples	4	U	5,623	20.47	\$ 11,220	\$ 126,323
Ocal Nat Forest	4	U	326	20.47	\$ 651	\$ 7,324
Ocala	4	U	9,370	20.47	\$ 18,697	\$ 210,501
Ocklawaha	4	U	233	20.47	\$ 465	\$ 5,234
Okeechobee	1	U	2,919	15.20	\$ 5,825	\$ 50,193
Orange City	3	U	1,752	18.71	\$ 3,496	\$ 36,276
Panacea	6	C	152	21.75	\$ 303	\$ 3,609
Pine Island	5	U	706	22.28	\$ 1,409	\$ 17,138
Ponce De Leon	2	C	116	17.65	\$ 231	\$ 2,279
Port Charlotte	3	U	4,970	18.71	\$ 9,917	\$ 102,906
Punta Gorda	3	U	2,820	18.71	\$ 5,627	\$ 58,389
Reedy Creek	6	U	4,277	24.03	\$ 8,534	\$ 111,311
Reg. Airport	5	U	1,521	22.28	\$ 3,035	\$ 36,923
Reynolds Hill	1	C	51	16.65	\$ 102	\$ 951
Rolling Green	4	U	316	20.47	\$ 631	\$ 7,099
Saint Cloud	3	U	1,833	18.71	\$ 3,658	\$ 37,953
Salt Springs	4	U	113	20.47	\$ 225	\$ 2,539

Sprint - FloridaVoice Grade, flat-rate business local exchange service
December 1997Business
Page 7 of 8

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Business Revenue
San Antonio	2	U	401	16.96	\$ 800	\$ 7,601
San Carlos Park	5	U	908	22.28	\$ 1,812	\$ 22,042
Sanibel-Captiva Islands	5	U	1,577	22.28	\$ 3,147	\$ 38,282
Santa Rosa	4	C	690	19.60	\$ 1,377	\$ 14,901
Seagrove Beach	1	C	611	16.65	\$ 1,219	\$ 11,392
Sebring	2	U	3,068	16.96	\$ 6,122	\$ 58,155
Shady Road	4	U	2,971	20.47	\$ 5,928	\$ 66,745
Shalimar	5	C	879	20.60	\$ 1,754	\$ 19,861
Silver Springs	4	U	452	20.47	\$ 902	\$ 10,154
Silver Springs Shores	4	U	404	20.47	\$ 806	\$ 9,076
Sneads	2	C	229	17.65	\$ 457	\$ 4,499
Sopchoppy	6	C	89	21.75	\$ 178	\$ 2,113
South Fort Myers	5	U	6,894	22.28	\$ 13,756	\$ 167,355
Spring Lake	2	U	400	16.96	\$ 798	\$ 7,582
St. Marks	6	C	127	21.75	\$ 253	\$ 3,016
Starke	2	C	1,672	17.65	\$ 3,336	\$ 32,847
Suncoast	5	U	827	22.28	\$ 1,650	\$ 20,076
Tallahassee	6	C	26,843	21.75	\$ 53,563	\$ 637,398
Tavares	4	U	1,523	20.47	\$ 3,039	\$ 34,215
Trilacoochee	2	U	256	16.96	\$ 511	\$ 4,853
Umatilla	4	U	650	20.47	\$ 1,297	\$ 14,603
Valparaiso	5	C	467	20.60	\$ 932	\$ 10,552
Wauchula	1	U	1,165	15.20	\$ 2,325	\$ 20,033
Westville	1	C	73	16.65	\$ 146	\$ 1,361
Wildwood	1	U	907	15.20	\$ 1,810	\$ 15,596
Williston	1	U	639	15.20	\$ 1,275	\$ 10,988
Windermere	6	U	675	24.03	\$ 1,347	\$ 17,567
Winter Garden	6	U	3,052	24.03	\$ 6,090	\$ 7,430
Winter Park	6	U	8,971	24.03	\$ 17,901	\$ 233,474
Woodville	6	C	355	21.75	\$ 708	\$ 8,430
Zolfo Springs	1	U	262	15.20	\$ 523	\$ 4,505
Total Sprint			248,284		\$ 495,430	\$ 5,670,207

FLORIDA TSLRIC STUDY

Service: B1

STATEWIDE

Element	Units	Statewide Average	Central	United
Local Loop (Incl. NID)	\$/mo	13.46	11.37	14.24
Local Switching Usage	\$/mo	2.68	2.68	2.68
Port	\$/mo	1.79	1.79	1.79
EAS Switching Usage	\$/mo	0.58	0.58	0.58
EAS Transport	\$/mo	0.14	0.14	0.14
Total Service Cost	\$/mo	18.64	16.55	19.42

CENTRAL

Element	Units	Rate Group 1	Rate Group 2	Rate Group 3	Rate Group 4	Rate Group 5	Rate Group 6
Local Loop (Incl. NID)	\$/mo	19.44	27.89	23.06	28.77	11.04	8.67
Local Switching Usage	\$/mo	2.68	2.68	2.68	2.68	2.68	2.68
Port	\$/mo	1.79	1.79	1.79	1.79	1.79	1.79
EAS Switching Usage	\$/mo	0.58	0.58	0.58	0.58	0.58	0.58
EAS Transport	\$/mo	0.14	0.14	0.14	0.14	0.14	0.14
Total Service Cost	\$/mo	24.62	33.07	28.25	33.95	16.23	13.85

UNITED

Element	Units	Rate Group 1	Rate Group 2	Rate Group 3	Rate Group 4	Rate Group 5	Rate Group 6
Local Loop (Incl. NID)	\$/mo	24.11	19.71	17.16	14.85	12.37	10.71
Local Switching Usage	\$/mo	2.68	2.68	2.68	2.68	2.68	2.68
Port	\$/mo	1.79	1.7	1.79	1.79	1.79	1.79
EAS Switching Usage	\$/mo	0.58	0.58	0.58	0.58	0.58	0.58
EAS Transport	\$/mo	0.14	0.14	0.14	0.14	0.14	0.14
Total Service Cost	\$/mo	29.29	24.90	22.35	20.04	17.56	15.90



**Sprint – Florida
Contribution Analysis
Centrex Local Exchange Service**

The contribution analysis for business local exchange service reflects the following major assumptions and calculations:

1. A contribution analysis is provided on a unit and total service basis for Sprint's entire Florida operations (page 1).
2. Demand for Sprint's entire operations was extracted from Sprint's December 1997 records (page 1).
3. Revenues were extracted from Sprint's December 1997 records (page 1).
4. Average revenue per Centrex line was developed by dividing Centrex revenue by Centrex units.
5. Cost information was summarized at a statewide level and provided on a unit basis (page 2).
6. Subscriber Line Charge (SLC) revenue has not been included in Sprint's contribution analysis. If the Commission desires to understand the impacts of including SLC revenues in the contribution analysis, a special study will be required.

SPRINT - FLORIDA, INC.
Centrex Service
Contribution Analysis**Total Sprint**

Line	Centrex - Total Statewide Contribution Analysis	Source	Amount	%
1	Statewide Revenue	End User Billing	2,271,259	
2	Statewide Cost	Line 5 * Line 7	\$ 2,243,427	
3	Contribution		\$ 27,832	1.2%
Line	Centrex - Statewide Unit Contribution Analysis	Source	Amount	%
4	Statewide Unit Revenue	Line 1/Line 7	\$ 19.42	
5	Statewide Unit Cost	Page 2	\$ 19.18	
6	Contribution		\$ 0.24	1.2%
7	Centrex Units - December 1997	End User Billing	116,967	

FLORIDA TSLRIC STUDY

Service: Centrex

Centrex
Page 2 of 2**STATEWIDE**

Element	Units	Statewide Average
Local Loop (Incl. NID)	\$/mo	13.46
Local Switching Usage	\$/mo	2.51
Port	\$/mo	1.79
EAS Switching Usage	\$/mo	1.15
EAS Transport	\$/mo	0.27
Total Service Cost	\$/mo	19.18



**Sprint – Florida
Contribution Analysis
PBX Exchange Service**

The contribution analysis for PBX exchange service reflects the following major assumptions and calculations:

1. A contribution analysis is provided on a unit and total service basis for Sprint's entire Florida operations (page 1).
2. To demonstrate the revenue/cost relationships between urban and rural areas inherent in the current rate structure, a contribution analysis was completed for each rate group. Exchange level revenue and cost information was summarized for each rate group. Because the rate groups sizes and rates differ between Sprint's (former) Centel and United companies' rate structures, a separate contribution analysis was completed for each territory (pages 2 and 3).
3. Demand for each exchange was extracted from Sprint's December 1997 records (pages 5 through 7).
4. Revenues were calculated by multiplying demand for each exchange by its respective tariff rate (pages 5 through 7).
5. Mandatory extended local calling revenues were included in the calculation of basic local service revenues (pages 5 through 7).
6. Revenue information was summarized for each rate group (separately for United and Centel), including extended calling revenues (page 4).
7. Cost information was summarized at a rate group level and provided on a unit basis (page 8).
8. Subscriber Line Charge (SLC) revenue has not been included in Sprint's contribution analysis. If the Commission desires to understand the impacts of including SLC revenues in the contribution analysis, a special study will be required.

SPRINT - FLORIDA, INC.
PBX Exchange Service
Contribution Analysis**Total Sprint**

Line	PBX - Statewide Unit Contribution Analysis	Source	Amount	%
1	Statewide Revenue	Page 4 of 8	\$ 1,808,042	
2	Statewide Cost	Units X Cost	\$ 764,860	
3	Contribution	Line 1 - Line 2	\$ 1,043,182	136.4%
Line	PBX - Statewide Unit Contribution Analysis	Source	Amount	%
4	Statewide Unit Revenue	Page 4 of 8	\$ 45.27	
5	Statewide Unit Cost	Page 8 of 8	19.70	
6	Contribution	Line 4 - Line 5	\$ 25.57	129.8%

SPRINT - FLORIDA, INC.
PBX Exchange Service
Contribution Analysis

United Exchanges

Line	PBX - Rate Group 1 Unit Contribution Analysis	Source	Amount	%
1	Rate Group 1 Unit Revenue	Page 4 of 8	\$ 32.40	
2	Rate Group 1 Unit Cost	Page 8 of 8	\$ 30.34	
3	Contribution	Line 1 - Line 2	\$ 2.06	6.8%
PBX - Rate Group 2 Unit Contribution Analysis				
4	Rate Group 2 Unit Revenue	Page 4 of 8	\$ 35.91	
5	Rate Group 2 Unit Cost	Page 8 of 8	\$ 25.95	
6	Contribution	Line 4 - Line 5	\$ 9.96	38.4%
PBX - Rate Group 3 Unit Contribution Analysis				
7	Rate Group 3 Unit Revenue	Page 4 of 8	\$ 39.47	
8	Rate Group 3 Unit Cost	Page 8 of 8	\$ 23.40	
9	Contribution	Line 7 - Line 8	\$ 16.07	68.7%
PBX - Rate Group 4 Unit Contribution Analysis				
10	Rate Group 4 Unit Revenue	Page 4 of 8	\$ 42.98	
11	Rate Group 4 Unit Cost	Page 8 of 8	\$ 21.09	
12	Contribution	Line 10 - Line 11	\$ 21.89	103.8%
PBX - Rate Group 5 Unit Contribution Analysis				
13	Rate Group 5 Unit Revenue	Page 4 of 8	\$ 46.53	
14	Rate Group 5 Unit Cost	Page 8 of 8	\$ 18.61	
15	Contribution	Line 13 - Line 14	\$ 27.92	150.0%
PBX - Rate Group 6 Unit Contribution Analysis				
16	Rate Group 6 Unit Revenue	Page 4 of 8	\$ 50.06	
17	Rate Group 6 Unit Cost	Page 8 of 8	\$ 16.95	
18	Contribution	Line 16 - Line 17	\$ 33.11	195.3%
PBX - Statewide Unit Contribution Analysis				
19	Statewide Unit Revenue	Page 4 of 8	\$ 45.62	
20	Statewide Unit Cost	Page 8 of 8	\$ 20.48	
21	Contribution	Line 19 - Line 20	\$ 25.14	122.7%

SPRINT - FLORIDA, INC.
PBX Exchange Service
Contribution Analysis

Centel Exchanges

Line	PBX - Rate Group 1 Unit Contribution Analysis	Source	Amount	%
1	Rate Group 1 Unit Revenue	Page 4 of 8	\$ 35.30	
2	Rate Group 1 Unit Cost	Page 8 of 8	\$ 25.67	
3	Contribution	Line 1 - Line 2	\$ 9.63	37.5%
PBX - Rate Group 2 Unit Contribution Analysis				
4	Rate Group 2 Unit Revenue	Page 4 of 8	\$ 37.30	
5	Rate Group 2 Unit Cost	Page 8 of 8	\$ 34.12	
6	Contribution	Line 4 - Line 5	\$ 3.18	9.3%
PBX - Rate Group 3 Unit Contribution Analysis				
7	Rate Group 3 Unit Revenue	Page 4 of 8	\$ 39.10	
8	Rate Group 3 Unit Cost	Page 8 of 8	\$ 29.30	
9	Contribution	Line 7 - Line 8	\$ 9.80	33.4%
PBX - Rate Group 4 Unit Contribution Analysis				
10	Rate Group 4 Unit Revenue	Page 4 of 8	\$ 41.20	
11	Rate Group 4 Unit Cost	Page 8 of 8	\$ 35.00	
12	Contribution	Line 10 - Line 11	\$ 6.20	17.7%
PBX - Rate Group 5 Unit Contribution Analysis				
13	Rate Group 5 Unit Revenue	Page 4 of 8	\$ 43.20	
14	Rate Group 5 Unit Cost	Page 8 of 8	\$ 17.28	
15	Contribution	Line 13 - Line 14	\$ 25.92	150.0%
PBX - Rate Group 6 Unit Contribution Analysis				
16	Rate Group 6 Unit Revenue	Page 4 of 8	\$ 45.50	
17	Rate Group 6 Unit Cost	Page 8 of 8	\$ 14.90	
18	Contribution	Line 16 - Line 17	\$ 30.60	205.3%
PBX - Statewide Unit Contribution Analysis				
19	Statewide Unit Revenue	Page 4 of 8	\$ 45.50	
20	Statewide Unit Cost	Page 8 of 8	\$ 17.61	
21	Contribution	Line 19 - Line 20	\$ 27.89	158.3%

Sprint - FloridaPBX Trunks
December 1997PBX
Page 4 of 8

Company	Rate Group	Monthly Units	Total Annual Business Flat Key Revenue	Average Monthly Rate
Centel	1	115	4,059	\$ 35.30
	2	434	16,186	\$ 37.30
	3	291	11,377	\$ 39.10
	4	101	4,161	\$ 41.20
	5	2,445	105,613	\$ 43.20
	6	5,215	237,259	\$ 45.50
	Total	8,601	378,654	\$ 44.02
United	1	1,158	37,514	\$ 32.40
	2	638	22,908	\$ 35.91
	3	3,907	154,191	\$ 39.47
	4	6,683	287,205	\$ 42.98
	5	5,929	275,849	\$ 46.53
	6	13,020	651,722	\$ 50.06
	Total	31,335	1,429,388	\$ 45.62
Total Sprint		39,936	1,808,042	\$ 45.27

Sprint - FloridaPBX Trunks
December 1997PBX
Page 5 of 8

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total MonthlyPBX Trunks Revenue
Alford	2	C	0	\$ 35.30	\$ -	\$ -
Altamonte Springs	6	U	1,741	48.06	\$ 3,474	\$ 87,146
Alva	5	U	15	44.53	\$ 30	\$ 698
Apopka	6	U	292	48.06	\$ 583	\$ 14,616
Arcadia	1	U	112	30.40	\$ 223	\$ 3,628
Astor	4	U	0	40.98	\$ -	\$ -
Avon Park	1	U	124	30.40	\$ 247	\$ 4,017
Baker	2	C	0	35.30	\$ -	\$ -
Belleview	4	U	37	40.98	\$ 74	\$ 1,590
Beverly Hills	3	U	130	37.47	\$ 259	\$ 5,131
Boca Grande	1	U	47	30.40	\$ 94	\$ 1,523
Bonifay	1	C	38	33.30	\$ 76	\$ 1,341
Bonita Springs	5	U	379	44.53	\$ 756	\$ 17,633
Bowling Green	1	U	27	30.40	\$ 54	\$ 875
Buenaventura	3	U	29	37.47	\$ 58	\$ 1,144
Bushnell	1	U	91	30.40	\$ 182	\$ 2,948
Cape Coral	5	U	149	44.53	\$ 297	\$ 6,932
Cape Haze	2	U	0	33.91	\$ -	\$ -
Casselberry	6	U	65	48.06	\$ 130	\$ 3,254
Chassahowitzka	3	U	0	37.47	\$ -	\$ -
Cherry Lake	1	C	0	33.30	\$ -	\$ -
Clermont	6	U	84	48.06	\$ 168	\$ 4,205
Clewiston	1	U	131	30.40	\$ 261	\$ 4,244
Cottdale	2	C	0	35.30	\$ -	\$ -
Crawfordville	6	C	8	43.50	\$ 16	\$ 364
Crestview	2	C	133	35.30	\$ 265	\$ 4,960
Crystal River	3	U	517	37.47	\$ 1,032	\$ 20,404
Cypress Lake	5	U	906	44.53	\$ 1,808	\$ 42,152
Dade City	2	U	246	33.91	\$ 491	\$ 8,833
Defuniak Springs	2	C	129	35.30	\$ 257	\$ 4,811
Deltona Lakes	3	U	21	37.47	\$ 42	\$ 829
Destin	5	C	443	41.20	\$ 884	\$ 19,136
East Fort Myers	5	U	109	44.53	\$ 218	\$ 5,071
Eustis	4	U	191	40.98	\$ 381	\$ 8,208
Everglades	1	U	12	30.40	\$ 24	\$ 389
Fort Meade	3	U	51	37.47	\$ 102	\$ 2,013
Fort Myers	5	U	1,626	44.53	\$ 3,245	\$ 75,650
Fort Myers Beach	5	U	126	44.53	\$ 251	\$ 5,862
Fort Walton Beach	5	C	1,572	41.20	\$ 3,137	\$ 67,903
Freeport	2	C	0	35.30	\$ -	\$ -
Glendale	1	C	0	33.30	\$ -	\$ -
Golden Gate	4	U	111	40.98	\$ 221	\$ 4,770
Goldenrod	6	U	1,032	48.06	\$ 2,059	\$ 51,657
Grand Ridge	2	C	4	35.30	\$ 8	\$ 149

Sprint - FloridaPBX Trunks
December 1997PBX
Page 6 of 8

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly PBX Trunks Revenue
Greenville	6	C	0	43.50	\$ -	\$ -
Greenwood	2	C	0	35.30	\$ -	\$ -
Groveland	4	U	55	40.98	\$ 110	\$ 2,364
Highlands	4	U	124	40.98	\$ 247	\$ 5,329
Homosassa Springs	3	U	25	37.47	\$ 50	\$ 987
Howey-In-The-Hills	4	U	49	40.98	\$ 98	\$ 2,106
Immokalee	1	U	102	30.40	\$ 204	\$ 3,304
Inverness	3	U	225	37.47	\$ 449	\$ 8,880
Iona	5	U	140	44.53	\$ 279	\$ 6,514
Kenansville	3	U	2	37.47	\$ 4	\$ 79
Kingsley Lake	2	C	20	35.30	\$ 40	\$ 746
Kissimmee	3	U	1,421	37.47	\$ 2,835	\$ 56,080
Labelle	1	U	80	30.40	\$ 160	\$ 2,592
Lady Lake (753)	4	U	82	40.98	\$ 164	\$ 3,524
Lake Brantley	6	U	1,013	48.06	\$ 2,021	\$ 50,706
Lake Helen	3	U	36	37.47	\$ 72	\$ 1,421
Lake Placid	1	U	46	30.40	\$ 92	\$ 1,490
Lawtey	2	C	12	35.30	\$ 24	\$ 448
Lee	1	C	0	33.30	\$ -	\$ -
Leesburg	4	U	661	40.98	\$ 1,319	\$ 28,407
Lehigh Acres	4	U	79	40.98	\$ 158	\$ 3,395
Madison	1	C	59	33.30	\$ 118	\$ 2,082
Maitland Center	6	U	2,867	48.06	\$ 5,721	\$ 143,509
Malone	2	C	0	35.30	\$ -	\$ -
Marco Island	4	U	252	40.98	\$ 503	\$ 10,830
Marianna	3	C	291	37.10	\$ 581	\$ 11,377
Mary Esther	5	C	13	41.20	\$ 26	\$ 562
Monticello	6	C	15	43.50	\$ 30	\$ 682
Montverde	6	U	4	48.06	\$ 8	\$ 200
Moore Haven	1	U	31	30.40	\$ 62	\$ 1,004
Mount Dora	4	U	105	40.98	\$ 210	\$ 4,512
Murdock	3	U	69	37.47	\$ 138	\$ 2,723
Naples	4	U	2,005	40.98	\$ 4,001	\$ 86,166
Niceville	5	C	223	41.20	\$ 445	\$ 9,633
North Cape Coral	5	U	282	44.53	\$ 563	\$ 13,120
North Fort Myers	5	U	215	44.53	\$ 429	\$ 10,003
North Naples	4	U	693	40.98	\$ 1,383	\$ 29,782
Ocala Nat Forest	4	U	0	40.98	\$ -	\$ -
Ocala	4	U	1,309	40.98	\$ 2,612	\$ 56,255
Ocklawaha	4	U	0	40.98	\$ -	\$ -
Okeechobee	1	U	146	30.40	\$ 291	\$ 4,730
Orange City	3	U	193	37.47	\$ 385	\$ 7,617
Panacea	6	C	4	43.50	\$ 8	\$ 182
Pine Island	5	U	0	44.53	\$ -	\$ -

Sprint - FloridaPBX Trunks
December 1997PBX
Page 7 of 8

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly PBX Trunks Revenue
Ponce De Leon	2	C	0	35.30	\$ -	\$ -
Port Charlotte	3	U	598	37.47	\$ 1,193	\$ 23,600
Punta Gorda	3	U	485	37.47	\$ 968	\$ 19,141
Reedy Creek	6	U	2,748	48.06	\$ 5,483	\$ 137,552
Reg. Airport	5	U	262	44.53	\$ 523	\$ 12,190
Reynolds Hill	1	C	0	33.30	\$ -	\$ -
Rolling Green	4	U	0	40.98	\$ -	\$ -
Saint Cloud	3	U	105	37.47	\$ 210	\$ 4,144
Salt Springs	4	U	7	40.98	\$ 14	\$ 301
San Antonio	2	U	67	33.91	\$ 134	\$ 2,406
San Carlos Park	5	U	115	44.53	\$ 229	\$ 5,350
Sanibel-Captiva Islands	5	U	199	44.53	\$ 397	\$ 9,259
Santa Rosa	4	C	101	39.20	\$ 202	\$ 4,161
Seagrove Beach	1	C	18	33.30	\$ 36	\$ 635
Sebring	2	U	320	33.91	\$ 639	\$ 11,490
Shady Road	4	U	513	40.98	\$ 1,024	\$ 22,046
Shalimar	5	C	69	41.20	\$ 138	\$ 2,980
Silver Springs	4	U	49	40.98	\$ 98	\$ 2,106
Silver Springs Shores	4	U	67	40.98	\$ 134	\$ 2,879
Sneads	2	C	17	35.30	\$ 34	\$ 634
Sopchoppy	6	C	0	43.50	\$ -	\$ -
South Fort Myers	5	U	1,377	44.53	\$ 2,748	\$ 64,065
Spring Lake	2	U	5	33.91	\$ 10	\$ 180
St. Marks	6	C	49	43.50	\$ 98	\$ 2,229
Starke	2	C	119	35.30	\$ 237	\$ 4,438
Suncoast	5	U	29	44.53	\$ 58	\$ 1,349
Tallahassee	6	C	5,129	43.50	\$ 10,234	\$ 233,346
Tavares	4	U	269	40.98	\$ 537	\$ 11,560
Trilacoochee	2	U	0	33.91	\$ -	\$ -
Umatilla	4	U	25	40.98	\$ 50	\$ 1,074
Valparaiso	5	C	125	41.20	\$ 249	\$ 5,399
Wauchula	1	U	78	30.40	\$ 156	\$ 2,527
Westville	1	C	0	33.30	\$ -	\$ -
Wildwood	1	U	120	30.40	\$ 239	\$ 3,887
Williston	1	U	10	30.40	\$ 20	\$ 324
Windermere	6	U	95	48.06	\$ 190	\$ 4,755
Winter Garden	6	U	292	48.06	\$ 583	\$ 14,616
Winter Park	6	U	2,787	48.06	\$ 5,561	\$ 139,504
Woodville	6	C	10	43.50	\$ 20	\$ 455
Zolfo Springs	1	U	1	30.40	\$ 2	\$ 32
			39,936		79,688.96	\$ 1,808,042

FLORIDA TSLRIC STUDY

Service: PBX

STATEWIDE

Element	Units	Statewide Average	Central	United
Local Loop (Incl. NID)	\$/mo	13.46	11.37	14.24
Local Switching Usage	\$/mo	4.28	4.28	4.28
Port	\$/mo	1.79	1.79	1.79
EAS Switching Usage	\$/mo	0.14	0.14	0.14
EAS Transport	\$/mo	0.03	0.03	0.03
Total Service Cost	\$/mo	19.70	17.61	20.48

CENTRAL

Element	Units	Rate Group 1	Rate Group 2	Rate Group 3	Rate Group 4	Rate Group 5	Rate Group 6
Local Loop (Incl. NID)	\$/mo	19.44	27.89	23.06	28.77	11.04	8.67
Local Switching Usage	\$/mo	4.28	4.28	4.28	4.28	4.28	4.28
Port	\$/mo	1.79	1.79	1.79	1.79	1.79	1.79
EAS Switching Usage	\$/mo	0.14	0.14	0.14	0.14	0.14	0.14
EAS Transport	\$/mo	0.03	0.03	0.03	0.03	0.03	0.03
Total Service Cost	\$/mo	25.67	34.12	29.30	35.00	17.28	14.90

UNITED

Element	Units	Rate Group 1	Rate Group 2	Rate Group 3	Rate Group 4	Rate Group 5	Rate Group 6
Local Loop (Incl. NID)	\$/mo	24.11	19.71	17.16	14.85	12.37	10.71
Local Switching Usage	\$/mo	4.28	4.28	4.28	4.28	4.28	4.28
Port	\$/mo	1.79	1.79	1.79	1.79	1.79	1.79
EAS Switching Usage	\$/mo	0.14	0.14	0.14	0.14	0.14	0.14
EAS Transport	\$/mo	0.03	0.03	0.03	0.03	0.03	0.03
Total Service Cost	\$/mo	30.34	25.95	23.40	21.09	18.61	16.95

**Sprint – Florida
Contribution Analysis
Key Exchange Service**

The contribution analysis for Key exchange service reflects the following major assumptions and calculations:

1. Separate contribution analyses for key rotary and key non-rotary service are provided on a unit and total service basis for Sprint's entire Florida operations (pages 1 and 8).
2. To demonstrate the revenue/cost relationships between urban and rural areas inherent in the current rate structure, a contribution analysis was completed for each rate group. Exchange level revenue and cost information was summarized for each rate group. Because the rate groups sizes and rates differ between Sprint's (former) Centel and United companies' rate structures, a separate contribution analysis was completed for each territory (pages 2 to 3 and 9 to 10).
3. Demand for each exchange was extracted from Sprint's December 1997 records (pages 5 to 7 and 12 to 14).
4. Revenues were calculated by multiplying demand for each exchange by its respective tariff rate (pages 5 to 7 and 12 to 14).
5. Mandatory extended local calling revenues were included in the calculation of basic local service revenues (pages 5 to 7 and 12 to 14).
6. Revenue information was summarized for each rate group (separately for United and Centel), including extended calling revenues (pages 4 and 11).
7. Cost information was summarized at a rate group level and provided on a unit basis (page 15). No cost differential exists as between rotary and non-rotary key service.
8. Subscriber Line Charge (SLC) revenue has not been included in Sprint's contribution analysis. If the Commission desires to understand the impacts of including SLC revenues in the contribution analysis, a special study will be required.

SPRINT - FLORIDA, INC.
Business Flat Key Exchange Service
Contribution Analysis

Total Sprint

Line	Key - Total Statewide Contribution Analysis	Source	Amount	%
1	Statewide Revenue	Page 4 of 15	\$ 1,457,699	
2	Statewide Cost	Cost x Units	\$ 794,161	
3	Contribution	Line 1 - Line 2	\$ 663,538	83.6%

Line	Key - Statewide Unit Contribution Analysis	Source	Amount	%
4	Statewide Unit Revenue	Page 4 of 15	\$ 34.69	
5	Statewide Unit Cost	Page 8 of 8	\$ 18.40	
6	Contribution	Line 4 - Line 5	\$ 16.29	88.5%

SPRINT - FLORIDA, INC.
Business Flat Key Exchange Service
Contribution Analysis

United Exchanges

Line	Key - Rate Group 1 Unit Contribution Analysis	Source	Amount	%
1	Rate Group 1 Unit Revenue	Page 4 of 15	\$ 25.27	
2	Rate Group 1 Unit Cost	Page 15 of 15	\$ 29.05	
3	Contribution	Line 1 - Line 2	\$ (3.78)	-13.0%
Key - Rate Group 2 Unit Contribution Analysis				
4	Rate Group 2 Unit Revenue	Page 4 of 15	\$ 27.97	
5	Rate Group 2 Unit Cost	Page 15 of 15	\$ 24.65	
6	Contribution	Line 4 - Line 5	\$ 3.32	13.4%
Key - Rate Group 3 Unit Contribution Analysis				
7	Rate Group 3 Unit Revenue	Page 4 of 15	\$ 30.68	
8	Rate Group 3 Unit Cost	Page 15 of 15	\$ 22.10	
9	Contribution	Line 7 - Line 8	\$ 8.58	38.8%
Key - Rate Group 4 Unit Contribution Analysis				
10	Rate Group 4 Unit Revenue	Page 4 of 15	\$ 33.39	
11	Rate Group 4 Unit Cost	Page 15 of 15	\$ 19.79	
12	Contribution	Line 10 - Line 11	\$ 13.60	68.7%
Key - Rate Group 5 Unit Contribution Analysis				
13	Rate Group 5 Unit Revenue	Page 4 of 15	\$ 36.10	
14	Rate Group 5 Unit Cost	Page 15 of 15	\$ 17.31	
15	Contribution	Line 13 - Line 14	\$ 18.79	108.5%
Key - Rate Group 6 Unit Contribution Analysis				
16	Rate Group 6 Unit Revenue	Page 4 of 15	\$ 38.81	
17	Rate Group 6 Unit Cost	Page 15 of 15	\$ 15.65	
18	Contribution	Line 16 - Line 17	\$ 23.16	148.0%
Key - Statewide Unit Contribution Analysis				
19	Statewide Unit Revenue	Page 4 of 15	\$ 34.70	
20	Statewide Unit Cost	Page 15 of 15	\$ 19.18	
21	Contribution	Line 19 - Line 20	\$ 15.52	80.9%

SPRINT - FLORIDA, INC.
Business Flat Key Exchange Service
Contribution Analysis

Centel Exchanges

Line	Key - Rate Group 1 Unit Contribution Analysis	Source	Amount	%
1	Rate Group 1 Unit Revenue	Page 4 of 15	\$ 27.00	
2	Rate Group 1 Unit Cost	Page 15 of 15	\$ 24.38	
3	Contribution	Line 1 - Line 2	\$ 2.62	10.7%
Key - Rate Group 2 Unit Contribution Analysis				
4	Rate Group 2 Unit Revenue	Page 4 of 15	\$ 28.50	
5	Rate Group 2 Unit Cost	Page 15 of 15	\$ 32.83	
6	Contribution	Line 4 - Line 5	\$ (4.33)	-13.2%
Key - Rate Group 3 Unit Contribution Analysis				
7	Rate Group 3 Unit Revenue	Page 4 of 15	\$ 29.85	
8	Rate Group 3 Unit Cost	Page 15 of 15	\$ 28.00	
9	Contribution	Line 7 - Line 8	\$ 1.85	6.6%
Key - Rate Group 4 Unit Contribution Analysis				
10	Rate Group 4 Unit Revenue	Page 4 of 15	\$ 31.40	
11	Rate Group 4 Unit Cost	Page 15 of 15	\$ 33.71	
12	Contribution	Line 10 - Line 11	\$ (2.31)	-6.9%
Key - Rate Group 5 Unit Contribution Analysis				
13	Rate Group 5 Unit Revenue	Page 4 of 15	\$ 32.90	
14	Rate Group 5 Unit Cost	Page 15 of 15	\$ 15.98	
15	Contribution	Line 13 - Line 14	\$ 16.92	105.9%
Key - Rate Group 6 Unit Contribution Analysis				
16	Rate Group 6 Unit Revenue	Page 4 of 15	\$ 34.65	
17	Rate Group 6 Unit Cost	Page 15 of 15	\$ 13.61	
18	Contribution	Line 16 - Line 17	\$ 21.04	154.6%
Key - Statewide Unit Contribution Analysis				
19	Statewide Unit Revenue	Page 4 of 15	\$ 32.83	
20	Statewide Unit Cost	Page 15 of 15	\$ 16.31	
21	Contribution	Line 19 - Line 20	\$ 16.52	101.3%

Sprint - Florida

Business Flat Key

December 1997

Key
Page 4 of 15

Company	Rate Group	Monthly Units	Total Annual Business Flat Key Revenue	Average Monthly Rate
Centel	1	5	\$ 135	\$ 27.00
	2	20	\$ 570	\$ 28.50
	3	4	\$ 119	\$ 29.85
	4	1	\$ 31	\$ 31.40
	5	82	\$ 2,697	\$ 32.90
	6	68	\$ 2,356	\$ 34.65
	Total	180	\$ 5,909	\$ 32.83
United	1	2,185	\$ 55,205	\$ 25.27
	2	1,204	\$ 33,670	\$ 27.97
	3	5,093	\$ 156,230	\$ 30.68
	4	11,594	\$ 387,071	\$ 33.39
	5	9,191	\$ 331,753	\$ 36.10
	6	12,572	\$ 487,862	\$ 38.81
	Total	41,839	\$ 1,451,790	\$ 34.70
Total Sprint		42,019	\$ 1,457,699	\$ 34.69

Sprint - FloridaBusiness Flat Key
December 1997Key
Page 5 of 15

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Business Flat Key Revenue
Alford	2	C	0	\$ 26.50	\$ -	\$ -
Altamonte Springs	6	U	2,901	36.81	\$ 5,789	\$ 112,575
Alva	5	U	15	34.10	\$ 30	\$ 541
Apopka	6	U	732	36.81	\$ 1,461	\$ 28,406
Arcadia	1	U	240	23.27	\$ 479	\$ 6,064
Astor	4	U	7	31.39	\$ 14	\$ 234
Avon Park	1	U	156	23.27	\$ 311	\$ 3,941
Baker	2	C	0	26.50	\$ -	\$ -
Bellevue	4	U	225	31.39	\$ 449	\$ 7,512
Beverly Hills	3	U	233	28.68	\$ 465	\$ 7,147
Boca Grande	1	U	42	23.27	\$ 84	\$ 1,061
Bonifay	1	C	1	25.00	\$ 2	\$ 27
Bonita Springs	5	U	746	34.10	\$ 1,489	\$ 26,927
Bowling Green	1	U	14	23.27	\$ 28	\$ 354
Buenaventura	3	U	81	28.68	\$ 162	\$ 2,485
Bushnell	1	U	131	23.27	\$ 261	\$ 3,310
Cape Coral	5	U	590	34.10	\$ 1,177	\$ 21,296
Cape Haze	2	U	79	25.97	\$ 158	\$ 2,209
Casselberry	6	U	222	36.81	\$ 443	\$ 6,615
Chassahowitzka	3	U	17	28.68	\$ 34	\$ 521
Cherry Lake	1	C	0	25.00	\$ -	\$ -
Clermont	6	U	265	36.81	\$ 529	\$ 10,283
Clewiston	1	U	221	23.27	\$ 441	\$ 5,584
Cottondale	2	C	0	26.50	\$ -	\$ -
Crawfordville	6	C	2	32.65	\$ 4	\$ 69
Crestview	2	C	7	26.50	\$ 14	\$ 199
Crystal River	3	U	416	28.68	\$ 830	\$ 12,761
Cypress Lake	5	U	1,460	34.10	\$ 2,913	\$ 52,699
Dade City	2	U	252	25.97	\$ 503	\$ 7,047
Defuniak Springs	2	C	3	26.50	\$ 6	\$ 85
Deltona Lakes	3	U	76	28.68	\$ 152	\$ 2,331
Destin	5	C	27	30.90	\$ 54	\$ 888
East Fort Myers	5	U	317	34.10	\$ 633	\$ 11,442
Eustis	4	U	412	31.39	\$ 822	\$ 13,755
Everglades	1	U	28	23.27	\$ 56	\$ 707
Fort Meade	3	U	41	28.68	\$ 82	\$ 1,258
Fort Myers	5	U	1,331	34.10	\$ 2,656	\$ 48,043
Fort Myers Beach	5	U	194	34.10	\$ 387	\$ 7,003
Fort Walton Beach	5	C	37	30.90	\$ 74	\$ 1,217
Freeport	2	C	7	26.50	\$ 14	\$ 199
Glendale	1	C	0	25.00	\$ -	\$ -
Golden Gate	4	U	259	31.39	\$ 517	\$ 8,647
Goldenrod	6	U	1,247	36.81	\$ 2,488	\$ 48,390
Grand Ridge	2	C	0	26.50	\$ -	\$ -

Sprint - FloridaBusiness Flat Key
December 1997Key
Page 6 of 15

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Business Flat Key Revenue
Greenville	6	C	0	32.65	\$ -	\$ -
Greenwood	2	C	0	26.50	\$ -	\$ -
Groveland	4	U	77	31.39	\$ 154	\$ 2,571
Highlands	4	U	107	31.39	\$ 214	\$ 3,572
Homosassa Springs	3	U	142	28.68	\$ 283	\$ 4,356
Howey-In-The-Hills	4	U	20	31.39	\$ 40	\$ 668
Immokalee	1	U	149	23.27	\$ 297	\$ 3,765
Inverness	3	U	474	28.68	\$ 946	\$ 14,540
Iona	5	U	171	34.10	\$ 341	\$ 6,172
Kenansville	3	U	0	28.68	\$ -	\$ -
Kingsley Lake	2	C	0	26.50	\$ -	\$ -
Kissimmee	3	U	1,165	28.68	\$ 2,325	\$ 35,737
Labelle	1	U	150	23.27	\$ 299	\$ 3,790
Lady Lake (753)	4	U	221	31.39	\$ 441	\$ 7,378
Lake Brantley	6	U	1,859	36.81	\$ 3,709	\$ 72,139
Lake Helen	3	U	15	28.68	\$ 30	\$ 460
Lake Placid	1	U	149	23.27	\$ 297	\$ 3,765
Lawley	2	C	0	26.50	\$ -	\$ -
Lee	1	C	1	25.00	\$ 2	\$ 27
Leesburg	4	U	915	31.39	\$ 1,826	\$ 30,548
Lehigh Acres	4	U	266	31.39	\$ 531	\$ 8,881
Madison	1	C	1	25.00	\$ 2	\$ 27
Maitland Center	6	U	1,244	36.81	\$ 2,482	\$ 48,274
Malone	2	C	1	26.50	\$ 2	\$ 28
Marco Island	4	U	352	31.39	\$ 702	\$ 11,752
Marianna	3	C	4	27.85	\$ 8	\$ 119
Mary Esther	5	C	0	30.90	\$ -	\$ -
Monticello	6	C	0	32.65	\$ -	\$ -
Montverde	6	U	15	36.81	\$ 30	\$ 582
Moore Haven	1	U	31	23.27	\$ 62	\$ 783
Mount Dora	4	U	379	31.39	\$ 756	\$ 12,653
Murdock	3	U	165	28.68	\$ 329	\$ 5,061
Naples	4	U	3,454	31.39	\$ 6,892	\$ 115,313
Niceville	5	C	10	30.90	\$ 20	\$ 329
North Cape Coral	5	U	638	34.10	\$ 1,273	\$ 23,029
North Fort Myers	5	U	322	34.10	\$ 643	\$ 11,623
North Naples	4	U	1,379	31.39	\$ 2,752	\$ 46,038
Ocal Nat Forest	4	U	19	31.39	\$ 38	\$ 634
Ocala	4	U	2,325	31.39	\$ 4,639	\$ 77,621
Ocklawaha	4	U	8	31.39	\$ 16	\$ 267
Okeechobee	1	U	439	23.27	\$ 876	\$ 11,092
Orange City	3	U	319	28.68	\$ 637	\$ 9,785
Panacea	6	C	0	32.65	\$ -	\$ -
Pine Island	5	U	78	34.10	\$ 156	\$ 2,815

Sprint - FloridaBusiness Flat Key
December 1997Key
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Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Business Flat Key Revenue
Ponce De Leon	2	C	0	26.50	\$ -	\$ -
Port Charlotte	3	U	1,182	28.68	\$ 2,359	\$ 36,258
Punta Gorda	3	U	539	28.68	\$ 1,076	\$ 16,534
Reedy Creek	6	U	621	36.81	\$ 1,239	\$ 24,098
Reg. Airport	5	U	398	34.10	\$ 794	\$ 14,366
Reynolds Hill	1	C	0	25.00	\$ -	\$ -
Rolling Green	4	U	42	31.39	\$ 84	\$ 1,402
Saint Cloud	3	U	228	28.68	\$ 455	\$ 6,994
Salt Springs	4	U	10	31.39	\$ 20	\$ 334
San Antonio	2	U	50	25.97	\$ 100	\$ 1,398
San Carlos Park	5	U	152	34.10	\$ 303	\$ 5,487
Sanibel-Captiva Islands	5	U	236	34.10	\$ 471	\$ 8,519
Santa Rosa	4	C	1	29.40	\$ 2	\$ 31
Seagrove Beach	1	C	2	25.00	\$ 4	\$ 54
Sebring	2	U	748	25.97	\$ 1,493	\$ 20,918
Shady Road	4	U	687	31.39	\$ 1,371	\$ 22,936
Shalimar	5	C	3	30.90	\$ 6	\$ 99
Silver Springs	4	U	42	31.39	\$ 84	\$ 1,402
Silver Springs Shores	4	U	55	31.39	\$ 110	\$ 1,836
Sneads	2	C	1	26.50	\$ 2	\$ 28
Sopchoppy	6	C	0	32.65	\$ -	\$ -
South Fort Myers	5	U	2,430	34.10	\$ 4,849	\$ 87,712
Spring Lake	2	U	54	25.97	\$ 108	\$ 1,510
St. Marks	6	C	0	32.65	\$ -	\$ -
Starke	2	C	1	26.50	\$ 2	\$ 28
Suncoast	5	U	113	34.10	\$ 225	\$ 4,079
Tallahassee	6	C	66	32.65	\$ 132	\$ 2,287
Tavares	4	U	272	31.39	\$ 543	\$ 9,081
Trilacoochee	2	U	21	25.97	\$ 42	\$ 587
Umatilla	4	U	61	31.39	\$ 122	\$ 2,037
Valparaiso	5	C	5	30.90	\$ 10	\$ 164
Wauchula	1	U	220	23.27	\$ 439	\$ 5,558
Westville	1	C	0	25.00	\$ -	\$ -
Wildwood	1	U	109	23.27	\$ 218	\$ 2,754
Williston	1	U	65	23.27	\$ 130	\$ 1,642
Windermere	6	U	91	36.81	\$ 182	\$ 3,531
Winter Garden	6	U	536	36.81	\$ 1,070	\$ 20,800
Winter Park	6	U	2,839	36.81	\$ 5,665	\$ 110,169
Woodville	6	C	0	32.65	\$ -	\$ -
Zolfo Springs	1	U	41	23.27	\$ 82	\$ 1,036
			42,019		83,845	\$ 1,457,699

SPRINT - FLORIDA, INC.
Business Rotary Key Exchange Service
Contribution Analysis

Total Sprint

Line	Key - R - Statewide Contribution Analysis	Source	Amount	%
1	Statewide Unit Revenue	Page 4 of 15	\$ 1,826,641	
2	Statewide Unit Cost	Cost x Units	\$ 1,479,130	
3	Contribution	Line 1 - Line 2	\$ 347,511	23.5%
Line	Key - R - Statewide Unit Contribution Analysis	Source	Amount	%
4	Statewide Unit Revenue	Page 4 of 15	\$ 23.34	
5	Statewide Unit Cost	Pag 15 of 15	\$ 18.40	
6	Contribution	Line 4 - Line 5	\$ 4.94	26.8%

SPRINT - FLORIDA, INC.
Business Rotary Key Exchange Service
Contribution Analysis

United Exchanges

Line	Key - R - Rate Group 1 Unit Contribution Analysis	Source	Amount	%
1	Rate Group 1 Unit Revenue	Page 4 of 15	\$ 17.20	
2	Rate Group 1 Unit Cost	Page 15 of 15	\$ 29.05	
3	Contribution	Line 1 - Line 2	\$ (11.85)	-40.8%
Key - R - Rate Group 2 Unit Contribution Analysis				
			Amount	%
4	Rate Group 2 Unit Revenue	Page 4 of 15	\$ 18.96	
5	Rate Group 2 Unit Cost	Page 15 of 15	\$ 24.65	
6	Contribution	Line 4 - Line 5	\$ (5.69)	-23.1%
Key - R - Rate Group 3 Unit Contribution Analysis				
			Amount	%
7	Rate Group 3 Unit Revenue	Page 4 of 15	\$ 20.71	
8	Rate Group 3 Unit Cost	Page 15 of 15	\$ 22.10	
9	Contribution	Line 7 - Line 8	\$ (1.39)	-6.3%
Key - R - Rate Group 4 Unit Contribution Analysis				
			Amount	%
10	Rate Group 4 Unit Revenue	Page 4 of 15	\$ 22.47	
11	Rate Group 4 Unit Cost	Page 15 of 15	\$ 19.79	
12	Contribution	Line 10 - Line 11	\$ 2.68	13.5%
Key - R - Rate Group 5 Unit Contribution Analysis				
			Amount	%
13	Rate Group 5 Unit Revenue	Page 4 of 15	\$ 24.28	
14	Rate Group 5 Unit Cost	Page 15 of 15	\$ 17.31	
15	Contribution	Line 13 - Line 14	\$ 6.97	40.2%
Key - R - Rate Group 6 Unit Contribution Analysis				
			Amount	%
16	Rate Group 6 Unit Revenue	Page 4 of 15	\$ 26.03	
17	Rate Group 6 Unit Cost	Page 15 of 15	\$ 15.65	
18	Contribution	Line 16 - Line 17	\$ 10.38	66.3%
Key - R - Statewide Unit Contribution Analysis				
			Amount	%
19	Statewide Unit Revenue	Page 4 of 15	\$ 23.34	
20	Statewide Unit Cost	Page 15 of 15	\$ 19.18	
21	Contribution	Line 19 - Line 20	\$ 4.16	21.7%

SPRINT - FLORIDA, INC.
Business Rotary Key Exchange Service
Contribution Analysis

Centel Exchanges

Line	Key - R - Rate Group 1 Unit Contribution Analysis	Source	Amount	%
1	Rate Group 1 Unit Revenue	Page 4 of 15	\$ 18.65	
2	Rate Group 1 Unit Cost	Page 15 of 15	\$ 24.38	
3	Contribution	Line 1 - Line 2	\$ (5.73)	-23.5%
Key - R - Rate Group 2 Unit Contribution Analysis				
			Amount	%
4	Rate Group 2 Unit Revenue	Page 4 of 15	\$ 19.65	
5	Rate Group 2 Unit Cost	Page 15 of 15	\$ 32.83	
6	Contribution	Line 4 - Line 5	\$ (13.18)	-40.2%
Key - R - Rate Group 3 Unit Contribution Analysis				
			Amount	%
7	Rate Group 3 Unit Revenue	Page 4 of 15	\$ 20.55	
8	Rate Group 3 Unit Cost	Page 15 of 15	\$ 28.00	
9	Contribution	Line 7 - Line 8	\$ (7.45)	-26.6%
Key - R - Rate Group 4 Unit Contribution Analysis				
			Amount	%
10	Rate Group 4 Unit Revenue	Page 4 of 15	\$ 21.60	
11	Rate Group 4 Unit Cost	Page 15 of 15	\$ 33.71	
12	Contribution	Line 10 - Line 11	\$ (12.11)	-35.9%
Key - R - Rate Group 5 Unit Contribution Analysis				
			Amount	%
13	Rate Group 5 Unit Revenue	Page 4 of 15	\$ 22.60	
14	Rate Group 5 Unit Cost	Page 15 of 15	\$ 15.98	
15	Contribution	Line 13 - Line 14	\$ 6.62	41.4%
Key - R - Rate Group 6 Unit Contribution Analysis				
			Amount	%
16	Rate Group 6 Unit Revenue	Page 4 of 15	\$ 23.75	
17	Rate Group 6 Unit Cost	Page 15 of 15	\$ 13.61	
18	Contribution	Line 16 - Line 17	\$ 10.14	74.5%
Key - R - Statewide Unit Contribution Analysis				
			Amount	%
19	Statewide Unit Revenue	Page 4 of 15	\$ 22.60	
20	Statewide Unit Cost	Page 15 of 15	\$ 16.31	
21	Contribution	Line 19 - Line 20	\$ 6.29	38.6%

Sprint - FloridaBusiness Rotary Key
December 1997Key - R
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Company	Rate Group	Total Annual		
		Monthly Units	Business Flat Key Revenue	Average Monthly Rate
Centel	1	8	\$ 149	\$ 18.65
	2	36	\$ 707	\$ 19.65
	3	7	\$ 144	\$ 20.55
	4	1	\$ 22	\$ 21.60
	5	153	\$ 3,457	\$ 22.60
	6	135	\$ 3,206	\$ 23.75
	Total	340	\$ 7,685	\$ 22.60
United	1	4,076	\$ 70,089	\$ 17.20
	2	2,238	\$ 42,422	\$ 18.96
	3	9,485	\$ 196,391	\$ 20.71
	4	21,581	\$ 484,826	\$ 22.47
	5	17,127	\$ 415,765	\$ 24.28
	6	23,418	\$ 609,463	\$ 26.03
	Total	77,925	\$ 1,818,956	\$ 23.34
Total Sprint		78,265	\$ 1,826,641	\$ 23.34

Sprint - FloridaBusiness Rotary Key
December 1997Key - R
Page 12 of 15

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Business Flat Key Revenue
Alford	2	C	0	\$ 17.65	\$ -	\$ -
Altamonte Springs	6	U	5,406	24.03	\$ 10,787	\$ 140,693
Alva	5	U	28	22.28	\$ 56	\$ 680
Apopka	6	U	1,364	24.03	\$ 2,722	\$ 35,499
Arcadia	1	U	449	15.20	\$ 896	\$ 7,721
Astor	4	U	13	20.47	\$ 26	\$ 292
Avon Park	1	U	291	15.20	\$ 581	\$ 5,004
Baker	2	C	1	17.65	\$ 2	\$ 20
Belleview	4	U	419	20.47	\$ 836	\$ 9,413
Beverly Hills	3	U	435	18.71	\$ 868	\$ 9,007
Boca Grande	1	U	78	15.20	\$ 156	\$ 1,341
Bonifay	1	C	1	16.65	\$ 2	\$ 19
Bonita Springs	5	U	1,392	22.28	\$ 2,778	\$ 33,791
Bowling Green	1	U	27	15.20	\$ 54	\$ 464
Buenaventura	3	U	150	18.71	\$ 299	\$ 3,106
Bushnell	1	U	244	15.20	\$ 487	\$ 4,196
Cape Coral	5	U	1,099	22.28	\$ 2,193	\$ 26,679
Cape Haze	2	U	146	16.96	\$ 291	\$ 2,767
Casselberry	6	U	413	24.03	\$ 824	\$ 10,746
Chassahowitzka	3	U	33	18.71	\$ 66	\$ 683
Cherry Lake	1	C	0	16.65	\$ -	\$ -
Clermont	6	U	492	24.03	\$ 982	\$ 12,805
Clewiston	1	U	412	15.20	\$ 822	\$ 7,085
Cottondale	2	C	0	17.65	\$ -	\$ -
Crawfordville	6	C	5	21.75	\$ 10	\$ 119
Crestview	2	C	13	17.65	\$ 26	\$ 255
Crystal River	3	U	774	18.71	\$ 1,544	\$ 16,026
Cypress Lake	5	U	2,718	22.28	\$ 5,424	\$ 65,981
Dade City	2	U	471	16.96	\$ 940	\$ 8,928
Defuniak Springs	2	C	5	17.65	\$ 10	\$ 98
Deltona Lakes	3	U	141	18.71	\$ 281	\$ 2,919
Destin	5	C	53	20.60	\$ 106	\$ 1,198
East Fort Myers	5	U	590	22.28	\$ 1,177	\$ 14,322
Eustis	4	U	767	20.47	\$ 1,530	\$ 17,231
Everglades	1	U	51	15.20	\$ 102	\$ 877
Fort Meade	3	U	76	18.71	\$ 152	\$ 1,574
Fort Myers	5	U	2,483	22.28	\$ 4,955	\$ 60,276
Fort Myers Beach	5	U	363	22.28	\$ 724	\$ 8,812
Fort Walton Beach	5	C	70	20.60	\$ 140	\$ 1,582
Freeport	2	C	12	17.65	\$ 24	\$ 236
Glendale	1	C	0	16.65	\$ -	\$ -
Golden Gate	4	U	484	20.47	\$ 966	\$ 10,873
Goldenrod	6	U	2,322	24.03	\$ 4,633	\$ 60,431
Grand Ridge	2	C	0	17.65	\$ -	\$ -

Sprint - Florida

Business Rotary Key

December 1997

Key - R
Page 13 of 15

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Business Flat Key Revenue
Greenville	6	C	0	21.75	\$ -	\$ -
Greenwood	2	C	0	17.65	\$ -	\$ -
Groveland	4	U	144	20.47	\$ 287	\$ 3,235
Highlands	4	U	200	20.47	\$ 399	\$ 4,493
Homosassa Springs	3	U	265	18.71	\$ 529	\$ 5,487
Howey-In-The-Hills	4	U	38	20.47	\$ 76	\$ 854
Immokalee	1	U	278	15.20	\$ 555	\$ 4,780
Inverness	3	U	882	18.71	\$ 1,760	\$ 18,262
Iona	5	U	321	22.28	\$ 641	\$ 7,792
Kenansville	3	U	1	18.71	\$ 2	\$ 21
Kingsley Lake	2	C	0	17.65	\$ -	\$ -
Kissimmee	3	U	2,170	18.71	\$ 4,330	\$ 44,931
Labelle	1	U	281	15.20	\$ 561	\$ 4,832
Lady Lake (753)	4	U	409	20.47	\$ 816	\$ 9,188
Lake Brantley	6	U	3,463	24.03	\$ 6,910	\$ 90,126
Lake Helen	3	U	29	18.71	\$ 58	\$ 600
Lake Placid	1	U	279	15.20	\$ 557	\$ 4,798
Lawtey	2	C	0	17.65	\$ -	\$ -
Lee	1	C	1	16.65	\$ 2	\$ 19
Leesburg	4	U	1,701	20.47	\$ 3,394	\$ 38,214
Lehigh Acres	4	U	495	20.47	\$ 988	\$ 11,120
Madison	1	C	2	16.65	\$ 4	\$ 37
Maitland Center	6	U	2,314	24.03	\$ 4,617	\$ 60,223
Malone	2	C	1	17.65	\$ 2	\$ 20
Marco Island	4	U	653	20.47	\$ 1,303	\$ 14,670
Marianna	3	C	7	18.55	\$ 14	\$ 144
Mary Esther	5	C	1	20.60	\$ 2	\$ 23
Monticello	6	C	0	21.75	\$ -	\$ -
Montverde	6	U	29	24.03	\$ 58	\$ 755
Moore Haven	1	U	57	15.20	\$ 114	\$ 980
Mount Dora	4	U	705	20.47	\$ 1,407	\$ 15,838
Murdock	3	U	308	18.71	\$ 615	\$ 6,377
Naples	4	U	6,433	20.47	\$ 12,837	\$ 144,520
Niceville	5	C	16	20.60	\$ 32	\$ 362
North Cape Coral	5	U	1,186	22.28	\$ 2,367	\$ 28,791
North Fort Myers	5	U	602	22.28	\$ 1,201	\$ 14,614
North Naples	4	U	2,567	20.47	\$ 5,122	\$ 57,669
Ocal Nat Forest	4	U	36	20.47	\$ 72	\$ 809
Ocala	4	U	4,331	20.47	\$ 8,642	\$ 97,298
Ocklawaha	4	U	14	20.47	\$ 28	\$ 315
Okeechobee	1	U	820	15.20	\$ 1,636	\$ 14,100
Orange City	3	U	594	18.71	\$ 1,185	\$ 12,299
Panacea	6	C	0	21.75	\$ -	\$ -
Pine Island	5	U	146	22.28	\$ 291	\$ 3,544

Sprint - FloridaBusiness Rotary Key
December 1997Key - R
Page 14 of 15

Exchange Name	Rate Group	Co.	Monthly Units	Per Unit Rate	ELC Revenue	Total Monthly Business Flat Key Revenue
Ponce De Leon	2	C	0	17.65	\$	\$ -
Port Charlotte	3	U	2,202	18.71	\$	\$ 45,593
Punta Gorda	3	U	1,000	18.71	\$	\$ 20,705
Reedy Creek	6	U	1,158	24.03	\$	\$ 30,137
Reg. Airport	5	U	742	22.28	\$	\$ 18,012
Reynolds Hill	1	C	0	16.65	\$	\$ -
Rolling Green	4	U	77	20.47	\$	\$ 1,730
Saint Cloud	3	U	425	18.71	\$	\$ 8,800
Salt Springs	4	U	18	20.47	\$	\$ 404
San Antonio	2	U	92	16.96	\$	\$ 1,744
San Carlos Park	5	U	282	22.28	\$	\$ 6,846
Sanibel-Captiva Islands	5	U	439	22.28	\$	\$ 10,657
Santa Rosa	4	C	1	19.60	\$	\$ 22
Seagrove Beach	1	C	4	16.65	\$	\$ 75
Sebring	2	U	1,389	16.96	\$	\$ 26,329
Shady Road	4	U	1,279	20.47	\$	\$ 28,733
Shalimar	5	C	5	20.60	\$	\$ 113
Silver Springs	4	U	77	20.47	\$	\$ 1,730
Silver Springs Shores	4	U	103	20.47	\$	\$ 2,314
Sneads	2	C	1	17.65	\$	\$ 20
Sopchoppy	6	C	0	21.75	\$	\$ -
South Fort Myers	5	U	4,526	22.28	\$	\$ 109,871
Spring Lake	2	U	101	16.96	\$	\$ 1,914
St. Marks	6	C	0	21.75	\$	\$ -
Starke	2	C	3	17.65	\$	\$ 59
Suncoast	5	U	210	22.28	\$	\$ 5,098
Tallahassee	6	C	130	21.75	\$	\$ 3,087
Tavares	4	U	505	20.47	\$	\$ 11,345
Trilacoochee	2	U	39	16.96	\$	\$ 739
Umatilla	4	U	113	20.47	\$	\$ 2,539
Valparaiso	5	C	8	20.60	\$	\$ 181
Wauchula	1	U	409	15.20	\$	\$ 7,033
Westville	1	C	0	16.65	\$	\$ -
Wildwood	1	U	203	15.20	\$	\$ 3,491
Williston	1	U	121	15.20	\$	\$ 2,081
Windermere	6	U	170	24.03	\$	\$ 4,424
Winter Garden	6	U	999	24.03	\$	\$ 25,999
Winter Park	6	U	5,288	24.03	\$	\$ 137,622
Woodville	6	C	0	21.75	\$	\$ -
Zolfo Springs	1	U	76	15.20	\$	\$ 1,307
					78,265	156,171 \$ 1,826,641

FLORIDA TSLRIC STUDY

Service: Key Trunk

STATEWIDE

Element	Units	Statewide Average	Central	United
Local Loop (Incl. NID)	\$/mo	13.46	11.37	14.24
Local Switching Usage	\$/mo	1.70	1.70	1.70
Port	\$/mo	1.79	1.79	1.79
EAS Switching Usage	\$/mo	1.17	1.17	1.17
EAS Transport	\$/mo	0.27	0.27	0.27
Total Service Cost	\$/mo	18.40	16.31	19.18

CENTRAL

Element	Unit	Rate Group 1	Rate Group 2	Rate Group 3	Rate Group 4	Rate Group 5	Rate Group 6
Local Loop (Incl. NID)	\$/mo	19.44	27.89	23.06	28.77	11.04	8.67
Local Switching Usage	\$/mo	1.70	1.70	1.70	1.70	1.70	1.70
Port	\$/mo	1.79	1.79	1.79	1.79	1.79	1.79
EAS Switching Usage	\$/mo	1.17	1.17	1.17	1.17	1.17	1.17
EAS Transport	\$/mo	0.27	0.27	0.27	0.27	0.27	0.27
Total Service Cost	\$/mo	24.38	32.83	28.00	33.71	15.98	13.61

UNITED

Element	Unit	Rate Group 1	Rate Group 2	Rate Group 3	Rate Group 4	Rate Group 5	Rate Group 6
Local Loop (Incl. NID)	\$/mo	24.11	19.71	17.16	14.85	12.37	10.71
Local Switching Usage	\$/mo	1.70	1.70	1.70	1.70	1.70	1.70
Port	\$/mo	1.79	1.79	1.79	1.79	1.79	1.79
EAS Switching Usage	\$/mo	1.17	1.17	1.17	1.17	1.17	1.17
EAS Transport	\$/mo	0.27	0.27	0.27	0.27	0.27	0.27
Total Service Cost	\$/mo	29.05	24.65	22.10	19.79	17.31	15.65



**Sprint – Florida
Contribution Analysis
Intrastate Switched Access**

The contribution analysis for intrastate switched access reflects the following major assumptions and calculations:

1. The contribution analysis for intrastate switched access is provided on a unit and total service basis for Sprint's entire Florida operations. Residential and business breakdowns for intrastate switched access are not readily available within Sprint's systems.
2. Demand information was extracted Sprint's December 1997 records (page 2). Sprint's projected access rates to be effective in October 1998 were applied to the 1997 demand to provide total annual revenues. An average revenue per minute was calculated as well as an average monthly revenue and demand.
3. The demand and revenue information excludes dedicated switched transport demand and revenue.
4. Cost information was provided from the TSLRIC cost study and includes switching and transport.

SPRINT - FLORIDA, INC.
Intrastate Switched Access Charges
Contribution Analysis

Line	Unit Level	Source	Amount	%
1	Average Rate per MOU	(Page 2, line 10)	\$ 0.049656	
2	Average Cost per MOU	(Page 3, line 3)	\$ 0.003653	
3	Contribution	(Line 1 - Line 2)	<u>\$ 0.046003</u>	1259.2%

	Total Service Level	Source	Amount	%
4	Total Revenues	(Page 2, line 13)	\$ 12,152,596	
5	Total Cost	(Page 3, line 6)	\$ 894,093	
6	Contribution	(Line 4 - Line 5)	<u>\$ 11,258,503</u>	1259.2%

SPRINT - FLORIDA, INC.
Intrastate Switched Access Charges
Revenues

Line	Element	Source	Rate
1	CCL-Originating	Tariff	\$ 0.025800
2	CCL - Terminating	Tariff	\$ 0.033600
3	Local Switching	Tariff	\$ 0.017700
4	Interconnection	Tariff *	\$ 0.001166
5	Tandem Switch Transport Termination	Tariff	\$ 0.000200
6	Tandem Switch Transport Facility	Tariff	\$ 0.000040
7	Tandem Switching	Tariff	\$ 0.000880
8	Total Switched Access Costs	Tariff	\$ 0.046146
9	Terminating Rate	Tariff	\$ 0.053946
10	Composite Rate (Projected 10/1/98)	Lines 1 through 9	<u>\$ 0.049656</u>
11	1997 Actual Access MOU Demand	Access Billing System	2,936,828,365
12	1997 Average Monthly Demand	Line 11/12 Months	244,735,697
13	Total Switched Access Revenues	Line 10 * Line 12	<u>\$ 12,152,596</u>

* Adjusted for October 1, 1998 access reduction of 10%

SPRINT - FLORIDA, INC.
Intrastate Switched Access Charges
Costs

Line	Element	Source	Rate
1	Switching	Page 4	\$ 0.003155
2	Transport	Page 4	\$ 0.000498
3	Total cost	Line 1 + Line 2	<u>\$ 0.003653</u>
4	1997 Actual Access MOU Demand	Access Billing System	2,936,828,365
5	1997 Average Monthly Demand	Line 4/12 Months	244,735,697
6	Total Switched Access Costs	Line 5 * Line 3	<u>\$ 894,093</u>

SWITCHED ACCESS & INTRALATA TOLL

	Cost (\$/MOU)	
	Switching	Transport
Local Loop	0.003220	
EAS	0.003155	0.0007402
Switched Access	0.003155	0.0004983
IntraLATA Toll	0.003088	0.0006241

	Monthly Usage	
	Local	EAS
BUS	832.39	183.49
CTX	779.87	365.31
KEY	528.83	371.41
PBX	1,328.81	42.86
RES	754.49	198.24

SWITCHED ACCESS & INTRALATA TOLL

	Cost (\$/MOU)	
	Switching	Transport
Local Loop	0.003220	
EAS	0.003155	0.0007402
Switched Access	0.003155	0.0004983
IntraLATA Toll	0.003088	0.0006241

	Monthly Usage	
	Local	EAS
BUS	832.39	183.49
CTX	779.87	365.31
KEY	528.83	371.41
PBX	1,328.81	42.86
RES	754.49	198.24

**Sprint – Florida
Contribution Analysis
IntraLATA Toll**

The contribution analysis for intraLATA toll service reflects the following major assumptions and calculations:

1. The contribution analysis for intraLATA toll is provided on a unit and total service basis for Sprint's entire Florida operations. Residential and business breakdowns for intraLATA toll are not readily available within Sprint's systems.
2. Demand information was extracted from Sprint's December 1997 records (page 2). Sprint's revised intraLATA toll rates effective in July 1998 were applied to the 1997 demand to provide total annual revenues. An average revenue per minute was calculated as well as an average monthly revenue and demand.
3. Cost information was provided from the TSLRIC cost study and includes switching and transport. Costs for terminating access paid to other ILECS were also included in the cost analysis. A percentage of traffic that the terminating access costs apply to was developed from actual data (page 3).

SPRINT - FLORIDA, INC.
IntraLATA Toll
Contribution Analysis

Line	Unit Level	Source	Amount	%
1	Average Rate per MOU	(Page 2, line 3)	\$ 0.1774820	
2	Average Cost per MOU	(Page 3, line 7)	\$ 0.0049557	
3	Contribution	(Line 1 - Line 2)	<u>\$ 0.1725264</u>	3481.4%

	Total Service Level	Source	Amount	%
4	Total Revenues	(Page 2, line 5)	\$ 2,431,246	
5	Total Cost	(Page 3, line 10)	\$ 67,885	
6	Contribution	(Line 4 - Line 5)	<u>\$ 2,363,361</u>	3481.4%

SPRINT - FLORIDA, INC.
IntraLATA Toll
Revenues

Line	Element	Source	Rate
1	1997 Actual IntraLATA Toll Revenue	End User Billing	\$ 29,174,956
2	1997 Actual IntraLATA MOU Demand	End User Billing	164,382,576
3	Average IntraLATA Revenue Per MOU	Line 1/Line 2	<u>\$ 0.177482</u>
4	Average monthly demand	Line 2/12 months	13,698,548
5	Average monthly IntraLATA Toll Revenue	Line 4 * Line 3	<u>\$ 2,431,246</u>

SPRINT - FLORIDA, INC.
IntraLATA Toll
Costs

Line	Element	Source	Rate
1	Switching	Page 4	\$ 0.0030880
2	Transport	Page 4	\$ 0.0006241
3	Total Sprint Cost	Line 1 + Line 2	<u>\$ 0.0037121</u>
4	Terminating access costs to other LECs	Imputation Study	33.5%
5	Terminating access rate **	Line 3	<u>\$ 0.0037121</u>
6	Weighted terminating access costs	Line 4 * Line 5	<u>\$ 0.0012436</u>
7	Total Costs per MOU	Line 3 + Line 6	\$ 0.0049557
8	1997 Actual IntraLATA Toll MOU Demand	End User Billing	164,382,576
9	Average monthly intraLATA toll demand	Line 8/12 months	13,698,548
10	Total Monthly IntraLATA Toll Costs	Line 9 * Line 7	<u>\$ 67,885</u>

** Assumed other ILEC TSLRIC rates would be equivalent to Sprint's

SWITCHED ACCESS & INTRALATA TOLL

	Cost (\$/MOU)	
	Switching	Transport
Local Loop	0.003220	
EAS	0.003155	0.0007402
Switched Access	0.003155	0.0004983
IntraLATA Toll	0.003088	0.0006241

	Monthly Usage	
	Local	EAS
BUS	832.39	183.49
CTX	779.87	365.31
KEY	528.83	371.41
PBX	1,328.81	42.86
RES	754.49	198.24

**Sprint – Florida
Contribution Analysis
Vertical Services**

The contribution analysis for vertical services (features) reflects the following major assumptions and calculations:

1. Demand information was extracted from Sprint's December 1997 records.
2. Rate information was obtained from Sprint's current tariff and reflects recent price changes effective in July 1998 for features.
3. Total revenue and cost amounts were calculated by multiplying demand by the tariff rate.
4. Cost information was provided from the TSLRIC cost study (page 43).
5. Individual contribution analyses are provided for the requested features except item 4.a.7 of the Commission's data request, Call Selector. Sprint does not offer this service in Florida.
6. Contribution analyses are provided for Sprint's most popular feature packages. The analysis compared tariff rates for the package to the cumulative costs of all features included in the package.

SPRINT - FLORIDA, INC.
Features - 3 Way Calling
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 2, Line 1	\$ 3.00		\$ 4.50	
2	Unit Cost	Page 3, Line 1	\$ 0.04420		\$ 0.04420	
3	Contribution	(Line 1 - Line 2)	<u>\$ 2.96</u>	6687.3%	<u>\$ 4.46</u>	10081.0%

Line	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 2, Line 3				
5	Monthly Costs	Page 3, Line 3				
6	Contribution	(Line 4 - Line 5)		6687.3%		10081.0%

**SPRINT - FLORIDA, INC.
Features - 3 Way Calling
Revenues**

Line		<u>Source</u>	<u>Residence</u>	<u>Business</u>
1	Tariff Rate	Tariff	\$ 3.00	\$ 4.50
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - 3 Way Calling
Costs

Line		Source	Residence	Business
1	Cost per unit	Page 43	\$ 0.04420	\$ 0.04420
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Call Waiting
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 5, Line 1	\$ 5.00		\$ 6.00	
2	Unit Cost	Page 6, Line 1	\$ 0.00510		\$ 0.00510	
3	Contribution	(Line 1 - Line 2)	\$ 4.99	97939.2%	\$ 5.99	117547.1%

	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 5, Line 3				
5	Monthly Costs	Page 6, Line 3				
6	Contribution	(Line 4 - Line 5)		97939.2%		117547.1%

SPRINT - FLORIDA, INC.
Features - Call Waiting
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 5.00	\$ 6.00
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Call Waiting
Costs

Line		Source	Residence	Business
1	Cost per unit	Page 43	\$ 0.00510	\$ 0.00510
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Call Forwarding Busy Line
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 8, Line 1	\$ 1.00		\$ 1.00	
2	Unit Cost	Page 9, Line 1	\$ 0.00870		\$ 0.00870	
3	Contribution	(Line 1 - Line 2)	\$ 0.99	11394.3%	\$ 0.99	11394.3%

Line	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 8, Line 3				
5	Monthly Costs	Page 9, Line 3				
6	Contribution	(Line 4 - Line 5)		11394.3%		11394.3%

SPRINT - FLORIDA, INC.
Features - Call Forwarding Busy Line
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 1.00	\$ 1.00
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Call Forwarding Busy Line
Costs

Line		Source	Residence	Business
1	Cost per unit	Page 43	\$ 0.00870	\$ 0.00870
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Call Forwarding Don't Answer
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 11, Line 1	\$ 1.00		\$ 1.00	
2	Unit Cost	Page 12, Line 1	\$ 0.01700		\$ 0.01700	
3	Contribution	(Line 1 - Line 2)	\$ 0.98	5782.4%	\$ 0.98	5782.4%

	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 11, Line 3				
5	Monthly Costs	Page 12, Line 3				
6	Contribution	(Line 4 - Line 5)		5782.4%		5782.4%

SPRINT - FLORIDA, INC.
Features - Call Forwarding Don't Answer
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 1.00	\$ 1.00
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Call Forwarding Don't Answer
Costs

Line		Source	Residence	Business
1	Cost per unit	Page 43	\$ 0.01700	\$ 0.01700
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Return Call
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 14, Line 1	\$ 4.00		\$ 4.50	
2	Unit Cost	Page 15, Line 1	\$ 0.18750		\$ 0.18750	
3	Contribution	(Line 1 - Line 2)	\$ 3.81	2033.3%	\$ 4.31	2300.0%

	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 14, Line 3				
5	Monthly Costs	Page 15, Line 3				
6	Contribution	(Line 4 - Line 5)		2033.3%		2300.0%

SPRINT - FLORIDA, INC.
Features - Return Call
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 4.00	\$ 4.50
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Return Call
Costs

Line		Source	Residence	Business
1	Cost per unit	Page 43	\$ 0.18750	\$ 0.18750
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Repeat Dialing
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 17, Line 1	\$ 3.00		\$ 3.50	
2	Unit Cost	Page 18, Line 1	\$ 0.09400		\$ 0.09400	
3	Contribution	(Line 1 - Line 2)	<u>\$ 2.91</u>	3091.5%	<u>\$ 3.41</u>	3623.4%

	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 17, Line 3				
5	Monthly Costs	Page 18, Line 3				
6	Contribution	(Line 4 - Line 5)		3091.5%		3623.4%

SPRINT - FLORIDA, INC.
Features - Repeat Dialing
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 3.00	\$ 3.50
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Repeat Dialing
Costs

Line		Source	Residence	Business
1	Cost per unit	Page 43	\$ 0.09400	\$ 0.09400
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Call Forwarding
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 20, Line 1	\$ 4.50		\$ 4.50	
2	Unit Cost	Page 21, Line 1	\$ 0.35380		\$ 0.35380	
3	Contribution	(Line 1 - Line 2)	<u>\$ 4.15</u>	1171.9%	<u>\$ 4.15</u>	1171.9%

	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 20, Line 3				
5	Monthly Costs	Page 21, Line 3				
6	Contribution	(Line 4 - Line 5)		1171.9%		1171.9%

SPRINT - FLORIDA, INC.
Features - Call Forwarding
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 4.50	\$ 4.50
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Call Forwarding
Costs

Line		Source	Residence	Business
1	Cost per unit	Page 43	\$ 0.35380	\$ 0.35380
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Caller ID With Name
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 23, Line 1	\$ 8.00		\$ 10.00	
2	Unit Cost	Page 24, Line 1	\$ 0.86800		\$ 0.86800	
3	Contribution	(Line 1 - Line 2)	\$ 7.13	821.7%	\$ 9.13	1052.1%

	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 23, Line 3				
5	Monthly Costs	Page 24, Line 3				
6	Contribution	(Line 4 - Line 5)		821.7%		1052.1%

SPRINT - FLORIDA, INC.
Features - Caller ID With Name
Revenues

Line		<u>Source</u>	<u>Residence</u>	<u>Business</u>
1	Tariff Rate	Tariff	\$ 8.00	\$ 10.00
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Caller ID With Name
Costs

Line		<u>Source</u>	<u>Residence</u>	<u>Business</u>
1	Cost per unit	Page 43	\$ 0.86800	\$ 0.86800
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Custom Code Restrictions
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 26, Line 1	\$ 2.50		\$ 4.00	
2	Unit Cost	Page 27, Line 1	\$ 0.02950		\$ 0.02950	
3	Contribution	(Line 1 - Line 2)	<u>\$ 2.47</u>	8374.6%	<u>\$ 3.97</u>	13459.3%

Line	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 26, Line 3				
5	Monthly Costs	Page 27, Line 3				
6	Contribution	(Line 4 - Line 5)		8374.6%		13459.3%

SPRINT - FLORIDA, INC.
Features - Custom Code Restrictions
Revenues

Line		<u>Source</u>	<u>Residence</u>	<u>Business</u>
1	Tariff Rate	Tariff	\$ 2.50	\$ 4.00
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Features - Custom Code Restrictions
Costs

Line		Source	Residence	Business
1	Cost per unit	Page 43	\$ 0.02950	\$ 0.02950
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Feature Packages - In Touch with Call Forward
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 29, Line 1	\$ 7.00		\$ 9.00	
2	Unit Cost	Page 30, Line 1	\$ 0.42880		\$ 0.42880	
3	Contribution	(Line 1 - Line 2)	\$ 6.57	1532.5%	\$ 8.57	1998.9%

	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 29, Line 3				
5	Monthly Costs	Page 30, Line 3				
6	Contribution	(Line 4 - Line 5)		1532.5%		1998.9%

Package includes:

- Call Waiting
- 3 Way Calling
- Call Forwarding
- Call Forward Busy
- Call Forward Don't Answer

SPRINT - FLORIDA, INC.
Feature Packages - In Touch with Call Forward
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 7.00	\$ 9.00
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Feature Packages - In Touch with Call Forward
Costs

Line		Source	Residence	Business
1	Cost for Call Waiting	Page 43	\$ 0.00510	\$ 0.00510
	Cost for 3 Way Calling	Page 43	\$ 0.04420	\$ 0.04420
	Cost for Call Forward	Page 43	\$ 0.35380	\$ 0.35380
	Cost for Call Forward Busy	Page 43	\$ 0.00870	\$ 0.00870
	Cost for Call Forward Don't Answer	Page 43	\$ 0.01700	\$ 0.01700
	Total Unit Cost of Features in Package		\$ 0.42880	\$ 0.42880
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Feature Packages - In Touch with Call Return
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 32, Line 1	\$ 8.00		\$ 10.00	
2	Unit Cost	Page 33, Line 1	\$ 0.26250		\$ 0.26250	
3	Contribution	(Line 1 - Line 2)	<u>\$ 7.74</u>	2947.6%	<u>\$ 9.74</u>	3709.5%

	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 32, Line 3				
5	Monthly Costs	Page 33, Line 3				
6	Contribution	(Line 4 - Line 5)		2947.6%		3709.5%

Package includes:

- Call Waiting
- 3 Way Calling
- Call Return
- Call Forward Busy
- Call Forward Don't Answer

SPRINT - FLORIDA, INC.
Feature Packages - In Touch with Call Return
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 8.00	\$ 10.00
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Feature Packages - In Touch with Call Return
Costs

Line		Source	Residence	Business
1	Cost for Call Waiting	Page 43	\$ 0.00510	\$ 0.00510
	Cost for 3 Way Calling	Page 43	\$ 0.04420	\$ 0.04420
	Cost for Call Return	Page 43	\$ 0.18750	\$ 0.18750
	Cost for Call Forward Busy	Page 43	\$ 0.00870	\$ 0.00870
	Cost for Call Forward Don't Answer	Page 43	\$ 0.01700	\$ 0.01700
	Total Unit Cost of Features in Package		\$ 0.26250	\$ 0.26250
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Feature Packages - Call Manager
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 35, Line 1	\$ 10.00		\$ 12.00	
2	Unit Cost	Page 36, Line 1	\$ 0.71030		\$ 0.71030	
3	Contribution	(Line 1 - Line 2)	\$ 9.29	1307.9%	\$ 11.29	1589.4%

	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 35, Line 3				
5	Monthly Costs	Page 36, Line 3				
6	Contribution	(Line 4 - Line 5)		1307.9%		1589.4%

Package includes:

- Call Waiting
- 3 Way Calling
- Call Forwarding
- Call Forward Busy
- Call Forward Don't Answer
- Return Call
- Repeat Dialing

SPRINT - FLORIDA, INC.
Feature Packages - Call Manager
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 10.00	\$ 12.00
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Feature Packages - Call Manager
Costs

Line		Source	Residence	Business
1	Cost for Call Waiting	Page 43	\$ 0.00510	\$ 0.00510
	Cost for 3 Way Calling	Page 43	\$ 0.04420	\$ 0.04420
	Cost for Call Forward	Page 43	\$ 0.35380	\$ 0.35380
	Cost for Call Forward Busy	Page 43	\$ 0.00870	\$ 0.00870
	Cost for Call Forward Don't Answer	Page 43	\$ 0.01700	\$ 0.01700
	Cost for Return Call	Page 43	\$ 0.18750	\$ 0.18750
	Cost for Repeat Dial	Page 43	\$ 0.09400	\$ 0.09400
	Total Unit Cost of Features in Package		\$ 0.71030	\$ 0.71030
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Feature Packages - Call Manager Plus
Contribution Analysis

Line	Unit Level	Source	Residence		Business	
			Amount	%	Amount	%
1	Unit Rate	Page 38, Line 1	\$ 14.00		\$ 16.00	
2	Unit Cost	Page 39, Line 1	\$ 1.543109		\$ 1.543109	
3	Contribution	(Line 1 - Line 2)	\$ 12.46	807.3%	\$ 14.46	936.9%

	Total Level	Source	Residence		Business	
			Amount	%	Amount	%
4	Monthly Revenues	Page 38, Line 3				
5	Monthly Costs	Page 39, Line 3				
6	Contribution	(Line 4 - Line 5)		807.3%		936.9%

Package includes:

- Call Waiting
- Call Forward Busy
- Call Forward Don't Answer
- Return Call
- Call Waiting ID
- Caller ID with Name

SPRINT - FLORIDA, INC.
Feature Packages - Call Manager Plus
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 14.00	\$ 16.00
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Feature Packages - Call Manager Plus
Costs

Line		Source	Residence	Business
1	Cost for Call Waiting	Page 43	\$ 0.005100	\$ 0.005100
	Cost for Call Forward Busy	Page 43	\$ 0.008700	\$ 0.008700
	Cost for Call Forward Don't Answer	Page 43	\$ 0.017000	\$ 0.017000
	Cost for Return Call	Page 43	\$ 0.187500	\$ 0.187500
	Cost for Call Waiting ID	Page 43	\$ 0.456809	\$ 0.456809
	Cost for Caller ID with Name	Page 43	\$ 0.868000	\$ 0.868000
	Total Unit Cost of Features in Package		\$ 1.543109	\$ 1.543109
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Feature Packages - Advantage
Contribution Analysis

Line	Unit Level	Source	Residence Amount	%	Business Amount	%
1	Unit Rate	Page 41, Line 1	\$ 15.00		\$ 17.00	
2	Unit Cost	Page 42, Line 1	\$ 2.58		\$ 2.58	
3	Contribution	(Line 1 - Line 2)	<u>\$ 12.42</u>	482.5%	<u>\$ 14.42</u>	560.1%

	Total Level	Source	Residence Amount	%	Business Amount	%
4	Monthly Revenues	Page 41, Line 3				
5	Monthly Costs	Page 42, Line 3				
6	Contribution	(Line 4 - Line 5)		482.5%		560.1%

Package includes:

- Call Waiting
- 3 Way Calling
- Call Forward
- Call Forward Busy
- Call Forward Don't Answer
- Return Call
- Repeat Dialing
- Call Waiting ID
- Caller ID with Name
- Selective Call Rejection

SPRINT - FLORIDA, INC.
Feature Packages - Advantage
Revenues

Line		Source	Residence	Business
1	Tariff Rate	Tariff	\$ 15.00	\$ 17.00
2	Demand	End User Billing		
3	Total Revenue	Line 1 * Line 2		

SPRINT - FLORIDA, INC.
Feature Packages - Advantage
Costs

Line		Source	Residence	Business
1	Cost for Call Waiting	Page 43	\$ 0.005100	\$ 0.005100
	Costs for 3 Way Calling	Page 43	\$ 0.044200	\$ 0.044200
	Costs for Call Forward	Page 43	\$ 0.353800	\$ 0.353800
	Cost for Call Forward Busy	Page 43	\$ 0.008700	\$ 0.008700
	Cost for Call Forward Don't Answer	Page 43	\$ 0.017000	\$ 0.017000
	Cost for Return Call	Page 43	\$ 0.187500	\$ 0.187500
	Costs for Repeat Dialing	Page 43	\$ 0.094000	\$ 0.094000
	Cost for Call Waiting ID	Page 43	\$ 0.456809	\$ 0.456809
	Cost for Caller ID with Name	Page 43	\$ 0.868000	\$ 0.868000
	Cost for Selective Call Rejection	Page 43	\$ 0.540214	\$ 0.540214
	Total Unit Cost of Features in Package		\$ 2.575323	\$ 2.575323
2	Demand	End User Billing		
3	Total Cost	Line 1 * Line 2		

SPRINT - FLORIDA
TSLRIC STUDY
FEATURES

Features
Page 43

Features		
- 3-way calling	\$ per month	0.04420
- call waiting	\$ per month	0.00510
- call forwarding busy line	\$ per month	0.00870
- call forwarding don't answer	\$ per month	0.01700
- call return	\$ per month	0.18750
- repeat dialing	\$ per month	0.09400
- call forwarding	\$ per month	0.35380
- caller ID deluxe	\$ per month	0.86800
- custom code restrictions	\$ per month	0.02950
- selective call rejection	\$ per month	0.540214
- call waiting ID	\$ per month	0.456809



4. (b) Please provide the cost study and all associated work papers and related documentation, that results in each of the contribution analyses in (a)

The response to this request follows.

Costs for local loop were estimated by applying annual charge factors by investment account to the local loop investment developed in the Benchmark Cost Proxy Model (BCPM) version 3.1. Inputs used for the BCPM are summarized behind the "BCPM Inputs" divider in this section. Assumptions used for the inputs are described behind the "Input Documentation" divider.

Results of the BCPM are shown on the "Key Elements" summary on the following page. Business and residential loop costs by rate group were developed by first developing grid-level loop costs. Rate group loop costs for business and residential loops were developed by weighting grid-level costs according to the assumed number of access lines in BCPM.

A summary of costs is as follows:

Company	Rate Group	Loop Cost (\$/mo)	
		Residential	Business
<i>Sprint</i>	Statewide	21.92	13.46
<i>Central Tel Co of Florida</i>	Statewide	28.11	11.37
	1	45.32	19.44
	2	55.11	27.89
	3	39.44	23.06
	4	36.56	28.77
	5	13.73	11.04
	6	23.07	8.67
<i>United Telephone of Florida</i>	Statewide	20.55	14.24
	1	38.03	24.11
	2	27.29	19.71
	3	22.43	17.16
	4	20.51	14.85
	5	15.60	12.37
	6	14.40	10.71

Benchmark Cost Proxy Model Results

Key Elements

TOTAL SUMMARY

SPRINT

Investment: Capped¹

Lines Above \$10K Loop Investment = 7,635

FLORIDA
WIRE CENTERS [139]

Analysis	Total	Per Line
GRID Lines Served	1,938,005	
Average Distribution Length	2,093,554,840	1,080
Average Feeder Length	36,524,036,205	18,846
Average Loop Length	38,617,591,045	19,926
Distribution Investment	\$ 876,137,822	\$ 452
Feeder Investment	\$ 1,209,409,150	\$ 624
Loop Investment (Capped)	\$ 1,945,240,801	\$ 1,004

Plant Type	Capped Annual Investment	Percentage	Annual Per Line Investment
2112 Motor Vehicle	\$ -	0.00%	\$ -
2114 Special Purpose Vehicle	\$ -	0.00%	\$ -
2115 Garage Work	\$ -	0.00%	\$ -
2116 Other Work	\$ -	0.00%	\$ -
2122 Furniture	\$ -	0.00%	\$ -
2123 Office	\$ -	0.00%	\$ -
2124 General Purpose Computers	\$ -	0.00%	\$ -
Total Support Investment	\$ -	0.00%	\$ -
2111 Land	\$ -	0.00%	\$ -
2121 Building	\$ -	0.00%	\$ -
2210 Switching Equipment	\$ -	0.00%	\$ -
2230 Circuit Equipment	\$ 462,150,412	0.00%	\$ 238.47
2230 IOF Equipment	\$ -	0.00%	\$ -
2411 Pole Investment	\$ 22,857,607	1.18%	\$ 11.79
2421 Aerial Cable - Copper	\$ 76,917,615	3.95%	\$ 39.69
2421 Aerial Cable - Fiber	\$ 2,057,990	0.11%	\$ 1.06
2421 Aerial Cable	\$ 78,975,605	4.06%	\$ 40.75
2422 Underground Cable - Copper	\$ 39,793,912	2.05%	\$ 20.53
2422 Underground Cable - Fiber	\$ 40,427,518	2.08%	\$ 20.86
2422 Underground Cable	\$ 80,221,429	4.12%	\$ 41.39
2423 Buried Cable - Copper	\$ 1,109,985,682	57.06%	\$ 572.75
2423 Buried Cable - Fiber	\$ 120,059,738	6.17%	\$ 61.95
2423 Buried Cable	\$ 1,230,045,419	0.00%	\$ 634.70
2441 Conduit Investment	\$ 70,990,328	3.65%	\$ 36.63
Total Plant Investment	\$ 1,945,240,801	13.01%	\$ 1,003.73
Total Investment	\$ 1,945,240,801	13.01%	\$ 1,003.73

ptions:

C:\BCPM3.1 - JULY 8, 1998\RESULTS\FLTSLRIC_FLTSLRIC_GRID_REPORT.CSV
PROCESSING - FLTSLRIC : CAPCOST - FLTSLRIC

BCPM INPUTS

Buried Drop Costs

Size	FIXED COSTS					DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Adjustment	Total	Adjustment	Total
1	\$	0.74					\$	0.74	\$	0.74	\$

Aerial Drop Costs

Size	FIXED COSTS					DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Adjustment	Total	Adjustment	Total
1	\$	0.80					\$	0.80	\$	0.80	\$

Residence Costs

Size	FIXED COSTS					DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Adjustment	Total	Adjustment	Total
NID	\$	58.95					\$	58.95	\$	58.95	\$
Protector											
Interface											

Business Costs

Size	FIXED COSTS					DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Adjustment	Total	Adjustment	Total
NID	\$	99.85					\$	99.85	\$	99.85	\$
Protector											
Interface											

Fiber Costs

Fiber - Underground

Size	FIXED COSTS					DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Adjustment	Total	Adjustment	Total
288	\$	15.01					\$	15.01	\$	15.01	\$
144	\$	9.41					\$	9.41	\$	9.41	\$
96	\$	7.51					\$	7.51	\$	7.51	\$
72	\$	6.55					\$	6.55	\$	6.55	\$
60	\$	6.07					\$	6.07	\$	6.07	\$
48	\$	5.51					\$	5.51	\$	5.51	\$
36	\$	4.91					\$	4.91	\$	4.91	\$
24	\$	4.58					\$	4.58	\$	4.58	\$
18	\$	4.43					\$	4.43	\$	4.43	\$
12	\$	4.23					\$	4.23	\$	4.23	\$

Fiber - Buried

Size	FIXED COSTS					DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Adjustment	Total	Adjustment	Total
288	\$	14.26					\$	14.26	\$	14.26	\$
144	\$	8.28					\$	8.28	\$	8.28	\$
96	\$	6.23					\$	6.23	\$	6.23	\$
72	\$	5.16					\$	5.16	\$	5.16	\$
60	\$	4.64					\$	4.64	\$	4.64	\$
48	\$	4.07					\$	4.07	\$	4.07	\$
36	\$	3.42					\$	3.42	\$	3.42	\$
24	\$	3.06					\$	3.06	\$	3.06	\$
18	\$	2.90					\$	2.90	\$	2.90	\$
12	\$	2.68					\$	2.68	\$	2.68	\$

Buried Drop Costs

Size	DENSITY 201-650	DENSITY 651-850	DENSITY 851-2550	DENSITY 2551-5000	DENSITY 5001-10000	DENSITY >10001
1	\$ 0.74	\$ 0.74	\$ 0.74	\$ 0.74	\$ 0.74	\$ 0.74
	Adjustment	Total	Adjustment	Total	Adjustment	Total

Aerial Drop Costs

Size	DENSITY 201-650	DENSITY 651-850	DENSITY 851-2550	DENSITY 2551-5000	DENSITY 5001-10000	DENSITY >10001
1	\$ 0.80	\$ 0.80	\$ 0.80	\$ 0.80	\$ 0.80	\$ 0.80
	Adjustment	Total	Adjustment	Total	Adjustment	Total

Residence Costs

Size	DENSITY 201-650	DENSITY 651-850	DENSITY 851-2550	DENSITY 2551-5000	DENSITY 5001-10000	DENSITY >10001
NID	\$ 58.95	\$ 58.95	\$ 58.95	\$ 58.95	\$ 58.95	\$ 58.95
Protection	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interface	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Adjustment	Total	Adjustment	Total	Adjustment	Total

Business Costs

Size	DENSITY 201-650	DENSITY 651-850	DENSITY 851-2550	DENSITY 2551-5000	DENSITY 5001-10000	DENSITY >10001
NID	\$ 99.85	\$ 99.85	\$ 99.85	\$ 99.85	\$ 99.85	\$ 99.85
Protection	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interface	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Adjustment	Total	Adjustment	Total	Adjustment	Total

Fiber Costs

Fiber - Underground

Size	DENSITY 201-650	DENSITY 651-850	DENSITY 851-2550	DENSITY 2551-5000	DENSITY 5001-10000	DENSITY >10001
288	\$ 15.01	\$ 15.01	\$ 15.01	\$ 15.01	\$ 15.01	\$ 15.01
144	\$ 9.41	\$ 9.41	\$ 9.41	\$ 9.41	\$ 9.41	\$ 9.41
96	\$ 7.51	\$ 7.51	\$ 7.51	\$ 7.51	\$ 7.51	\$ 7.51
72	\$ 6.55	\$ 6.55	\$ 6.55	\$ 6.55	\$ 6.55	\$ 6.55
60	\$ 6.07	\$ 6.07	\$ 6.07	\$ 6.07	\$ 6.07	\$ 6.07
48	\$ 5.51	\$ 5.51	\$ 5.51	\$ 5.51	\$ 5.51	\$ 5.51
36	\$ 4.91	\$ 4.91	\$ 4.91	\$ 4.91	\$ 4.91	\$ 4.91
24	\$ 4.58	\$ 4.58	\$ 4.58	\$ 4.58	\$ 4.58	\$ 4.58
18	\$ 4.43	\$ 4.43	\$ 4.43	\$ 4.43	\$ 4.43	\$ 4.43
12	\$ 4.23	\$ 4.23	\$ 4.23	\$ 4.23	\$ 4.23	\$ 4.23
	Adjustment	Total	Adjustment	Total	Adjustment	Total

Fiber - Buried

Size	DENSITY 201-650	DENSITY 651-850	DENSITY 851-2550	DENSITY 2551-5000	DENSITY 5001-10000	DENSITY >10001
288	\$ 14.26	\$ 14.26	\$ 14.26	\$ 14.26	\$ 14.26	\$ 14.26
144	\$ 8.28	\$ 8.28	\$ 8.28	\$ 8.28	\$ 8.28	\$ 8.28
96	\$ 6.23	\$ 6.23	\$ 6.23	\$ 6.23	\$ 6.23	\$ 6.23
72	\$ 5.16	\$ 5.16	\$ 5.16	\$ 5.16	\$ 5.16	\$ 5.16
60	\$ 4.64	\$ 4.64	\$ 4.64	\$ 4.64	\$ 4.64	\$ 4.64
48	\$ 4.07	\$ 4.07	\$ 4.07	\$ 4.07	\$ 4.07	\$ 4.07
36	\$ 3.42	\$ 3.42	\$ 3.42	\$ 3.42	\$ 3.42	\$ 3.42
24	\$ 3.06	\$ 3.06	\$ 3.06	\$ 3.06	\$ 3.06	\$ 3.06
18	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90
12	\$ 2.68	\$ 2.68	\$ 2.68	\$ 2.68	\$ 2.68	\$ 2.68
	Adjustment	Total	Adjustment	Total	Adjustment	Total

Fiber - Aerial

Size	FIXED COSTS				DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Maintal Cost	Supply Cost	Placing	Splicing	Engineering	Total	Adjustment	Total	Adjustment	Total
288	\$ 13.90					\$ 13.90	\$ -	\$ 13.90	\$ -	\$ 13.90
144	\$ 7.82					\$ 7.82	\$ -	\$ 7.82	\$ -	\$ 7.82
96	\$ 5.96					\$ 5.96	\$ -	\$ 5.96	\$ -	\$ 5.96
72	\$ 5.33					\$ 5.33	\$ -	\$ 5.33	\$ -	\$ 5.33
60	\$ 4.68					\$ 4.68	\$ -	\$ 4.68	\$ -	\$ 4.68
48	\$ 4.15					\$ 4.15	\$ -	\$ 4.15	\$ -	\$ 4.15
36	\$ 3.70					\$ 3.70	\$ -	\$ 3.70	\$ -	\$ 3.70
24	\$ 3.22					\$ 3.22	\$ -	\$ 3.22	\$ -	\$ 3.22
18	\$ 3.03					\$ 3.03	\$ -	\$ 3.03	\$ -	\$ 3.03
12	\$ 2.83					\$ 2.83	\$ -	\$ 2.83	\$ -	\$ 2.83

Terminal Costs

Outdoor SAI/Cross Connector

Size	FIXED COSTS				DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Maintal Cost	Supply Cost	Placing	Splicing	Engineering	Total	Adjustment	Total	Adjustment	Total
25	\$ 498.13					\$ 498.13	\$ -	\$ 498.13	\$ -	\$ 498.13
50	\$ 875.49					\$ 875.49	\$ -	\$ 875.49	\$ -	\$ 875.49
100	\$ 1,197.67					\$ 1,197.67	\$ -	\$ 1,197.67	\$ -	\$ 1,197.67
200	\$ 1,371.59					\$ 1,371.59	\$ -	\$ 1,371.59	\$ -	\$ 1,371.59
300	\$ 1,590.54					\$ 1,590.54	\$ -	\$ 1,590.54	\$ -	\$ 1,590.54
400	\$ 1,794.08					\$ 1,794.08	\$ -	\$ 1,794.08	\$ -	\$ 1,794.08
600	\$ 2,447.66					\$ 2,447.66	\$ -	\$ 2,447.66	\$ -	\$ 2,447.66
900	\$ 3,361.55					\$ 3,361.55	\$ -	\$ 3,361.55	\$ -	\$ 3,361.55
1200	\$ 4,039.73					\$ 4,039.73	\$ -	\$ 4,039.73	\$ -	\$ 4,039.73
1800	\$ 5,736.78					\$ 5,736.78	\$ -	\$ 5,736.78	\$ -	\$ 5,736.78
2100	\$ 6,684.45					\$ 6,684.45	\$ -	\$ 6,684.45	\$ -	\$ 6,684.45
2400	\$ 7,110.22					\$ 7,110.22	\$ -	\$ 7,110.22	\$ -	\$ 7,110.22
3000	\$ 8,623.59					\$ 8,623.59	\$ -	\$ 8,623.59	\$ -	\$ 8,623.59
3600	\$ 10,084.82					\$ 10,084.82	\$ -	\$ 10,084.82	\$ -	\$ 10,084.82
4200	\$ 12,862.01					\$ 12,862.01	\$ -	\$ 12,862.01	\$ -	\$ 12,862.01

Indoor SAI/Building (Includes cost of protection)

Size	FIXED COSTS				DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Maintal Cost	Supply Cost	Placing	Splicing	Engineering	Total	Adjustment	Total	Adjustment	Total
25	\$ 509.33					\$ 509.33	\$ -	\$ 509.33	\$ -	\$ 509.33
50	\$ 751.63					\$ 751.63	\$ -	\$ 751.63	\$ -	\$ 751.63
100	\$ 1,102.64					\$ 1,102.64	\$ -	\$ 1,102.64	\$ -	\$ 1,102.64
200	\$ 1,979.68					\$ 1,979.68	\$ -	\$ 1,979.68	\$ -	\$ 1,979.68
300	\$ 2,781.51					\$ 2,781.51	\$ -	\$ 2,781.51	\$ -	\$ 2,781.51
400	\$ 3,733.75					\$ 3,733.75	\$ -	\$ 3,733.75	\$ -	\$ 3,733.75
600	\$ 5,412.63					\$ 5,412.63	\$ -	\$ 5,412.63	\$ -	\$ 5,412.63
900	\$ 8,043.74					\$ 8,043.74	\$ -	\$ 8,043.74	\$ -	\$ 8,043.74
1200	\$ 9,985.32					\$ 9,985.32	\$ -	\$ 9,985.32	\$ -	\$ 9,985.32
1800	\$ 14,977.97					\$ 14,977.97	\$ -	\$ 14,977.97	\$ -	\$ 14,977.97
2100	\$ 17,098.30					\$ 17,098.30	\$ -	\$ 17,098.30	\$ -	\$ 17,098.30
2400	\$ 19,594.63					\$ 19,594.63	\$ -	\$ 19,594.63	\$ -	\$ 19,594.63
3000	\$ 24,211.29					\$ 24,211.29	\$ -	\$ 24,211.29	\$ -	\$ 24,211.29
3600	\$ 29,203.95					\$ 29,203.95	\$ -	\$ 29,203.95	\$ -	\$ 29,203.95
4200	\$ 34,196.60					\$ 34,196.60	\$ -	\$ 34,196.60	\$ -	\$ 34,196.60

Aerial Drop Terminal Cost

Size	FIXED COSTS				DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Maintal Cost	Supply Cost	Placing	Splicing	Engineering	Total	Adjustment	Total	Adjustment	Total
6	\$ 150.32					\$ 150.32	\$ -	\$ 150.32	\$ -	\$ 150.32
12	\$ 180.16					\$ 180.16	\$ -	\$ 180.16	\$ -	\$ 180.16
25	\$ 282.99					\$ 282.99	\$ -	\$ 282.99	\$ -	\$ 282.99

Size	DENSITY 201-650		DENSITY 651-850		DENSITY 851-2550		DENSITY 2551-5000		DENSITY 5001-10000		DENSITY >10001	
	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total
288	\$ -	\$ 13.90	\$ -	\$ 13.90	\$ -	\$ 13.90	\$ -	\$ 13.90	\$ -	\$ 13.90	\$ -	\$ 13.90
144	\$ -	\$ 7.82	\$ -	\$ 7.82	\$ -	\$ 7.82	\$ -	\$ 7.82	\$ -	\$ 7.82	\$ -	\$ 7.82
96	\$ -	\$ 5.96	\$ -	\$ 5.96	\$ -	\$ 5.96	\$ -	\$ 5.96	\$ -	\$ 5.96	\$ -	\$ 5.96
72	\$ -	\$ 5.33	\$ -	\$ 5.33	\$ -	\$ 5.33	\$ -	\$ 5.33	\$ -	\$ 5.33	\$ -	\$ 5.33
60	\$ -	\$ 4.68	\$ -	\$ 4.68	\$ -	\$ 4.68	\$ -	\$ 4.68	\$ -	\$ 4.68	\$ -	\$ 4.68
48	\$ -	\$ 4.15	\$ -	\$ 4.15	\$ -	\$ 4.15	\$ -	\$ 4.15	\$ -	\$ 4.15	\$ -	\$ 4.15
36	\$ -	\$ 3.70	\$ -	\$ 3.70	\$ -	\$ 3.70	\$ -	\$ 3.70	\$ -	\$ 3.70	\$ -	\$ 3.70
24	\$ -	\$ 3.22	\$ -	\$ 3.22	\$ -	\$ 3.22	\$ -	\$ 3.22	\$ -	\$ 3.22	\$ -	\$ 3.22
18	\$ -	\$ 3.03	\$ -	\$ 3.03	\$ -	\$ 3.03	\$ -	\$ 3.03	\$ -	\$ 3.03	\$ -	\$ 3.03
12	\$ -	\$ 2.83	\$ -	\$ 2.83	\$ -	\$ 2.83	\$ -	\$ 2.83	\$ -	\$ 2.83	\$ -	\$ 2.83

Terminal Costs

Outdoor SAI/Cross Connector

Size	DENSITY 201-650		DENSITY 651-850		DENSITY 851-2550		DENSITY 2551-5000		DENSITY 5001-10000		DENSITY >10001	
	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total
25		\$ 498.13		\$ 498.13		\$ 498.13		\$ 498.13		\$ 498.13		\$ 498.13
50		\$ 875.49		\$ 875.49		\$ 875.49		\$ 875.49		\$ 875.49		\$ 875.49
100		\$ 1,197.67		\$ 1,197.67		\$ 1,197.67		\$ 1,197.67		\$ 1,197.67		\$ 1,197.67
200		\$ 1,371.59		\$ 1,371.59		\$ 1,371.59		\$ 1,371.59		\$ 1,371.59		\$ 1,371.59
300		\$ 1,590.54		\$ 1,590.54		\$ 1,590.54		\$ 1,590.54		\$ 1,590.54		\$ 1,590.54
400		\$ 1,794.08		\$ 1,794.08		\$ 1,794.08		\$ 1,794.08		\$ 1,794.08		\$ 1,794.08
600		\$ 2,447.66		\$ 2,447.66		\$ 2,447.66		\$ 2,447.66		\$ 2,447.66		\$ 2,447.66
900		\$ 3,361.55		\$ 3,361.55		\$ 3,361.55		\$ 3,361.55		\$ 3,361.55		\$ 3,361.55
1200		\$ 4,039.73		\$ 4,039.73		\$ 4,039.73		\$ 4,039.73		\$ 4,039.73		\$ 4,039.73
1800		\$ 5,736.78		\$ 5,736.78		\$ 5,736.78		\$ 5,736.78		\$ 5,736.78		\$ 5,736.78
2100		\$ 6,684.45		\$ 6,684.45		\$ 6,684.45		\$ 6,684.45		\$ 6,684.45		\$ 6,684.45
2400		\$ 7,110.22		\$ 7,110.22		\$ 7,110.22		\$ 7,110.22		\$ 7,110.22		\$ 7,110.22
3000		\$ 8,623.59		\$ 8,623.59		\$ 8,623.59		\$ 8,623.59		\$ 8,623.59		\$ 8,623.59
3600		\$ 10,084.82		\$ 10,084.82		\$ 10,084.82		\$ 10,084.82		\$ 10,084.82		\$ 10,084.82
4200		\$ 12,862.01		\$ 12,862.01		\$ 12,862.01		\$ 12,862.01		\$ 12,862.01		\$ 12,862.01

Indoor SAI/Building (Includes c

Size	DENSITY 201-650		DENSITY 651-850		DENSITY 851-2550		DENSITY 2551-5000		DENSITY 5001-10000		DENSITY >10001	
	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total
25		\$ 509.33		\$ 509.33		\$ 509.33		\$ 509.33		\$ 509.33		\$ 509.33
50		\$ 751.63		\$ 751.63		\$ 751.63		\$ 751.63		\$ 751.63		\$ 751.63
100		\$ 1,102.64		\$ 1,102.64		\$ 1,102.64		\$ 1,102.64		\$ 1,102.64		\$ 1,102.64
200		\$ 1,979.68		\$ 1,979.68		\$ 1,979.68		\$ 1,979.68		\$ 1,979.68		\$ 1,979.68
300		\$ 2,781.51		\$ 2,781.51		\$ 2,781.51		\$ 2,781.51		\$ 2,781.51		\$ 2,781.51
400		\$ 3,733.75		\$ 3,733.75		\$ 3,733.75		\$ 3,733.75		\$ 3,733.75		\$ 3,733.75
600		\$ 5,412.63		\$ 5,412.63		\$ 5,412.63		\$ 5,412.63		\$ 5,412.63		\$ 5,412.63
900		\$ 8,043.74		\$ 8,043.74		\$ 8,043.74		\$ 8,043.74		\$ 8,043.74		\$ 8,043.74
1200		\$ 9,985.32		\$ 9,985.32		\$ 9,985.32		\$ 9,985.32		\$ 9,985.32		\$ 9,985.32
1800		\$ 14,977.97		\$ 14,977.97		\$ 14,977.97		\$ 14,977.97		\$ 14,977.97		\$ 14,977.97
2100		\$ 17,098.30		\$ 17,098.30		\$ 17,098.30		\$ 17,098.30		\$ 17,098.30		\$ 17,098.30
2400		\$ 19,594.63		\$ 19,594.63		\$ 19,594.63		\$ 19,594.63		\$ 19,594.63		\$ 19,594.63
3000		\$ 24,211.29		\$ 24,211.29		\$ 24,211.29		\$ 24,211.29		\$ 24,211.29		\$ 24,211.29
3600		\$ 29,203.95		\$ 29,203.95		\$ 29,203.95		\$ 29,203.95		\$ 29,203.95		\$ 29,203.95
4200		\$ 34,196.60		\$ 34,196.60		\$ 34,196.60		\$ 34,196.60		\$ 34,196.60		\$ 34,196.60

Aerial Drop Terminal Cost

Size	DENSITY 201-650		DENSITY 651-850		DENSITY 851-2550		DENSITY 2551-5000		DENSITY 5001-10000		DENSITY >10001	
	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total
6		\$ 150.32		\$ 150.32		\$ 150.32		\$ 150.32		\$ 150.32		\$ 150.32
12		\$ 180.16		\$ 180.16		\$ 180.16		\$ 180.16		\$ 180.16		\$ 180.16
25		\$ 282.99		\$ 282.99		\$ 282.99		\$ 282.99		\$ 282.99		\$ 282.99

Buried Drop Cable Initial Cost (Encapsulated or Pedestal)

Size	FIXED COSTS					DENSITY 0-5		DENSITY 6-100		DENSITY 101-500	
	Material Cost	Supply Cost	Tax	Flacing	Splicing	Engineering	Adjustment	Adjustment	Total	Adjustment	Total
6	\$ 117.19						\$		\$ 117.19		\$ 117.19
12	\$ 145.29						\$		\$ 145.29		\$ 145.29
25	\$ 219.76						\$		\$ 219.76		\$ 219.76

Cable Costs

24 Gauge Cable - Underground Copper

Size	FIXED COSTS					DENSITY 0-5		DENSITY 6-100		DENSITY 101-500	
	Material Cost	Supply Cost	Tax	Flacing	Splicing	Engineering	Adjustment	Adjustment	Total	Adjustment	Total
4200	\$ 61.69						\$		\$ 61.69		\$ 61.69
3600	\$ 50.61						\$		\$ 50.61		\$ 50.61
3000	\$ 43.65						\$		\$ 43.65		\$ 43.65
2400	\$ 31.51						\$		\$ 31.51		\$ 31.51
2100	\$ 27.68						\$		\$ 27.68		\$ 27.68
1800	\$ 23.80						\$		\$ 23.80		\$ 23.80
1200	\$ 14.21						\$		\$ 14.21		\$ 14.21
900	\$ 12.39						\$		\$ 12.39		\$ 12.39
600	\$ 8.95						\$		\$ 8.95		\$ 8.95
400	\$ 8.51						\$		\$ 8.51		\$ 8.51
300	\$ 7.10						\$		\$ 7.10		\$ 7.10
200	\$ 5.47						\$		\$ 5.47		\$ 5.47
100	\$ 4.03						\$		\$ 4.03		\$ 4.03
50	\$ 3.51						\$		\$ 3.51		\$ 3.51
25	\$ 3.23						\$		\$ 3.23		\$ 3.23
18	\$ 2.83						\$		\$ 2.83		\$ 2.83
12	\$ 2.54						\$		\$ 2.54		\$ 2.54

24 Gauge Cable - Dual Sheath "Filled" Buried Copper

Size	FIXED COSTS					DENSITY 0-5		DENSITY 6-100		DENSITY 101-500	
	Material Cost	Supply Cost	Tax	Flacing	Splicing	Engineering	Adjustment	Adjustment	Total	Adjustment	Total
4200	\$ 53.39						\$		\$ 53.39		\$ 53.39
3600	\$ 43.21						\$		\$ 43.21		\$ 43.21
3000	\$ 37.45						\$		\$ 37.45		\$ 37.45
2400	\$ 26.18						\$		\$ 26.18		\$ 26.18
2100	\$ 23.18						\$		\$ 23.18		\$ 23.18
1800	\$ 19.83						\$		\$ 19.83		\$ 19.83
1200	\$ 11.46						\$		\$ 11.46		\$ 11.46
900	\$ 10.24						\$		\$ 10.24		\$ 10.24
600	\$ 7.55						\$		\$ 7.55		\$ 7.55
400	\$ 6.30						\$		\$ 6.30		\$ 6.30
300	\$ 5.27						\$		\$ 5.27		\$ 5.27
200	\$ 4.51						\$		\$ 4.51		\$ 4.51
100	\$ 3.07						\$		\$ 3.07		\$ 3.07
50	\$ 2.55						\$		\$ 2.55		\$ 2.55
25	\$ 2.27						\$		\$ 2.27		\$ 2.27
18	\$ 1.98						\$		\$ 1.98		\$ 1.98
12	\$ 1.73						\$		\$ 1.73		\$ 1.73

Buried Drop - Initial Cost (Eac

Size	DENSITY 201-609	DENSITY 601-850	DENSITY 851-2150	DENSITY 2551-5000	DENSITY 5001-10000	DENSITY >10001
	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment
6	\$ 117.19	\$ 117.19	\$ 117.19	\$ 117.19	\$ 117.19	\$ 117.19
12	\$ 145.29	\$ 145.29	\$ 145.29	\$ 145.29	\$ 145.29	\$ 145.29
25	\$ 219.76	\$ 219.76	\$ 219.76	\$ 219.76	\$ 219.76	\$ 219.76

Cable Costs

24 Gauge Cable - Underground

Size	DENSITY 201-609	DENSITY 601-850	DENSITY 851-2150	DENSITY 2551-5000	DENSITY 5001-10000	DENSITY >10001
	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment
4200	\$ 61.69	\$ 61.69	\$ 61.69	\$ 61.69	\$ 61.69	\$ 61.69
3600	\$ 50.61	\$ 50.61	\$ 50.61	\$ 50.61	\$ 50.61	\$ 50.61
3000	\$ 43.65	\$ 43.65	\$ 43.65	\$ 43.65	\$ 43.65	\$ 43.65
2400	\$ 31.51	\$ 31.51	\$ 31.51	\$ 31.51	\$ 31.51	\$ 31.51
2100	\$ 27.68	\$ 27.68	\$ 27.68	\$ 27.68	\$ 27.68	\$ 27.68
1800	\$ 23.80	\$ 23.80	\$ 23.80	\$ 23.80	\$ 23.80	\$ 23.80
1200	\$ 14.21	\$ 14.21	\$ 14.21	\$ 14.21	\$ 14.21	\$ 14.21
900	\$ 12.39	\$ 12.39	\$ 12.39	\$ 12.39	\$ 12.39	\$ 12.39
600	\$ 8.95	\$ 8.95	\$ 8.95	\$ 8.95	\$ 8.95	\$ 8.95
400	\$ 8.51	\$ 8.51	\$ 8.51	\$ 8.51	\$ 8.51	\$ 8.51
300	\$ 7.10	\$ 7.10	\$ 7.10	\$ 7.10	\$ 7.10	\$ 7.10
200	\$ 5.47	\$ 5.47	\$ 5.47	\$ 5.47	\$ 5.47	\$ 5.47
100	\$ 4.03	\$ 4.03	\$ 4.03	\$ 4.03	\$ 4.03	\$ 4.03
50	\$ 3.51	\$ 3.51	\$ 3.51	\$ 3.51	\$ 3.51	\$ 3.51
25	\$ 3.23	\$ 3.23	\$ 3.23	\$ 3.23	\$ 3.23	\$ 3.23
18	\$ 2.83	\$ 2.83	\$ 2.83	\$ 2.83	\$ 2.83	\$ 2.83
12	\$ 2.54	\$ 2.54	\$ 2.54	\$ 2.54	\$ 2.54	\$ 2.54

24 Gauge Cable - Dual Sheath *

Size	DENSITY 201-609	DENSITY 601-850	DENSITY 851-2150	DENSITY 2551-5000	DENSITY 5001-10000	DENSITY >10001
	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment
4200	\$ 53.39	\$ 53.39	\$ 53.39	\$ 53.39	\$ 53.39	\$ 53.39
3600	\$ 43.21	\$ 43.21	\$ 43.21	\$ 43.21	\$ 43.21	\$ 43.21
3000	\$ 37.45	\$ 37.45	\$ 37.45	\$ 37.45	\$ 37.45	\$ 37.45
2400	\$ 26.18	\$ 26.18	\$ 26.18	\$ 26.18	\$ 26.18	\$ 26.18
2100	\$ 23.18	\$ 23.18	\$ 23.18	\$ 23.18	\$ 23.18	\$ 23.18
1800	\$ 19.83	\$ 19.83	\$ 19.83	\$ 19.83	\$ 19.83	\$ 19.83
1200	\$ 11.46	\$ 11.46	\$ 11.46	\$ 11.46	\$ 11.46	\$ 11.46
900	\$ 10.24	\$ 10.24	\$ 10.24	\$ 10.24	\$ 10.24	\$ 10.24
600	\$ 7.55	\$ 7.55	\$ 7.55	\$ 7.55	\$ 7.55	\$ 7.55
400	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30
300	\$ 5.27	\$ 5.27	\$ 5.27	\$ 5.27	\$ 5.27	\$ 5.27
200	\$ 4.51	\$ 4.51	\$ 4.51	\$ 4.51	\$ 4.51	\$ 4.51
100	\$ 3.07	\$ 3.07	\$ 3.07	\$ 3.07	\$ 3.07	\$ 3.07
50	\$ 2.55	\$ 2.55	\$ 2.55	\$ 2.55	\$ 2.55	\$ 2.55
25	\$ 2.27	\$ 2.27	\$ 2.27	\$ 2.27	\$ 2.27	\$ 2.27
18	\$ 1.98	\$ 1.98	\$ 1.98	\$ 1.98	\$ 1.98	\$ 1.98
12	\$ 1.73	\$ 1.73	\$ 1.73	\$ 1.73	\$ 1.73	\$ 1.73

24 Gauge Cable - Aerial

Loop Cost Inputs

Size	FIXED COSTS						DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Total	Adjustment	Total	Adjustment	Total
4200	\$ 45.14						\$ -	\$ 45.14	\$ -	\$ 45.14	\$ -	\$ 45.14
3600	\$ 36.81						\$ -	\$ 36.81	\$ -	\$ 36.81	\$ -	\$ 36.81
3000	\$ 32.03						\$ -	\$ 32.03	\$ -	\$ 32.03	\$ -	\$ 32.03
2400	\$ 22.82						\$ -	\$ 22.82	\$ -	\$ 22.82	\$ -	\$ 22.82
2100	\$ 20.47						\$ -	\$ 20.47	\$ -	\$ 20.47	\$ -	\$ 20.47
1800	\$ 17.68						\$ -	\$ 17.68	\$ -	\$ 17.68	\$ -	\$ 17.68
1200	\$ 10.89						\$ -	\$ 10.89	\$ -	\$ 10.89	\$ -	\$ 10.89
900	\$ 9.79						\$ -	\$ 9.79	\$ -	\$ 9.79	\$ -	\$ 9.79
600	\$ 7.63						\$ -	\$ 7.63	\$ -	\$ 7.63	\$ -	\$ 7.63
400	\$ 5.78						\$ -	\$ 5.78	\$ -	\$ 5.78	\$ -	\$ 5.78
300	\$ 4.80						\$ -	\$ 4.80	\$ -	\$ 4.80	\$ -	\$ 4.80
200	\$ 4.23						\$ -	\$ 4.23	\$ -	\$ 4.23	\$ -	\$ 4.23
100	\$ 2.97						\$ -	\$ 2.97	\$ -	\$ 2.97	\$ -	\$ 2.97
50	\$ 2.51						\$ -	\$ 2.51	\$ -	\$ 2.51	\$ -	\$ 2.51
25	\$ 2.28						\$ -	\$ 2.28	\$ -	\$ 2.28	\$ -	\$ 2.28
18	\$ 1.90						\$ -	\$ 1.90	\$ -	\$ 1.90	\$ -	\$ 1.90
12	\$ 1.64						\$ -	\$ 1.64	\$ -	\$ 1.64	\$ -	\$ 1.64

26 Gauge Cable - Underground Copper

Size	FIXED COSTS						DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Total	Adjustment	Total	Adjustment	Total
4200	\$ 61.69						\$ -	\$ 61.69	\$ -	\$ 61.69	\$ -	\$ 61.69
3600	\$ 50.61						\$ -	\$ 50.61	\$ -	\$ 50.61	\$ -	\$ 50.61
3000	\$ 43.65						\$ -	\$ 43.65	\$ -	\$ 43.65	\$ -	\$ 43.65
2400	\$ 26.53						\$ -	\$ 26.53	\$ -	\$ 26.53	\$ -	\$ 26.53
2100	\$ 23.32						\$ -	\$ 23.32	\$ -	\$ 23.32	\$ -	\$ 23.32
1800	\$ 20.05						\$ -	\$ 20.05	\$ -	\$ 20.05	\$ -	\$ 20.05
1200	\$ 11.71						\$ -	\$ 11.71	\$ -	\$ 11.71	\$ -	\$ 11.71
900	\$ 10.51						\$ -	\$ 10.51	\$ -	\$ 10.51	\$ -	\$ 10.51
600	\$ 7.70						\$ -	\$ 7.70	\$ -	\$ 7.70	\$ -	\$ 7.70
400	\$ 7.69						\$ -	\$ 7.69	\$ -	\$ 7.69	\$ -	\$ 7.69
300	\$ 6.48						\$ -	\$ 6.48	\$ -	\$ 6.48	\$ -	\$ 6.48
200	\$ 5.06						\$ -	\$ 5.06	\$ -	\$ 5.06	\$ -	\$ 5.06
100	\$ 3.82						\$ -	\$ 3.82	\$ -	\$ 3.82	\$ -	\$ 3.82
50	\$ 3.40						\$ -	\$ 3.40	\$ -	\$ 3.40	\$ -	\$ 3.40
25	\$ 3.18						\$ -	\$ 3.18	\$ -	\$ 3.18	\$ -	\$ 3.18
18	\$ 2.78						\$ -	\$ 2.78	\$ -	\$ 2.78	\$ -	\$ 2.78
12	\$ 2.51						\$ -	\$ 2.51	\$ -	\$ 2.51	\$ -	\$ 2.51

24 Gauge Cable - Aerial

Loop Cost Inputs

Size	DENSITY 201-650		DENSITY 651-850		DENSITY 851-2550		DENSITY 2551-5000		DENSITY 5001-10000		DENSITY 10001+	
	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total
4200	\$ -	\$ 45.14	\$ -	\$ 45.14	\$ -	\$ 45.14	\$ -	\$ 45.14	\$ -	\$ 45.14	\$ -	\$ 45.14
3600	\$ -	\$ 36.81	\$ -	\$ 36.81	\$ -	\$ 36.81	\$ -	\$ 36.81	\$ -	\$ 36.81	\$ -	\$ 36.81
3000	\$ -	\$ 32.03	\$ -	\$ 32.03	\$ -	\$ 32.03	\$ -	\$ 32.03	\$ -	\$ 32.03	\$ -	\$ 32.03
2400	\$ -	\$ 22.82	\$ -	\$ 22.82	\$ -	\$ 22.82	\$ -	\$ 22.82	\$ -	\$ 22.82	\$ -	\$ 22.82
2100	\$ -	\$ 20.47	\$ -	\$ 20.47	\$ -	\$ 20.47	\$ -	\$ 20.47	\$ -	\$ 20.47	\$ -	\$ 20.47
1800	\$ -	\$ 17.68	\$ -	\$ 17.68	\$ -	\$ 17.68	\$ -	\$ 17.68	\$ -	\$ 17.68	\$ -	\$ 17.68
1200	\$ -	\$ 10.89	\$ -	\$ 10.89	\$ -	\$ 10.89	\$ -	\$ 10.89	\$ -	\$ 10.89	\$ -	\$ 10.89
900	\$ -	\$ 9.79	\$ -	\$ 9.79	\$ -	\$ 9.79	\$ -	\$ 9.79	\$ -	\$ 9.79	\$ -	\$ 9.79
600	\$ -	\$ 7.63	\$ -	\$ 7.63	\$ -	\$ 7.63	\$ -	\$ 7.63	\$ -	\$ 7.63	\$ -	\$ 7.63
400	\$ -	\$ 5.78	\$ -	\$ 5.78	\$ -	\$ 5.78	\$ -	\$ 5.78	\$ -	\$ 5.78	\$ -	\$ 5.78
300	\$ -	\$ 4.80	\$ -	\$ 4.80	\$ -	\$ 4.80	\$ -	\$ 4.80	\$ -	\$ 4.80	\$ -	\$ 4.80
200	\$ -	\$ 4.23	\$ -	\$ 4.23	\$ -	\$ 4.23	\$ -	\$ 4.23	\$ -	\$ 4.23	\$ -	\$ 4.23
100	\$ -	\$ 2.97	\$ -	\$ 2.97	\$ -	\$ 2.97	\$ -	\$ 2.97	\$ -	\$ 2.97	\$ -	\$ 2.97
50	\$ -	\$ 2.51	\$ -	\$ 2.51	\$ -	\$ 2.51	\$ -	\$ 2.51	\$ -	\$ 2.51	\$ -	\$ 2.51
25	\$ -	\$ 2.28	\$ -	\$ 2.28	\$ -	\$ 2.28	\$ -	\$ 2.28	\$ -	\$ 2.28	\$ -	\$ 2.28
18	\$ -	\$ 1.90	\$ -	\$ 1.90	\$ -	\$ 1.90	\$ -	\$ 1.90	\$ -	\$ 1.90	\$ -	\$ 1.90
12	\$ -	\$ 1.64	\$ -	\$ 1.64	\$ -	\$ 1.64	\$ -	\$ 1.64	\$ -	\$ 1.64	\$ -	\$ 1.64

26 Gauge Cable - Underground

Size	DENSITY 201-650		DENSITY 651-850		DENSITY 851-2550		DENSITY 2551-5000		DENSITY 5001-10000		DENSITY 10001+	
	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total
4200	\$ -	\$ 61.69	\$ -	\$ 61.69	\$ -	\$ 61.69	\$ -	\$ 61.69	\$ -	\$ 61.69	\$ -	\$ 61.69
3600	\$ -	\$ 50.61	\$ -	\$ 50.61	\$ -	\$ 50.61	\$ -	\$ 50.61	\$ -	\$ 50.61	\$ -	\$ 50.61
3000	\$ -	\$ 43.65	\$ -	\$ 43.65	\$ -	\$ 43.65	\$ -	\$ 43.65	\$ -	\$ 43.65	\$ -	\$ 43.65
2400	\$ -	\$ 26.53	\$ -	\$ 26.53	\$ -	\$ 26.53	\$ -	\$ 26.53	\$ -	\$ 26.53	\$ -	\$ 26.53
2100	\$ -	\$ 23.32	\$ -	\$ 23.32	\$ -	\$ 23.32	\$ -	\$ 23.32	\$ -	\$ 23.32	\$ -	\$ 23.32
1800	\$ -	\$ 20.05	\$ -	\$ 20.05	\$ -	\$ 20.05	\$ -	\$ 20.05	\$ -	\$ 20.05	\$ -	\$ 20.05
1200	\$ -	\$ 11.71	\$ -	\$ 11.71	\$ -	\$ 11.71	\$ -	\$ 11.71	\$ -	\$ 11.71	\$ -	\$ 11.71
900	\$ -	\$ 10.51	\$ -	\$ 10.51	\$ -	\$ 10.51	\$ -	\$ 10.51	\$ -	\$ 10.51	\$ -	\$ 10.51
600	\$ -	\$ 7.70	\$ -	\$ 7.70	\$ -	\$ 7.70	\$ -	\$ 7.70	\$ -	\$ 7.70	\$ -	\$ 7.70
400	\$ -	\$ 7.69	\$ -	\$ 7.69	\$ -	\$ 7.69	\$ -	\$ 7.69	\$ -	\$ 7.69	\$ -	\$ 7.69
300	\$ -	\$ 6.48	\$ -	\$ 6.48	\$ -	\$ 6.48	\$ -	\$ 6.48	\$ -	\$ 6.48	\$ -	\$ 6.48
200	\$ -	\$ 5.06	\$ -	\$ 5.06	\$ -	\$ 5.06	\$ -	\$ 5.06	\$ -	\$ 5.06	\$ -	\$ 5.06
100	\$ -	\$ 3.82	\$ -	\$ 3.82	\$ -	\$ 3.82	\$ -	\$ 3.82	\$ -	\$ 3.82	\$ -	\$ 3.82
50	\$ -	\$ 3.40	\$ -	\$ 3.40	\$ -	\$ 3.40	\$ -	\$ 3.40	\$ -	\$ 3.40	\$ -	\$ 3.40
25	\$ -	\$ 3.18	\$ -	\$ 3.18	\$ -	\$ 3.18	\$ -	\$ 3.18	\$ -	\$ 3.18	\$ -	\$ 3.18
18	\$ -	\$ 2.78	\$ -	\$ 2.78	\$ -	\$ 2.78	\$ -	\$ 2.78	\$ -	\$ 2.78	\$ -	\$ 2.78
12	\$ -	\$ 2.51	\$ -	\$ 2.51	\$ -	\$ 2.51	\$ -	\$ 2.51	\$ -	\$ 2.51	\$ -	\$ 2.51

26 Gauge Cable - Dual Strand "Filled" Buried Copper

Loop Cost Inputs

Size	FIXED COSTS						DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Total	Adjustment	Total	Adjustment	Total
4200	\$ 53.39						\$ -	\$ 53.39	\$ -	\$ 53.39	\$ -	\$ 53.39
3600	\$ 43.21						\$ -	\$ 43.21	\$ -	\$ 43.21	\$ -	\$ 43.21
3000	\$ 37.45						\$ -	\$ 37.45	\$ -	\$ 37.45	\$ -	\$ 37.45
2400	\$ 20.86						\$ -	\$ 20.86	\$ -	\$ 20.86	\$ -	\$ 20.86
2100	\$ 18.53						\$ -	\$ 18.53	\$ -	\$ 18.53	\$ -	\$ 18.53
1800	\$ 15.83						\$ -	\$ 15.83	\$ -	\$ 15.83	\$ -	\$ 15.83
1200	\$ 8.80						\$ -	\$ 8.80	\$ -	\$ 8.80	\$ -	\$ 8.80
900	\$ 8.24						\$ -	\$ 8.24	\$ -	\$ 8.24	\$ -	\$ 8.24
600	\$ 6.21						\$ -	\$ 6.21	\$ -	\$ 6.21	\$ -	\$ 6.21
400	\$ 5.42						\$ -	\$ 5.42	\$ -	\$ 5.42	\$ -	\$ 5.42
300	\$ 4.61						\$ -	\$ 4.61	\$ -	\$ 4.61	\$ -	\$ 4.61
200	\$ 4.07						\$ -	\$ 4.07	\$ -	\$ 4.07	\$ -	\$ 4.07
100	\$ 2.85						\$ -	\$ 2.85	\$ -	\$ 2.85	\$ -	\$ 2.85
50	\$ 2.44						\$ -	\$ 2.44	\$ -	\$ 2.44	\$ -	\$ 2.44
25	\$ 2.22						\$ -	\$ 2.22	\$ -	\$ 2.22	\$ -	\$ 2.22
18	\$ 1.94						\$ -	\$ 1.94	\$ -	\$ 1.94	\$ -	\$ 1.94
12	\$ 1.70						\$ -	\$ 1.70	\$ -	\$ 1.70	\$ -	\$ 1.70

26 Gauge Cable - Aerial

Size	FIXED COSTS						DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Total	Adjustment	Total	Adjustment	Total
4200	\$ 45.14						\$ -	\$ 45.14	\$ -	\$ 45.14	\$ -	\$ 45.14
3600	\$ 36.81						\$ -	\$ 36.81	\$ -	\$ 36.81	\$ -	\$ 36.81
3000	\$ 32.03						\$ -	\$ 32.03	\$ -	\$ 32.03	\$ -	\$ 32.03
2400	\$ 18.54						\$ -	\$ 18.54	\$ -	\$ 18.54	\$ -	\$ 18.54
2100	\$ 16.72						\$ -	\$ 16.72	\$ -	\$ 16.72	\$ -	\$ 16.72
1800	\$ 14.47						\$ -	\$ 14.47	\$ -	\$ 14.47	\$ -	\$ 14.47
1200	\$ 8.75						\$ -	\$ 8.75	\$ -	\$ 8.75	\$ -	\$ 8.75
900	\$ 8.18						\$ -	\$ 8.18	\$ -	\$ 8.18	\$ -	\$ 8.18
600	\$ 6.55						\$ -	\$ 6.55	\$ -	\$ 6.55	\$ -	\$ 6.55
400	\$ 5.07						\$ -	\$ 5.07	\$ -	\$ 5.07	\$ -	\$ 5.07
300	\$ 4.27						\$ -	\$ 4.27	\$ -	\$ 4.27	\$ -	\$ 4.27
200	\$ 3.87						\$ -	\$ 3.87	\$ -	\$ 3.87	\$ -	\$ 3.87
100	\$ 2.79						\$ -	\$ 2.79	\$ -	\$ 2.79	\$ -	\$ 2.79
50	\$ 2.42						\$ -	\$ 2.42	\$ -	\$ 2.42	\$ -	\$ 2.42
25	\$ 2.23						\$ -	\$ 2.23	\$ -	\$ 2.23	\$ -	\$ 2.23
18	\$ 1.86						\$ -	\$ 1.86	\$ -	\$ 1.86	\$ -	\$ 1.86
12	\$ 1.62						\$ -	\$ 1.62	\$ -	\$ 1.62	\$ -	\$ 1.62

Strand

Size	FIXED COSTS						DENSITY 0-5		DENSITY 6-100		DENSITY 101-200	
	Material Cost	Supply Cost	Tax	Placing	Splicing	Engineering	Adjustment	Total	Adjustment	Total	Adjustment	Total
25m	\$ 0.53							\$ 0.53		\$ 0.53		\$ 0.53
16m	\$ 0.45							\$ 0.45		\$ 0.45		\$ 0.45
10m	\$ 0.29							\$ 0.29		\$ 0.29		\$ 0.29
6m	\$ 0.28							\$ 0.28		\$ 0.28		\$ 0.28

26 Gauge Cable - Dual Sheath *

Loop Cable Inputs

Size	DENSITY 201-650		DENSITY 651-850		DENSITY 851-2550		DENSITY 2551-5000		DENSITY 5001-10000		DENSITY >10001	
	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total
4200	\$ -	\$ 53.39	\$ -	\$ 53.39	\$ -	\$ 53.39	\$ -	\$ 53.39	\$ -	\$ 53.39	\$ -	\$ 53.39
3600	\$ -	\$ 43.21	\$ -	\$ 43.21	\$ -	\$ 43.21	\$ -	\$ 43.21	\$ -	\$ 43.21	\$ -	\$ 43.21
3000	\$ -	\$ 37.45	\$ -	\$ 37.45	\$ -	\$ 37.45	\$ -	\$ 37.45	\$ -	\$ 37.45	\$ -	\$ 37.45
2400	\$ -	\$ 20.86	\$ -	\$ 20.86	\$ -	\$ 20.86	\$ -	\$ 20.86	\$ -	\$ 20.86	\$ -	\$ 20.86
2100	\$ -	\$ 18.53	\$ -	\$ 18.53	\$ -	\$ 18.53	\$ -	\$ 18.53	\$ -	\$ 18.53	\$ -	\$ 18.53
1800	\$ -	\$ 15.83	\$ -	\$ 15.83	\$ -	\$ 15.83	\$ -	\$ 15.83	\$ -	\$ 15.83	\$ -	\$ 15.83
1200	\$ -	\$ 8.80	\$ -	\$ 8.80	\$ -	\$ 8.80	\$ -	\$ 8.80	\$ -	\$ 8.80	\$ -	\$ 8.80
900	\$ -	\$ 8.24	\$ -	\$ 8.24	\$ -	\$ 8.24	\$ -	\$ 8.24	\$ -	\$ 8.24	\$ -	\$ 8.24
600	\$ -	\$ 6.21	\$ -	\$ 6.21	\$ -	\$ 6.21	\$ -	\$ 6.21	\$ -	\$ 6.21	\$ -	\$ 6.21
400	\$ -	\$ 5.42	\$ -	\$ 5.42	\$ -	\$ 5.42	\$ -	\$ 5.42	\$ -	\$ 5.42	\$ -	\$ 5.42
300	\$ -	\$ 4.61	\$ -	\$ 4.61	\$ -	\$ 4.61	\$ -	\$ 4.61	\$ -	\$ 4.61	\$ -	\$ 4.61
200	\$ -	\$ 4.07	\$ -	\$ 4.07	\$ -	\$ 4.07	\$ -	\$ 4.07	\$ -	\$ 4.07	\$ -	\$ 4.07
100	\$ -	\$ 2.85	\$ -	\$ 2.85	\$ -	\$ 2.85	\$ -	\$ 2.85	\$ -	\$ 2.85	\$ -	\$ 2.85
50	\$ -	\$ 2.44	\$ -	\$ 2.44	\$ -	\$ 2.44	\$ -	\$ 2.44	\$ -	\$ 2.44	\$ -	\$ 2.44
25	\$ -	\$ 2.22	\$ -	\$ 2.22	\$ -	\$ 2.22	\$ -	\$ 2.22	\$ -	\$ 2.22	\$ -	\$ 2.22
18	\$ -	\$ 1.94	\$ -	\$ 1.94	\$ -	\$ 1.94	\$ -	\$ 1.94	\$ -	\$ 1.94	\$ -	\$ 1.94
12	\$ -	\$ 1.70	\$ -	\$ 1.70	\$ -	\$ 1.70	\$ -	\$ 1.70	\$ -	\$ 1.70	\$ -	\$ 1.70

26 Gauge Cable - Aerial

Size	DENSITY 201-650		DENSITY 651-850		DENSITY 851-2550		DENSITY 2551-5000		DENSITY 5001-10000		DENSITY >10001	
	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total
4200	\$ -	\$ 45.14	\$ -	\$ 45.14	\$ -	\$ 45.14	\$ -	\$ 45.14	\$ -	\$ 45.14	\$ -	\$ 45.14
3600	\$ -	\$ 36.81	\$ -	\$ 36.81	\$ -	\$ 36.81	\$ -	\$ 36.81	\$ -	\$ 36.81	\$ -	\$ 36.81
3000	\$ -	\$ 32.03	\$ -	\$ 32.03	\$ -	\$ 32.03	\$ -	\$ 32.03	\$ -	\$ 32.03	\$ -	\$ 32.03
2400	\$ -	\$ 18.54	\$ -	\$ 18.54	\$ -	\$ 18.54	\$ -	\$ 18.54	\$ -	\$ 18.54	\$ -	\$ 18.54
2100	\$ -	\$ 16.72	\$ -	\$ 16.72	\$ -	\$ 16.72	\$ -	\$ 16.72	\$ -	\$ 16.72	\$ -	\$ 16.72
1800	\$ -	\$ 14.47	\$ -	\$ 14.47	\$ -	\$ 14.47	\$ -	\$ 14.47	\$ -	\$ 14.47	\$ -	\$ 14.47
1200	\$ -	\$ 8.75	\$ -	\$ 8.75	\$ -	\$ 8.75	\$ -	\$ 8.75	\$ -	\$ 8.75	\$ -	\$ 8.75
900	\$ -	\$ 8.18	\$ -	\$ 8.18	\$ -	\$ 8.18	\$ -	\$ 8.18	\$ -	\$ 8.18	\$ -	\$ 8.18
600	\$ -	\$ 6.55	\$ -	\$ 6.55	\$ -	\$ 6.55	\$ -	\$ 6.55	\$ -	\$ 6.55	\$ -	\$ 6.55
400	\$ -	\$ 5.07	\$ -	\$ 5.07	\$ -	\$ 5.07	\$ -	\$ 5.07	\$ -	\$ 5.07	\$ -	\$ 5.07
300	\$ -	\$ 4.27	\$ -	\$ 4.27	\$ -	\$ 4.27	\$ -	\$ 4.27	\$ -	\$ 4.27	\$ -	\$ 4.27
200	\$ -	\$ 3.87	\$ -	\$ 3.87	\$ -	\$ 3.87	\$ -	\$ 3.87	\$ -	\$ 3.87	\$ -	\$ 3.87
100	\$ -	\$ 2.79	\$ -	\$ 2.79	\$ -	\$ 2.79	\$ -	\$ 2.79	\$ -	\$ 2.79	\$ -	\$ 2.79
50	\$ -	\$ 2.42	\$ -	\$ 2.42	\$ -	\$ 2.42	\$ -	\$ 2.42	\$ -	\$ 2.42	\$ -	\$ 2.42
25	\$ -	\$ 2.23	\$ -	\$ 2.23	\$ -	\$ 2.23	\$ -	\$ 2.23	\$ -	\$ 2.23	\$ -	\$ 2.23
18	\$ -	\$ 1.86	\$ -	\$ 1.86	\$ -	\$ 1.86	\$ -	\$ 1.86	\$ -	\$ 1.86	\$ -	\$ 1.86
12	\$ -	\$ 1.62	\$ -	\$ 1.62	\$ -	\$ 1.62	\$ -	\$ 1.62	\$ -	\$ 1.62	\$ -	\$ 1.62

Strand

Size	DENSITY 201-650		DENSITY 651-850		DENSITY 851-2550		DENSITY 2551-5000		DENSITY 5001-10000		DENSITY >10001	
	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total	Adjustment	Total
25m		\$ 0.53		\$ 0.53		\$ 0.53		\$ 0.53		\$ 0.53		\$ 0.53
16m		\$ 0.45		\$ 0.45		\$ 0.45		\$ 0.45		\$ 0.45		\$ 0.45
10m		\$ 0.29		\$ 0.29		\$ 0.29		\$ 0.29		\$ 0.29		\$ 0.29
6m		\$ 0.28		\$ 0.28		\$ 0.28		\$ 0.28		\$ 0.28		\$ 0.28

Normal - Feeder Conduit

Activity	Base Cost Per Foot Installed	DENSITY 6-5				DENSITY 6-100				DENSITY 101-200			
		Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & backfill	\$ 1.90	\$ -	96.68%	100.00%	\$ 1.84	\$ -	96.39%	97.50%	\$ 1.79	\$ -	95.88%	95.00%	\$ 1.73
Rocky Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	97.50%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	97.50%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	97.50%	\$ -	\$ -	0.00%	95.00%	\$ -
Boring	\$ 15.15	\$ -	0.19%	100.00%	\$ 0.03	\$ -	0.43%	97.50%	\$ 0.06	\$ -	0.68%	95.00%	\$ 0.10
Cut & Restore Asphalt	\$ 12.63	\$ -	0.60%	100.00%	\$ 0.08	\$ -	0.67%	97.50%	\$ 0.08	\$ -	0.73%	95.00%	\$ 0.09
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	100.00%	\$ -	\$ -	0.13%	97.50%	\$ 0.02	\$ -	0.48%	95.00%	\$ 0.07
Cut & Restore Sod	\$ 3.00	\$ -	2.53%	100.00%	\$ 0.08	\$ -	2.38%	97.50%	\$ 0.07	\$ -	2.23%	95.00%	\$ 0.06
			100.00%		\$ 2.02		100.00%		\$ 2.02		100.00%		\$ 2.02

Normal - Distribution Conduit

Activity	Base Cost Per Foot Installed	DENSITY 6-5				DENSITY 6-100				DENSITY 101-200			
		Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ 1.90	\$ -	96.68%	100.00%	\$ 1.84	\$ -	96.39%	95.00%	\$ 1.74	\$ -	95.88%	90.00%	\$ 1.64
Rocky Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Boring	\$ 15.15	\$ -	0.19%	100.00%	\$ 0.03	\$ -	0.43%	95.00%	\$ 0.06	\$ -	6.78E-03	90.00%	\$ 0.07
Cut & Restore Asphalt	\$ 12.63	\$ -	0.60%	100.00%	\$ 0.08	\$ -	6.68E-03	95.00%	\$ 0.08	\$ -	7.35E-03	90.00%	\$ 0.08
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	100.00%	\$ -	\$ -	1.25E-03	95.00%	\$ 0.02	\$ -	4.76E-03	90.00%	\$ 0.07
Cut & Restore Sod	\$ 3.00	\$ -	2.53%	100.00%	\$ 0.08	\$ -	2.38%	95.00%	\$ 0.07	\$ -	2.23E-02	90.00%	\$ 0.06
			100.00%		\$ 2.02		100.00%		\$ 1.97		100.00%		\$ 1.97

Normal - Buried Feeder Cable

Activity	Base Cost Per Foot Installed	DENSITY 6-5				DENSITY 6-100				DENSITY 101-200			
		Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Flow	\$ 1.90	\$ -	93.19%	100.00%	\$ 1.77	\$ -	92.91%	100.00%	\$ 1.77	\$ -	92.42%	100.00%	\$ 1.76
Rocky Flow	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Trench & Backfill	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	97.50%	\$ -	\$ -	0.00%	95.00%	\$ -
Rocky Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	97.50%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	97.50%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	97.50%	\$ -	\$ -	0.00%	95.00%	\$ -
Bore Cable	\$ 15.15	\$ -	0.19%	100.00%	\$ 0.03	\$ -	4.23E-03	97.50%	\$ 0.06	\$ -	6.58E-03	95.00%	\$ 0.09
Push Pipe & Pull Cable	\$ 10.12	\$ -	3.58%	100.00%	\$ 0.36	\$ -	3.59E-02	97.50%	\$ 0.35	\$ -	3.59E-02	95.00%	\$ 0.35
Cut & Restore Asphalt	\$ 12.63	\$ -	0.58%	100.00%	\$ 0.07	\$ -	6.41E-03	97.50%	\$ 0.08	\$ -	7.05E-03	95.00%	\$ 0.08
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	100.00%	\$ -	\$ -	1.19E-03	97.50%	\$ 0.02	\$ -	4.56E-03	95.00%	\$ 0.07
Cut & Restore Sod	\$ 3.00	\$ -	2.46%	100.00%	\$ 0.07	\$ -	2.31E-02	97.50%	\$ 0.07	\$ -	2.17E-02	95.00%	\$ 0.06
			100.00%		\$ 2.31		100.00%		\$ 2.35		100.00%		\$ 2.41

Normal - Feeder Conduit

Activity	DENSITY 201-650				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ -	95.36%	95.00%	\$ 1.72	\$ -	94.85%	95.00%	\$ 1.71	\$ -	94.33%	95.00%	\$ 1.70
Rocky Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Boring	\$ -	0.92%	95.00%	\$ 0.13	\$ -	1.17%	95.00%	\$ 0.17	\$ -	1.41%	95.00%	\$ 0.20
Cut & Restore Asphalt	\$ -	0.80%	95.00%	\$ 0.10	\$ -	0.87%	95.00%	\$ 0.10	\$ -	0.93%	95.00%	\$ 0.11
Cut & Restore Concrete	\$ -	0.83%	95.00%	\$ 0.12	\$ -	1.18%	95.00%	\$ 0.17	\$ -	1.53%	95.00%	\$ 0.22
Cut & Restore Sod	\$ -	2.08%	95.00%	\$ 0.06	\$ -	1.94%	95.00%	\$ 0.06	\$ -	1.79%	95.00%	\$ 0.05
		99.99%		\$ 2.13		100.01%		\$ 2.21		99.99%		\$ 2.29

Normal - Distribution Conduit

Activity	DENSITY 201-650				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ -	95.36%	90.00%	\$ 1.63	\$ -	94.85%	90.00%	\$ 1.62	\$ -	94.33%	90.00%	\$ 1.61
Rocky Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Backhoe Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Hand Dig Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Boring	\$ -	9.23E-03	90.00%	\$ 0.13	\$ -	1.17E-02	90.00%	\$ 0.16	\$ -	1.41E-02	90.00%	\$ 0.19
Cut & Restore Asphalt	\$ -	8.02E-03	90.00%	\$ 0.09	\$ -	8.68E-03	90.00%	\$ 0.10	\$ -	9.35E-03	90.00%	\$ 0.11
Cut & Restore Concrete	\$ -	8.28E-03	90.00%	\$ 0.11	\$ -	1.18E-02	90.00%	\$ 0.16	\$ -	1.53E-02	90.00%	\$ 0.21
Cut & Restore Sod	\$ -	2.08E-02	90.00%	\$ 0.06	\$ -	1.94E-02	90.00%	\$ 0.05	\$ -	1.79E-02	90.00%	\$ 0.05
		100.00%		\$ 2.02		100.00%		\$ 2.10		100.00%		\$ 2.17

Normal - Buried Feeder Cable

Activity	DENSITY 201-650				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Plow	\$ -	91.92%	100.00%	\$ 1.75	\$ -	91.43%	100.00%	\$ 1.74	\$ -	90.94%	100.00%	\$ 1.73
Rocky Plow	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Trench & Backfill	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Rocky Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Bore Cable	\$ -	0.89%	95.00%	\$ 0.13	\$ -	1.13E-02	95.00%	\$ 0.16	\$ -	1.36E-02	95.00%	\$ 0.20
Push Pipe & Pull Cable	\$ -	3.60%	95.00%	\$ 0.35	\$ -	3.60E-02	95.00%	\$ 0.35	\$ -	3.61E-02	95.00%	\$ 0.35
Cut & Restore Asphalt	\$ -	0.77%	95.00%	\$ 0.09	\$ -	8.33E-03	95.00%	\$ 0.10	\$ -	8.97E-03	95.00%	\$ 0.11
Cut & Restore Concrete	\$ -	0.79%	95.00%	\$ 0.12	\$ -	1.13E-02	95.00%	\$ 0.17	\$ -	1.47%	95.00%	\$ 0.21
Cut & Restore Sod	\$ -	2.02%	95.00%	\$ 0.06	\$ -	1.88E-02	95.00%	\$ 0.05	\$ -	1.73E-02	95.00%	\$ 0.05
		99.99%		\$ 2.49		100.00%		\$ 2.50		100.00%		\$ 2.54

Normal - Feeder Conduit

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ -	93.82%	95.00%	\$ 1.69	\$ -	93.30%	95.00%	\$ 1.68	\$ -	93.30%	95.00%	\$ 1.68
Rocky Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Boring	\$ -	1.64%	95.00%	\$ 0.24	\$ -	1.90E-02	95.00%	\$ 0.27	\$ -	1.90%	95.00%	\$ 0.27
Cut & Restore Asphalt	\$ -	1.00%	95.00%	\$ 0.12	\$ -	1.07%	95.00%	\$ 0.13	\$ -	1.07%	95.00%	\$ 0.13
Cut & Restore Concrete	\$ -	1.88%	95.00%	\$ 0.27	\$ -	2.23E-02	95.00%	\$ 0.33	\$ -	2.23%	95.00%	\$ 0.33
Cut & Restore Sod	\$ -	1.64%	95.00%	\$ 0.05	\$ -	1.50E-02	95.00%	\$ 0.04	\$ -	1.50%	95.00%	\$ 0.04
		100.00%		\$ 2.33		100.00%		\$ 2.43		100.00%		\$ 2.43

Normal - Distribution Conduit

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ -	93.82%	90.00%	\$ 1.60	\$ -	93.30%	90.00%	\$ 1.60	\$ -	93.30%	90.00%	\$ 1.60
Rocky Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Backhoe Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Hand Dig Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Boring	\$ -	1.66%	90.00%	\$ 0.23	\$ -	1.90E-02	90.00%	\$ 0.26	\$ -	1.90E-02	90.00%	\$ 0.26
Cut & Restore Asphalt	\$ -	1.00%	90.00%	\$ 0.11	\$ -	1.07%	90.00%	\$ 0.12	\$ -	1.07%	90.00%	\$ 0.12
Cut & Restore Concrete	\$ -	1.88%	90.00%	\$ 0.26	\$ -	2.23E-02	90.00%	\$ 0.31	\$ -	2.23E-02	90.00%	\$ 0.31
Cut & Restore Sod	\$ -	1.64%	90.00%	\$ 0.04	\$ -	1.50E-02	90.00%	\$ 0.04	\$ -	1.50E-02	90.00%	\$ 0.04
		100.00%		\$ 3.23		100.00%		\$ 3.33		100.00%		\$ 3.33

Normal - Buried Feeder Cable

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Pole	\$ -	90.44%	100.00%	\$ 1.72	\$ -	89.95%	100.00%	\$ 1.71	\$ -	89.95%	100.00%	\$ 1.71
Rocky Pole	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Trench & Backfill	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Bore Cable	\$ -	1.60E-02	95.00%	\$ 0.23	\$ -	1.83E-02	95.00%	\$ 0.26	\$ -	1.83E-02	95.00%	\$ 0.26
Push Pipe & Pull Cable	\$ -	3.61E-02	95.00%	\$ 0.35	\$ -	3.62E-02	95.00%	\$ 0.35	\$ -	3.62E-02	95.00%	\$ 0.35
Cut & Restore Asphalt	\$ -	9.60E-03	95.00%	\$ 0.12	\$ -	1.02E-02	95.00%	\$ 0.12	\$ -	1.02E-02	95.00%	\$ 0.12
Cut & Restore Concrete	\$ -	1.81E-02	95.00%	\$ 0.26	\$ -	2.14E-02	95.00%	\$ 0.31	\$ -	2.14E-02	95.00%	\$ 0.31
Cut & Restore Sod	\$ -	1.58E-02	95.00%	\$ 0.05	\$ -	1.44E-02	95.00%	\$ 0.04	\$ -	1.44E-02	95.00%	\$ 0.04
		100.00%		\$ 2.92		100.00%		\$ 2.90		100.00%		\$ 2.90

Normal - Buried Distribution Cable

Activity	Base Cost Per Foot Installed	DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
		Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount
Pole	\$ 1.90	\$ -	93.19%	\$ 1.77	\$ -	92.91%	\$ 1.77	\$ -	92.42%	\$ 1.76
Rocky Flow	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Trench & Backfill	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Rocky Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Bore Cable	\$ 15.15	\$ -	0.19%	\$ 0.03	\$ -	0.42%	\$ 0.06	\$ -	0.66%	\$ 0.09
Push Pipe & Pull Cable	\$ 10.12	\$ -	3.58%	\$ 0.36	\$ -	3.59%	\$ 0.35	\$ -	3.59%	\$ 0.33
Cut & Restore Asphalt	\$ 12.63	\$ -	0.58%	\$ 0.07	\$ -	0.64%	\$ 0.08	\$ -	0.71%	\$ 0.08
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	\$ -	\$ -	0.12%	\$ 0.02	\$ -	0.46%	\$ 0.06
Cut & Restore Sod	\$ 3.00	\$ -	2.46%	\$ 0.07	\$ -	2.31%	\$ 0.07	\$ -	2.17%	\$ 0.06
			100.00%	\$ 2.31		99.99%	\$ 2.33		100.01%	\$ 2.35

Normal - Aerial Feeder Cable

Activity	Base Cost Per Foot Installed	DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
		Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount
Poles	\$ 255.00	\$ -	294.00	\$ 164.70	\$ -	294.00	\$ 164.70	\$ -	294.00	\$ 164.70
Anchors and Guyes	\$ 105.27	\$ -	209.00	\$ 52.38	\$ -	209.00	\$ 52.38	\$ -	209.00	\$ 52.38
			100.00%	\$ 217.08		100.00%	\$ 217.08		100.00%	\$ 217.08

Normal - Aerial Distribution Cable

Activity	Base Cost Per Foot Installed	DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
		Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount
Poles	\$ 255.00	\$ -	294.00	\$ 164.70	\$ -	294.00	\$ 164.70	\$ -	294.00	\$ 164.70
Anchors and Guyes	\$ 105.27	\$ -	209.00	\$ 52.38	\$ -	209.00	\$ 52.38	\$ -	209.00	\$ 52.38
			100.00%	\$ 217.08		100.00%	\$ 217.08		100.00%	\$ 217.08

Soft Rock Structure

Soft Rock - Feeder Conduit

Activity	Base Cost Per Foot Installed	DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
		Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount
Trench & Backfill	\$ 1.90	\$ -	96.68%	\$ 1.84	\$ -	96.39%	\$ 1.79	\$ -	95.88%	\$ 1.73
Rocky Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Boring	\$ 15.15	\$ -	0.19%	\$ 0.03	\$ -	0.43%	\$ 0.06	\$ -	0.68%	\$ 0.10
Cut & Restore Asphalt	\$ 12.63	\$ -	0.60%	\$ 0.08	\$ -	0.67%	\$ 0.08	\$ -	0.73%	\$ 0.09
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	\$ -	\$ -	0.13%	\$ 0.02	\$ -	0.48%	\$ 0.07
Cut & Restore Sod	\$ 3.00	\$ -	2.53%	\$ 0.08	\$ -	2.38%	\$ 0.07	\$ -	2.23%	\$ 0.06
			100.00%	\$ 2.02		100.00%	\$ 2.02		100.00%	\$ 2.05

Normal - Buried Distribution Cable

Activity	DENSITY 201-650				DENSITY 651-650				DENSITY 651-2650			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Pole	\$ -	91.92%	100.00%	\$ 1.75	\$ -	91.43%	100.00%	\$ 1.74	\$ -	90.94%	100.00%	\$ 1.73
Rocky Flow	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Trench & Backfill	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Rocky Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Backhoe Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Hand Dig Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Bore Cable	\$ -	0.89%	90.00%	\$ 0.12	\$ -	1.13%	90.00%	\$ 0.15	\$ -	1.36%	90.00%	\$ 0.19
Push Pipe & Pull Cable	\$ -	3.60%	90.00%	\$ 0.33	\$ -	3.60%	90.00%	\$ 0.33	\$ -	3.61%	90.00%	\$ 0.33
Cut & Restore Asphalt	\$ -	0.77%	90.00%	\$ 0.09	\$ -	0.83%	90.00%	\$ 0.09	\$ -	0.90%	90.00%	\$ 0.10
Cut & Restore Concrete	\$ -	0.79%	90.00%	\$ 0.11	\$ -	1.13%	90.00%	\$ 0.16	\$ -	1.47%	90.00%	\$ 0.20
Cut & Restore Sod	\$ -	2.02%	90.00%	\$ 0.05	\$ -	1.88%	90.00%	\$ 0.05	\$ -	1.73%	90.00%	\$ 0.05
	\$ -	99.99%		\$ 2.45	\$ -	100.00%		\$ 2.52	\$ -	100.01%		\$ 2.59

Normal - Aerial Feeder Cable

Activity	DENSITY 651-650				DENSITY 651-2650			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Poles	\$ -	294.00%	30.00%	\$ 164.70	\$ -	294.00%	30.00%	\$ 164.70
Auctions and Guys	\$ -	209.00%	100.00%	\$ 52.38	\$ -	209.00%	100.00%	\$ 47.14
	\$ -			\$ 217.08	\$ -			\$ 211.84

Normal - Aerial Distribution Cable

Activity	DENSITY 201-650				DENSITY 651-650			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Poles	\$ -	294.00%	30.00%	\$ 164.70	\$ -	294.00%	30.00%	\$ 164.70
Auctions and Guys	\$ -	209.00%	100.00%	\$ 52.38	\$ -	209.00%	100.00%	\$ 47.14
	\$ -			\$ 217.08	\$ -			\$ 211.84

Soft Rock Structure

Soft Rock - Feeder Conduit

Activity	DENSITY 201-650				DENSITY 651-650			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ -	95.36%	95.00%	\$ 1.72	\$ -	94.85%	95.00%	\$ 1.71
Rocky Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Boring	\$ -	0.92%	95.00%	\$ 0.13	\$ -	1.17%	95.00%	\$ 0.17
Cut & Restore Asphalt	\$ -	0.80%	95.00%	\$ 0.10	\$ -	0.87%	95.00%	\$ 0.10
Cut & Restore Concrete	\$ -	0.83%	95.00%	\$ 0.12	\$ -	1.18%	95.00%	\$ 0.17
Cut & Restore Sod	\$ -	2.08%	95.00%	\$ 0.06	\$ -	1.94%	95.00%	\$ 0.06
	\$ -	99.99%		\$ 2.13	\$ -	100.01%		\$ 2.21

Normal - Buried Distribution Cable

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	Telephone	Weighted Amount	Cost Adjustment	% Activity	Telephone	Weighted Amount	Cost Adjustment	% Activity	Telephone	Weighted Amount
Flow	\$ -	90.44%	100.00%	\$ 1.72	\$ -	89.95%	100.00%	\$ 1.71	\$ -	89.95%	100.00%	\$ 1.71
Rocky Flow	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Trench & Backfill	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Rocky Trench	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Backhoe Trench	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Hand Dig Trench	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Bare Cable	\$ -	1.60%	100.00%	\$ 0.22	\$ -	1.83%	100.00%	\$ 0.25	\$ -	1.83%	100.00%	\$ 0.25
Push Pipe & Pull Cable	\$ -	3.61%	100.00%	\$ 0.33	\$ -	3.62%	100.00%	\$ 0.33	\$ -	3.62%	100.00%	\$ 0.33
Cut & Restore Asphalt	\$ -	0.96%	100.00%	\$ 0.11	\$ -	1.02%	100.00%	\$ 0.12	\$ -	1.02%	100.00%	\$ 0.12
Cut & Restore Concrete	\$ -	1.81%	100.00%	\$ 0.25	\$ -	2.14%	100.00%	\$ 0.30	\$ -	2.14%	100.00%	\$ 0.30
Cut & Restore Sod	\$ -	1.58%	100.00%	\$ 0.04	\$ -	1.44%	100.00%	\$ 0.04	\$ -	1.44%	100.00%	\$ 0.04
		100.00%		\$ 2.67		100.00%		\$ 3.74		100.00%		\$ 3.74

Normal - Aerial Feeder Cable

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	Telephone	Weighted Amount	Cost Adjustment	% Activity	Telephone	Weighted Amount	Cost Adjustment	% Activity	Telephone	Weighted Amount
Poles	\$ -	254.00	30.00%	\$ 164.70	\$ -	294.00	30.00%	\$ 164.70	\$ -	294.00	30.00%	\$ 164.70
Anchor and Guys	\$ -	209.00	100.00%	\$ 94.28	\$ -	209.00	100.00%	\$ 94.28	\$ -	209.00	100.00%	\$ 94.28
				\$ 258.98				\$ 258.98				\$ 258.98

Normal - Aerial Distribution Cable

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	Telephone	Weighted Amount	Cost Adjustment	% Activity	Telephone	Weighted Amount	Cost Adjustment	% Activity	Telephone	Weighted Amount
Poles	\$ -	254.00	30.00%	\$ 164.70	\$ -	294.00	30.00%	\$ 164.70	\$ -	294.00	30.00%	\$ 164.70
Anchor and Guys	\$ -	209.00	100.00%	\$ 94.28	\$ -	209.00	100.00%	\$ 94.28	\$ -	209.00	100.00%	\$ 94.28
				\$ 258.98				\$ 258.98				\$ 258.98

Soft Rock Structure

Soft Rock - Feeder Conduit

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	Telephone	Weighted Amount	Cost Adjustment	% Activity	Telephone	Weighted Amount	Cost Adjustment	% Activity	Telephone	Weighted Amount
Trench & Backfill	\$ -	93.82%	95.00%	\$ 1.69	\$ -	93.30%	95.00%	\$ 1.68	\$ -	93.30%	95.00%	\$ 1.68
Rocky Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Boring	\$ -	1.66%	95.00%	\$ 0.24	\$ -	1.90%	95.00%	\$ 0.27	\$ -	1.90%	95.00%	\$ 0.27
Cut & Restore Asphalt	\$ -	1.00%	95.00%	\$ 0.12	\$ -	1.07%	95.00%	\$ 0.13	\$ -	1.07%	95.00%	\$ 0.13
Cut & Restore Concrete	\$ -	1.88%	95.00%	\$ 0.27	\$ -	2.23%	95.00%	\$ 0.33	\$ -	2.23%	95.00%	\$ 0.33
Cut & Restore Sod	\$ -	1.64%	95.00%	\$ 0.05	\$ -	1.50%	95.00%	\$ 0.04	\$ -	1.50%	95.00%	\$ 0.04
		100.00%		\$ 2.37		100.00%		\$ 2.43		100.00%		\$ 2.43

Soft Rock - Distribution Conduit

Structure Inputs

Activity	Base Cost Per Foot Installed	DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
		Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount
Trench & Backfill	\$ 1.90	\$ -	96.68%	\$ 1.84	\$ -	96.39%	\$ 1.74	\$ -	95.88%	\$ 1.64
Rocky Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Boring	\$ 15.15	\$ -	0.19%	\$ 0.03	\$ -	0.43%	\$ 0.06	\$ -	0.00%	\$ -
Cut & Restore Asphalt	\$ 12.63	\$ -	0.60%	\$ 0.08	\$ -	0.67%	\$ 0.08	\$ -	0.71%	\$ 0.09
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	\$ -	\$ -	0.13%	\$ 0.02	\$ -	0.48%	\$ 0.08
Cut & Restore Soil	\$ 3.00	\$ -	2.53%	\$ 0.08	\$ -	2.38%	\$ 0.07	\$ -	2.23%	\$ 0.07
			100.00%	\$ 2.02		100.00%	\$ 1.97		100.00%	\$ 1.94

Soft Rock - Buried Feeder Cable

Activity	Base Cost Per Foot Installed	DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
		Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount
Flow	\$ 1.90	\$ -	93.19%	\$ 1.77	\$ -	92.91%	\$ 1.77	\$ -	92.42%	\$ 1.76
Rocky Flow	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Trench & Backfill	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Rocky Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Bore Cable	\$ 15.15	\$ -	0.19%	\$ 0.03	\$ -	0.42%	\$ 0.06	\$ -	0.00%	\$ -
Push Pipe & Pull Cable	\$ 10.12	\$ -	3.58%	\$ 0.36	\$ -	3.59%	\$ 0.35	\$ -	3.59%	\$ 0.35
Cut & Restore Asphalt	\$ 12.63	\$ -	0.58%	\$ 0.07	\$ -	0.64%	\$ 0.08	\$ -	0.71%	\$ 0.09
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	\$ -	\$ -	0.12%	\$ 0.02	\$ -	0.46%	\$ 0.07
Cut & Restore Soil	\$ 3.00	\$ -	2.46%	\$ 0.07	\$ -	2.31%	\$ 0.07	\$ -	2.17%	\$ 0.06
			100.00%	\$ 2.31		99.08%	\$ 2.33		100.01%	\$ 2.38

Soft Rock - Buried Distribution Cable

Activity	Base Cost Per Foot Installed	DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
		Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount
Flow	\$ 1.90	\$ -	93.19%	\$ 1.77	\$ -	92.91%	\$ 1.77	\$ -	92.42%	\$ 1.76
Rocky Flow	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Trench & Backfill	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Rocky Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -	\$ -	0.00%	\$ -
Bore Cable	\$ 15.15	\$ -	0.19%	\$ 0.03	\$ -	0.42%	\$ 0.06	\$ -	0.00%	\$ -
Push Pipe & Pull Cable	\$ 10.12	\$ -	3.58%	\$ 0.36	\$ -	3.59%	\$ 0.35	\$ -	3.59%	\$ 0.35
Cut & Restore Asphalt	\$ 12.63	\$ -	0.58%	\$ 0.07	\$ -	0.64%	\$ 0.08	\$ -	0.71%	\$ 0.08
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	\$ -	\$ -	0.12%	\$ 0.02	\$ -	0.46%	\$ 0.06
Cut & Restore Soil	\$ 3.00	\$ -	2.46%	\$ 0.07	\$ -	2.31%	\$ 0.07	\$ -	2.17%	\$ 0.06
			100.00%	\$ 2.31		99.99%	\$ 2.33		100.01%	\$ 2.38

Soft Rock - Aerial Feeder Cable

Activity	Base Cost Per Foot Installed	DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
		Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount	Cost Adjustment	% Activity	Weighted Amount
Poles	\$ 255.00	\$ -	294.00%	\$ 164.70	\$ -	294.00%	\$ 164.70	\$ -	294.00%	\$ 164.70
Anchors and Guys	\$ 105.27	\$ -	209.00%	\$ 52.38	\$ -	209.00%	\$ 52.38	\$ -	209.00%	\$ 52.38
			100.00%	\$ 217.08		100.00%	\$ 217.08		100.00%	\$ 217.08

Soft Rock - Distribution Conduit

Structural Supports

Activity	DENSITY 201-450				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$	95.36%	90.00%	\$ 1.63	\$	94.85%	90.00%	\$ 1.62	\$	94.33%	90.00%	\$ 1.61
Rocky Trench	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Backhoe Trench	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Hand Dig Trench	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Boring	\$	0.02%	90.00%	\$ 0.13	\$	1.17%	90.00%	\$ 0.16	\$	1.41%	90.00%	\$ 0.19
Cut & Restore Asphalt	\$	0.86%	90.00%	\$ 0.09	\$	0.87%	90.00%	\$ 0.10	\$	0.93%	90.00%	\$ 0.11
Cut & Restore Concrete	\$	0.83%	90.00%	\$ 0.11	\$	1.18%	90.00%	\$ 0.16	\$	1.53%	90.00%	\$ 0.21
Cut & Restore Sod	\$	2.08%	90.00%	\$ 0.06	\$	1.94%	90.00%	\$ 0.05	\$	1.79%	90.00%	\$ 0.05
		99.96%		\$ 2.02		100.01%		\$ 2.10		99.99%		\$ 2.17

Soft Rock - Buried Feeder Cable

Activity	DENSITY 201-450				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Flow	\$	91.92%	100.00%	\$ 1.75	\$	91.43%	100.00%	\$ 1.74	\$	90.94%	100.00%	\$ 1.73
Rocky Flow	\$	0.00%	100.00%	\$ -	\$	0.00%	100.00%	\$ -	\$	0.00%	100.00%	\$ -
Trench & Backfill	\$	0.00%	95.00%	\$ -	\$	0.00%	95.00%	\$ -	\$	0.00%	95.00%	\$ -
Rocky Trench	\$	0.00%	95.00%	\$ -	\$	0.00%	95.00%	\$ -	\$	0.00%	95.00%	\$ -
Backhoe Trench	\$	0.00%	95.00%	\$ -	\$	0.00%	95.00%	\$ -	\$	0.00%	95.00%	\$ -
Hand Dig Trench	\$	0.00%	95.00%	\$ -	\$	0.00%	95.00%	\$ -	\$	0.00%	95.00%	\$ -
Bore Cable	\$	0.89%	95.00%	\$ 0.13	\$	1.13%	95.00%	\$ 0.16	\$	1.36%	95.00%	\$ 0.20
Push Pipe & Pull Cable	\$	3.60%	95.00%	\$ 0.35	\$	3.60%	95.00%	\$ 0.35	\$	3.61%	95.00%	\$ 0.35
Cut & Restore Asphalt	\$	0.77%	95.00%	\$ 0.09	\$	0.83%	95.00%	\$ 0.10	\$	0.90%	95.00%	\$ 0.11
Cut & Restore Concrete	\$	0.79%	95.00%	\$ 0.12	\$	1.13%	95.00%	\$ 0.16	\$	1.47%	95.00%	\$ 0.21
Cut & Restore Sod	\$	2.02%	95.00%	\$ 0.06	\$	1.88%	95.00%	\$ 0.05	\$	1.73%	95.00%	\$ 0.05
		99.99%		\$ 2.60		100.00%		\$ 2.58		100.01%		\$ 2.61

Soft Rock - Buried Distribution C

Activity	DENSITY 201-450				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Flow	\$	91.92%	100.00%	\$ 1.75	\$	91.43%	100.00%	\$ 1.74	\$	90.94%	100.00%	\$ 1.73
Rocky Flow	\$	0.00%	100.00%	\$ -	\$	0.00%	100.00%	\$ -	\$	0.00%	100.00%	\$ -
Trench & Backfill	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Rocky Trench	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Backhoe Trench	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Hand Dig Trench	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Bore Cable	\$	0.89%	90.00%	\$ 0.12	\$	1.13%	90.00%	\$ 0.15	\$	1.36%	90.00%	\$ 0.19
Push Pipe & Pull Cable	\$	3.60%	90.00%	\$ 0.33	\$	3.60%	90.00%	\$ 0.33	\$	3.61%	90.00%	\$ 0.33
Cut & Restore Asphalt	\$	0.77%	90.00%	\$ 0.09	\$	0.83%	90.00%	\$ 0.09	\$	0.90%	90.00%	\$ 0.10
Cut & Restore Concrete	\$	0.79%	90.00%	\$ 0.11	\$	1.13%	90.00%	\$ 0.16	\$	1.47%	90.00%	\$ 0.20
Cut & Restore Sod	\$	2.02%	90.00%	\$ 0.05	\$	1.88%	90.00%	\$ 0.05	\$	1.73%	90.00%	\$ 0.05
		99.99%		\$ 2.63		100.00%		\$ 2.52		100.01%		\$ 2.59

Soft Rock - Aerial Feeder Cable

Activity	DENSITY 201-450				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Poles	\$	294.00	30.00%	\$ 164.70	\$	294.00	30.00%	\$ 164.70	\$	294.00	30.00%	\$ 164.70
Anchor and Guys	\$	209.00	100.00%	\$ 52.38	\$	209.00	100.00%	\$ 47.14	\$	209.00	100.00%	\$ 94.28
				\$ 217.08				\$ 211.84				\$ 258.98

Soft Rock - Distribution Conduit

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ -	93.82%	90.00%	\$ 1.60	\$ -	93.30%	90.00%	\$ -	\$ -	93.30%	90.00%	\$ 1.60
Rocky Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Backhoe Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Hand Dig Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Boring	\$ -	1.66%	90.00%	\$ 0.23	\$ -	1.90%	90.00%	\$ 0.26	\$ -	1.90%	90.00%	\$ 0.26
Cut & Restore Asphalt	\$ -	1.00%	90.00%	\$ 0.11	\$ -	1.07%	90.00%	\$ 0.12	\$ -	1.07%	90.00%	\$ 0.12
Cut & Restore Concrete	\$ -	1.88%	90.00%	\$ 0.26	\$ -	2.23%	90.00%	\$ 0.31	\$ -	2.23%	90.00%	\$ 0.31
Cut & Restore Sod	\$ -	1.64%	90.00%	\$ 0.04	\$ -	1.50%	90.00%	\$ 0.04	\$ -	1.50%	90.00%	\$ 0.04
	\$ -	100.00%		\$ 2.35	\$ -	100.00%		\$ 2.33	\$ -	100.00%		\$ 2.33

Soft Rock - Buried Feeder Cable

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Flow	\$ -	90.44%	100.00%	\$ 1.72	\$ -	89.95%	100.00%	\$ 1.71	\$ -	89.95%	100.00%	\$ 1.71
Rocky Flow	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Trench & Backfill	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Rocky Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Bore Cable	\$ -	1.60%	95.00%	\$ 0.23	\$ -	1.83%	95.00%	\$ 0.26	\$ -	1.83%	95.00%	\$ 0.26
Push Pipe & Pull Cable	\$ -	3.61%	95.00%	\$ 0.35	\$ -	3.62%	95.00%	\$ 0.35	\$ -	3.62%	95.00%	\$ 0.35
Cut & Restore Asphalt	\$ -	0.96%	95.00%	\$ 0.12	\$ -	1.02%	95.00%	\$ 0.12	\$ -	1.02%	95.00%	\$ 0.12
Cut & Restore Concrete	\$ -	1.81%	95.00%	\$ 0.26	\$ -	2.14%	95.00%	\$ 0.31	\$ -	2.14%	95.00%	\$ 0.31
Cut & Restore Sod	\$ -	1.58%	95.00%	\$ 0.05	\$ -	1.44%	95.00%	\$ 0.04	\$ -	1.44%	95.00%	\$ 0.04
	\$ -	100.00%		\$ 2.72	\$ -	100.00%		\$ 2.69	\$ -	100.00%		\$ 2.69

Soft Rock - Buried Distribution C

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Flow	\$ -	90.44%	100.00%	\$ 1.72	\$ -	89.95%	100.00%	\$ 1.71	\$ -	89.95%	100.00%	\$ 1.71
Rocky Flow	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Trench & Backfill	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Rocky Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Backhoe Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Hand Dig Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Bore Cable	\$ -	1.60%	90.00%	\$ 0.22	\$ -	1.83%	90.00%	\$ 0.25	\$ -	1.83%	90.00%	\$ 0.25
Push Pipe & Pull Cable	\$ -	3.61%	90.00%	\$ 0.33	\$ -	3.62%	90.00%	\$ 0.33	\$ -	3.62%	90.00%	\$ 0.33
Cut & Restore Asphalt	\$ -	0.96%	90.00%	\$ 0.11	\$ -	1.02%	90.00%	\$ 0.12	\$ -	1.02%	90.00%	\$ 0.12
Cut & Restore Concrete	\$ -	1.81%	90.00%	\$ 0.25	\$ -	2.14%	90.00%	\$ 0.30	\$ -	2.14%	90.00%	\$ 0.30
Cut & Restore Sod	\$ -	1.58%	90.00%	\$ 0.04	\$ -	1.44%	90.00%	\$ 0.04	\$ -	1.44%	90.00%	\$ 0.04
	\$ -	100.00%		\$ 2.67	\$ -	100.00%		\$ 2.74	\$ -	100.00%		\$ 2.74

Soft Rock - Aerial Feeder Cable

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Poles	\$ -	254.00	30.00%	\$ 164.70	\$ -	254.00	30.00%	\$ 164.70	\$ -	254.00	30.00%	\$ 164.70
Anchors and Guys	\$ -	209.00	100.00%	\$ 94.28	\$ -	209.00	100.00%	\$ 94.28	\$ -	209.00	100.00%	\$ 94.28
	\$ -			\$ 258.98	\$ -			\$ 258.98	\$ -			\$ 258.98

Soft Rock - Distribution Cable

Activity	DENSITY 0-5				DENSITY 6-100				DENSITY 101-200			
	Base Cost Per Unit	Cost Adjustment	% Assigned Telephone	Weighted Amount	Base Cost Per Unit	Cost Adjustment	% Assigned Telephone	Weighted Amount	Base Cost Per Unit	Cost Adjustment	% Assigned Telephone	Weighted Amount
Poles	\$ 255.00	\$ -	30.00%	\$ 164.70	\$ 294.00	\$ -	30.00%	\$ 164.70	\$ 294.00	\$ -	30.00%	\$ 164.70
Anchor and Guys	\$ 105.27	\$ -	100.00%	\$ 52.38	\$ 209.00	\$ -	100.00%	\$ 52.38	\$ 209.00	\$ -	100.00%	\$ 52.38
				\$ 217.08				\$ 217.08				\$ 217.08

Hard Rock Structure

Hard Rock - Feeder Conduit

Activity	DENSITY 0-5				DENSITY 6-100				DENSITY 101-200			
	Base Cost Per Foot Installed	Cost Adjustment	% Assigned Telephone	Weighted Amount	Base Cost Per Foot Installed	Cost Adjustment	% Assigned Telephone	Weighted Amount	Base Cost Per Foot Installed	Cost Adjustment	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ 1.90	\$ -	96.68%	\$ 1.84	\$ -	\$ -	96%	\$ 1.79	\$ -	\$ -	95.88%	\$ 1.73
Rocky Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0.00%	\$ -
Boring	\$ 15.15	\$ -	0.19%	\$ 0.03	\$ -	\$ -	0%	\$ 0.07	\$ -	\$ -	0.68%	\$ 0.10
Cut & Restore Asphalt	\$ 12.63	\$ -	0.60%	\$ 0.08	\$ -	\$ -	1%	\$ 0.08	\$ -	\$ -	0.73%	\$ 0.09
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0.48%	\$ 0.07
Cut & Restore Sod	\$ 3.00	\$ -	2.53%	\$ 0.08	\$ -	\$ -	2%	\$ 0.07	\$ -	\$ -	2.23%	\$ 0.06
			100.00%	\$ 2.02			100.00%	\$ 3.04			100.00%	\$ 3.04

Hard Rock - Distribution Conduit

Activity	DENSITY 0-5				DENSITY 6-100				DENSITY 101-200			
	Base Cost Per Foot Installed	Cost Adjustment	% Assigned Telephone	Weighted Amount	Base Cost Per Foot Installed	Cost Adjustment	% Assigned Telephone	Weighted Amount	Base Cost Per Foot Installed	Cost Adjustment	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ 1.90	\$ -	96.68%	\$ 1.84	\$ -	\$ -	96%	\$ 1.73	\$ -	\$ -	95.88%	\$ 1.64
Rocky Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0.00%	\$ -
Boring	\$ 15.15	\$ -	0.19%	\$ 0.03	\$ -	\$ -	0%	\$ 0.06	\$ -	\$ -	0.68%	\$ 0.09
Cut & Restore Asphalt	\$ 12.63	\$ -	0.60%	\$ 0.08	\$ -	\$ -	1%	\$ 0.07	\$ -	\$ -	0.73%	\$ 0.08
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	\$ -	\$ -	\$ -	0%	\$ 0.02	\$ -	\$ -	0.48%	\$ 0.07
Cut & Restore Sod	\$ 3.00	\$ -	2.53%	\$ 0.08	\$ -	\$ -	2%	\$ 0.07	\$ -	\$ -	2.23%	\$ 0.06
			100.00%	\$ 2.02			99.64%	\$ 1.96			100.00%	\$ 1.96

Hard Rock - Buried Feeder Cable

Activity	DENSITY 0-5				DENSITY 6-100				DENSITY 101-200			
	Base Cost Per Foot Installed	Cost Adjustment	% Assigned Telephone	Weighted Amount	Base Cost Per Foot Installed	Cost Adjustment	% Assigned Telephone	Weighted Amount	Base Cost Per Foot Installed	Cost Adjustment	% Assigned Telephone	Weighted Amount
Flow	\$ 1.90	\$ -	93.19%	\$ 1.77	\$ -	\$ -	92.91%	\$ 1.77	\$ -	\$ -	92.42%	\$ 1.76
Rocky Flow	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ -	\$ -	0.00%	\$ -
Trench & Backfill	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ -	\$ -	0.00%	\$ -
Rocky Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ -	\$ -	0.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ -	\$ -	0.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ -	\$ -	0.00%	\$ -
Bore Cable	\$ 15.15	\$ -	0.19%	\$ 0.03	\$ -	\$ -	0.42%	\$ 0.06	\$ -	\$ -	0.66%	\$ 0.09
Push Pipe & Pull Cable	\$ 10.12	\$ -	3.58%	\$ 0.36	\$ -	\$ -	3.59%	\$ 0.35	\$ -	\$ -	3.59%	\$ 0.35
Cut & Restore Asphalt	\$ 12.63	\$ -	0.58%	\$ 0.07	\$ -	\$ -	0.64%	\$ 0.08	\$ -	\$ -	0.71%	\$ 0.09
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	\$ -	\$ -	\$ -	0.12%	\$ 0.02	\$ -	\$ -	0.46%	\$ 0.07
Cut & Restore Sod	\$ 3.00	\$ -	2.40%	\$ 0.07	\$ -	\$ -	2.31%	\$ 0.07	\$ -	\$ -	2.17%	\$ 0.06
			100.00%	\$ 2.31			99.99%	\$ 2.35			100.01%	\$ 2.41

Soft Rock - Distribution C

Summary Inputs

Activity	DENSITY 201-450				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone
Poles	\$ -	95.36%	\$ 164.70	30.00%	\$ -	94.83%	\$ 164.70	30.00%	\$ -	94.3%	\$ 164.70	30.00%
Anchors and Grays	\$ -	0.00%	\$ 52.38	100.00%	\$ -	0.00%	\$ 47.14	100.00%	\$ -	0.0%	\$ 47.14	100.00%
	\$ -	95.36%	\$ 217.08		\$ -	94.83%	\$ 211.84		\$ -	94.3%	\$ 211.84	

Hard Rock Structure

Hard Rock - Feeder Conduit

Activity	DENSITY 201-450				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone
Trench & Backfill	\$ -	95.36%	\$ 1.72	95.00%	\$ -	94.83%	\$ 1.71	95.00%	\$ -	94.3%	\$ 1.70	95.0%
Rocky Trench	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.0%	\$ -	0.0%
Backhoe Trench	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.0%	\$ -	0.0%
Hand Dig Trench	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.0%	\$ -	0.0%
Boring	\$ -	0.92%	\$ 0.13	95.00%	\$ -	1.17%	\$ 0.17	95.00%	\$ -	1.4%	\$ 0.20	95.0%
Cut & Restore Asphalt	\$ -	0.80%	\$ 0.10	95.00%	\$ -	0.87%	\$ 0.10	95.00%	\$ -	0.9%	\$ 0.11	95.0%
Cut & Restore Concrete	\$ -	0.83%	\$ 0.12	95.00%	\$ -	1.18%	\$ 0.17	95.00%	\$ -	1.5%	\$ 0.22	95.0%
Cut & Restore Sod	\$ -	2.08%	\$ 0.06	95.00%	\$ -	1.94%	\$ 0.06	95.00%	\$ -	1.8%	\$ 0.05	95.0%
	\$ -	99.99%	\$ 2.33		\$ -	100.01%	\$ 2.31		\$ -	99.99%	\$ 2.28	

Hard Rock - Distribution Condu

Activity	DENSITY 201-450				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone
Trench & Backfill	\$ -	95.36%	\$ 1.63	90.00%	\$ -	94.83%	\$ 1.62	90.00%	\$ -	94.33%	\$ 1.61	90.00%
Rocky Trench	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%
Backhoe Trench	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%
Hand Dig Trench	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%
Boring	\$ -	0.92%	\$ 0.13	90.00%	\$ -	1.17%	\$ 0.16	90.00%	\$ -	1.41%	\$ 0.19	90.00%
Cut & Restore Asphalt	\$ -	0.80%	\$ 0.09	90.00%	\$ -	0.87%	\$ 0.10	90.00%	\$ -	0.93%	\$ 0.11	90.00%
Cut & Restore Concrete	\$ -	0.83%	\$ 0.11	90.00%	\$ -	1.18%	\$ 0.16	90.00%	\$ -	1.53%	\$ 0.21	90.00%
Cut & Restore Sod	\$ -	2.08%	\$ 0.06	90.00%	\$ -	1.94%	\$ 0.05	90.00%	\$ -	1.79%	\$ 0.05	90.00%
	\$ -	99.99%	\$ 2.62		\$ -	100.01%	\$ 2.50		\$ -	99.99%	\$ 2.44	

Hard Rock - Buried Feeder Cabl

Activity	DENSITY 201-450				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone	Cost Adjustment	% Activity	Weighted Amount	% Assigned Telephone
Flow	\$ -	91.92%	\$ 1.75	100.00%	\$ -	91.43%	\$ 1.74	100.00%	\$ -	90.94%	\$ 1.73	100.00%
Rocky Flow	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%
Trench & Backfill	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%
Rocky Trench	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%
Backhoe Trench	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%
Hand Dig Trench	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%
Bore Cable	\$ -	0.89%	\$ 0.13	95.00%	\$ -	1.13%	\$ 0.16	95.00%	\$ -	1.36%	\$ 0.20	95.00%
Push Pipe & Pull Cable	\$ -	3.60%	\$ 0.35	95.00%	\$ -	3.60%	\$ 0.35	95.00%	\$ -	3.61%	\$ 0.35	95.00%
Cut & Restore Asphalt	\$ -	0.77%	\$ 0.09	95.00%	\$ -	0.83%	\$ 0.10	95.00%	\$ -	0.90%	\$ 0.11	95.00%
Cut & Restore Concrete	\$ -	0.79%	\$ 0.12	95.00%	\$ -	1.13%	\$ 0.16	95.00%	\$ -	1.47%	\$ 0.21	95.00%
Cut & Restore Sod	\$ -	2.02%	\$ 0.06	95.00%	\$ -	1.88%	\$ 0.05	95.00%	\$ -	1.73%	\$ 0.05	95.00%
	\$ -	99.99%	\$ 2.49		\$ -	100.00%	\$ 2.56		\$ -	100.01%	\$ 2.64	

Soft Rock - Distribution C

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount
Poles	\$ -	\$ 204.00	30.00%	\$ 164.70	\$ -	\$ 204.00	30.00%	\$ 164.70	\$ -	\$ 204.00	30.00%	\$ 164.70
Anchor and Guys	\$ -	\$ 209.00	100.00%	\$ 94.28	\$ -	\$ 209.00	100.00%	\$ 94.28	\$ -	\$ 209.00	100.00%	\$ 94.28
				\$ 258.98				\$ 258.98				\$ 258.98

Hard Rock Structure

Hard Rock - Feeder Conduit

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ -	93.82%	95.00%	\$ 1.69	\$ -	93.30%	95.00%	\$ 1.68	\$ -	93.30%	95.00%	\$ 1.68
Rocky Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Boring	\$ -	1.66%	95.00%	\$ 0.24	\$ -	1.90%	95.00%	\$ 0.27	\$ -	1.90%	95.00%	\$ 0.27
Cut & Restore Asphalt	\$ -	1.00%	95.00%	\$ 0.12	\$ -	1.07%	95.00%	\$ 0.13	\$ -	1.07%	95.00%	\$ 0.13
Cut & Restore Concrete	\$ -	1.88%	95.00%	\$ 0.27	\$ -	2.23%	95.00%	\$ 0.31	\$ -	2.23%	95.00%	\$ 0.31
Cut & Restore Sod	\$ -	1.64%	95.00%	\$ 0.05	\$ -	1.50%	95.00%	\$ 0.04	\$ -	1.50%	95.00%	\$ 0.04
		100.00%		\$ 2.37		100.00%		\$ 2.45		100.00%		\$ 2.45

Hard Rock - Distribution Conduit

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ -	93.82%	90.00%	\$ 1.60	\$ -	93.30%	90.00%	\$ 1.60	\$ -	93.30%	90.00%	\$ 1.60
Rocky Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Backhoe Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Hand Dig Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Boring	\$ -	1.66%	90.00%	\$ 0.23	\$ -	1.90%	90.00%	\$ 0.26	\$ -	1.90%	90.00%	\$ 0.26
Cut & Restore Asphalt	\$ -	1.00%	90.00%	\$ 0.11	\$ -	1.07%	90.00%	\$ 0.12	\$ -	1.07%	90.00%	\$ 0.12
Cut & Restore Concrete	\$ -	1.88%	90.00%	\$ 0.26	\$ -	2.23%	90.00%	\$ 0.31	\$ -	2.23%	90.00%	\$ 0.31
Cut & Restore Sod	\$ -	1.64%	90.00%	\$ 0.04	\$ -	1.50%	90.00%	\$ 0.04	\$ -	1.50%	90.00%	\$ 0.04
		100.00%		\$ 2.35		100.00%		\$ 2.33		100.00%		\$ 2.33

Hard Rock - Buried Feeder Cabi

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY >10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Flow	\$ -	90.44%	100.00%	\$ 1.72	\$ -	89.95%	100.00%	\$ 1.71	\$ -	89.95%	100.00%	\$ 1.71
Rocky Flow	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Trench & Backfill	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Rocky Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Backhoe Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Hand Dig Trench	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Bore Cable	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	95.00%	\$ -
Push Pipe & Pull Cable	\$ -	1.60%	95.00%	\$ 0.33	\$ -	1.83%	95.00%	\$ 0.26	\$ -	1.83%	95.00%	\$ 0.26
Cut & Restore Asphalt	\$ -	3.61%	95.00%	\$ 0.35	\$ -	3.62%	95.00%	\$ 0.35	\$ -	3.62%	95.00%	\$ 0.35
Cut & Restore Concrete	\$ -	0.96%	95.00%	\$ 0.12	\$ -	1.02%	95.00%	\$ 0.12	\$ -	1.02%	95.00%	\$ 0.12
Cut & Restore Sod	\$ -	1.81%	95.00%	\$ 0.26	\$ -	2.14%	95.00%	\$ 0.31	\$ -	2.14%	95.00%	\$ 0.31
		100.00%		\$ 2.72		100.00%		\$ 2.80		100.00%		\$ 2.80

Hard Rock - Distribution Cable

Structure Inputs

Activity	Base Cost Per Foot Installed	DENSITY 0-5				DENSITY 6-100				DENSITY 101-200			
		Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Flow	\$ 1.90	\$ -	93.19%	100.00%	\$ 1.77	\$ -	92.91%	100.00%	\$ 1.77	\$ -	92.42%	100.00%	\$ 1.76
Rocky Flow	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Trench & Backfill	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Rocky Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Backhoe Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Hand Dig Trench	\$ 1.90	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	95.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Bore Cable	\$ 15.15	\$ -	0.19%	100.00%	\$ 0.03	\$ -	0.42%	95.00%	\$ 0.06	\$ -	0.66%	90.00%	\$ 0.09
Push Pipe & Pull Cable	\$ 10.12	\$ -	3.58%	100.00%	\$ 0.36	\$ -	3.59%	95.00%	\$ 0.35	\$ -	3.59%	90.00%	\$ 0.33
Cut & Restore Asphalt	\$ 12.63	\$ -	0.58%	100.00%	\$ 0.07	\$ -	0.64%	95.00%	\$ 0.08	\$ -	0.71%	90.00%	\$ 0.08
Cut & Restore Concrete	\$ 15.37	\$ -	0.00%	100.00%	\$ -	\$ -	0.12%	95.00%	\$ 0.02	\$ -	0.46%	90.00%	\$ 0.06
Cut & Restore Sod	\$ 3.00	\$ -	2.46%	100.00%	\$ 0.07	\$ -	2.31%	95.00%	\$ 0.07	\$ -	2.17%	90.00%	\$ 0.06
			100.00%		\$ 2.31		99.99%		\$ 2.33		100.01%		\$ 2.38

Hard Rock - Aerial Feeder Cable

Activity	Base Cost Per Foot	DENSITY 0-5				DENSITY 6-100				DENSITY 101-200			
		Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount
Poles	\$ 255.00		\$ 294.00	30%	\$ 164.70		\$ 294.00	30%	\$ 164.70		\$ 294.00	30%	\$ 164.70
Anchor and Guys	\$ 105.27		\$ 209.00	100%	\$ 52.38		\$ 209.00	100%	\$ 52.38		\$ 209.00	100%	\$ 52.38
					\$ 217.08				\$ 217.08				\$ 217.08

Hard Rock - Aerial Distribution Cable

Activity	Base Cost Per Foot	DENSITY 0-5				DENSITY 6-100				DENSITY 101-200			
		Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount
Poles	\$ 255.00	\$ -	\$ 294.00	30%	\$ 164.70	\$ -	\$ 294.00	30%	\$ 164.70	\$ -	\$ 294.00	30%	\$ 164.70
Anchor and Guys	\$ 105.27	\$ -	\$ 209.00	100%	\$ 52.38	\$ -	\$ 209.00	100%	\$ 52.38	\$ -	\$ 209.00	100%	\$ 52.38
					\$ 217.08				\$ 217.08				\$ 217.08

Hard Rock - Distribution

Structure Inputs

Activity	DENSITY 201-650				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Flow	\$ -	91.92%	100.00%	\$ 1.75	\$ -	92%	100.00%	\$ 1.75	\$ -	90.94%	100.00%	\$ 1.73
Rocky Flow	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	100.00%	\$ -
Trench & Backfill	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Rocky Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Backhoe Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Hand Dig Trench	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -	\$ -	0.00%	90.00%	\$ -
Bore Cable	\$ -	0.89%	90.00%	\$ 0.12	\$ -	1.13%	90.00%	\$ 0.15	\$ -	1.36%	90.00%	\$ 0.19
Push Pipe & Pull Cable	\$ -	3.60%	90.00%	\$ 0.33	\$ -	3.60%	90.00%	\$ 0.33	\$ -	3.61%	90.00%	\$ 0.33
Cut & Restore Asphalt	\$ -	0.77%	90.00%	\$ 0.09	\$ -	0.83%	90.00%	\$ 0.09	\$ -	0.90%	90.00%	\$ 0.10
Cut & Restore Concrete	\$ -	0.79%	90.00%	\$ 0.11	\$ -	1.13%	90.00%	\$ 0.16	\$ -	1.47%	90.00%	\$ 0.20
Cut & Restore Sod	\$ -	2.02%	90.00%	\$ 0.05	\$ -	1.88%	90.00%	\$ 0.05	\$ -	1.73%	90.00%	\$ 0.05
		99.99%		\$ 2.45		1010.00%		\$ 2.51		100.01%		\$ 2.59

Hard Rock - Aerial Feeder Cable

Activity	DENSITY 201-650				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount
Poles		\$ 294.00	30%	\$ 164.70		\$ 294.00	30%	\$ 164.70		\$ 294.00	30%	\$ 164.70
Anchors and Guys		\$ 209.00	100%	\$ 52.38		\$ 209.00	100%	\$ 47.14		\$ 209.00	100%	\$ 94.28
				\$ 217.08				\$ 211.84				\$ 258.98

Hard Rock - Aerial Distribution

Activity	DENSITY 201-650				DENSITY 651-850				DENSITY 851-2550			
	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount	Cost Adjustment	Installation Cost	% Assigned Telephone	Weighted Amount
Poles	\$ -	\$ 294.00	30%	\$ 164.70	\$ -	\$ 294.00	30%	\$ 164.70	\$ -	\$ 294.00	30%	\$ 164.70
Anchors and Guys	\$ -	\$ 209.00	100%	\$ 52.38	\$ -	\$ 209.00	100%	\$ 47.14	\$ -	\$ 209.00	100%	\$ 94.28
				\$ 217.08				\$ 211.84				\$ 258.98

Hard Rock - Aerial Distribution

Structural Elements

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY > 10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Pole	\$	90.44%	100.00%	\$ 1.72	\$	89.95%	100.00%	\$ 1.71	\$	90%	100.00%	\$ 1.71
Rocky Pole	\$	0.00%	100.00%	\$ -	\$	0.00%	100.00%	\$ -	\$	0.00%	100.00%	\$ -
Trench & Backfill	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Rocky Trench	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Backhoe Trench	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Hand Dig Trench	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -	\$	0.00%	90.00%	\$ -
Bore Cable	\$	1.60%	90.00%	\$ 0.22	\$	1.83%	90.00%	\$ 0.25	\$	1.83%	90.00%	\$ 0.25
Push Pipe & Pull Cable	\$	3.61%	90.00%	\$ 0.33	\$	3.62%	90.00%	\$ 0.33	\$	3.62%	90.00%	\$ 0.33
Cut & Restore Asphalt	\$	0.96%	90.00%	\$ 0.11	\$	1.02%	90.00%	\$ 0.12	\$	1.02%	90.00%	\$ 0.12
Cut & Restore Concrete	\$	1.81%	90.00%	\$ 0.25	\$	2.14%	90.00%	\$ 0.30	\$	2.14%	90.00%	\$ 0.30
Cut & Restore Soil	\$	1.58%	90.00%	\$ 0.04	\$	1.44%	90.00%	\$ 0.04	\$	1.44%	90.00%	\$ 0.04
		100.00%		\$ 2.67		100.00%		\$ 2.74		100.00%		\$ 2.74

Hard Rock - Aerial Feeder Cable

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY > 10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Poles	\$	294.00	30%	\$ 164.70	\$	294.00	30%	\$ 164.70	\$	294.00	30%	\$ 164.70
Anchors and Guys	\$	209.00	100%	\$ 94.28	\$	209.00	100%	\$ 94.28	\$	209.00	100%	\$ 94.28
				\$ 258.98				\$ 258.98				\$ 258.98

Hard Rock - Aerial Distribution

Activity	DENSITY 2551-5000				DENSITY 5001-10000				DENSITY > 10001			
	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount	Cost Adjustment	% Activity	% Assigned Telephone	Weighted Amount
Poles	\$	294.00	30%	\$ 164.70	\$	294.00	30%	\$ 164.70	\$	294.00	30%	\$ 164.70
Anchors and Guys	\$	209.00	100%	\$ 94.28	\$	209.00	100%	\$ 94.28	\$	209.00	100%	\$ 94.28
				\$ 258.98				\$ 258.98				\$ 258.98

Normal - Manhole

Unit	Per Unit Costs			DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
	Material	Installation	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost
Handhole 3x5 or 4x6	\$ 944.00	\$ 400.00	\$ 1,008.00		75.00%	\$ 1,008.00		75.00%	\$ 1,008.00		75.00%	\$ 1,008.00
Manhole 48x7	\$ 2,138.25	\$ 1,645.00	\$ 3,404.93		90.00%	\$ 3,404.93		90.00%	\$ 3,404.93		90.00%	\$ 3,404.93
Manhole 12x6x7	\$ 3,209.00	\$ 2,431.00	\$ 4,512.00		80.00%	\$ 4,512.00		80.00%	\$ 4,512.00		80.00%	\$ 4,512.00
Adder 12x6x7	\$ 2,800.00	\$ 500.00	\$ 2,640.00		80.00%	\$ 2,640.00		80.00%	\$ 2,640.00		80.00%	\$ 2,640.00
Conduit Per Duct Foot	\$ 0.73		\$ 0.73		100.00%	\$ 0.73		100.00%	\$ 0.73		100.00%	\$ 0.73

Soft Rock - Manhole

Unit	Per Unit Costs			DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
	Material	Installation	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost
Handhole 3x5 or 4x6	\$ 944.00	\$ 600.00	\$ 1,158.00		75%	\$ 1,158.00		75%	\$ 1,158.00		75%	\$ 1,158.00
Manhole 48x7	\$ 2,138.25	\$ 2,045.00	\$ 3,764.93		90%	\$ 3,764.93		90%	\$ 3,764.93		90%	\$ 3,764.93
Manhole 12x6x7	\$ 3,209.00	\$ 2,831.00	\$ 4,832.00		80%	\$ 4,832.00		80%	\$ 4,832.00		80%	\$ 4,832.00
Adder 12x6x7	\$ 2,800.00	\$ 700.00	\$ 2,800.00		80%	\$ 2,800.00		80%	\$ 2,800.00		80%	\$ 2,800.00
Conduit Per Duct Foot	\$ 0.73		\$ 0.73		100%	\$ 0.73		100%	\$ 0.73		100%	\$ 0.73

Hard Rock - Manhole

Unit	Per Unit Costs			DENSITY 0-5			DENSITY 6-100			DENSITY 101-200		
	Material	Installation	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost
Handhole 3x5 or 4x6	\$ 944.00	\$ 800.00	\$ 1,308.00		75%	\$ 1,308.00		75%	\$ 1,308.00		75%	\$ 1,308.00
Manhole 48x7	\$ 2,138.25	\$ 2,445.00	\$ 4,124.93		90%	\$ 4,124.93		90%	\$ 4,124.93		90%	\$ 4,124.93
Manhole 12x6x7	\$ 3,209.00	\$ 3,231.00	\$ 5,152.00		80%	\$ 5,152.00		80%	\$ 5,152.00		80%	\$ 5,152.00
Adder 12x6x7	\$ 2,800.00	\$ 900.00	\$ 2,960.00		80%	\$ 2,960.00		80%	\$ 2,960.00		80%	\$ 2,960.00
Conduit Per Duct Foot	\$ 0.73		\$ 0.73		100%	\$ 0.73		100%	\$ 0.73		100%	\$ 0.73

Normal - Manhole

Unit	DENSITY 201-650			DENSITY 651-850			DENSITY 851-2550			DENSITY 2551-5000		
	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost
Handhole 3x5 or 4x6		75.00%	\$ 1,008.00		75.00%	\$ 1,008.00		75.00%	\$ 1,008.00		75.00%	\$ 1,008.00
Manhole 48x7		90.00%	\$ 3,404.93		90.00%	\$ 3,404.93		90.00%	\$ 3,404.93		90.00%	\$ 3,404.93
Manhole 12x6x7		80.00%	\$ 4,512.00		80.00%	\$ 4,512.00		80.00%	\$ 4,512.00		80.00%	\$ 4,512.00
Adlder 12x6x7		80.00%	\$ 2,640.00		80.00%	\$ 2,640.00		80.00%	\$ 2,640.00		80.00%	\$ 2,640.00
Conduit Per Dist Foot		100.00%	\$ 0.73		100.00%	\$ 0.73		100.00%	\$ 0.73		100.00%	\$ 0.73

Soft Rock - Manhole

Unit	DENSITY 201-650			DENSITY 651-850			DENSITY 851-2550			DENSITY 2551-5000		
	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost
Handhole 3x5 or 4x6		75%	\$ 1,158.00		75%	\$ 1,158.00		75%	\$ 1,158.00		75%	\$ 1,158.00
Manhole 48x7		90%	\$ 3,764.93		90%	\$ 3,764.93		90%	\$ 3,764.93		90%	\$ 3,764.93
Manhole 12x6x7		80%	\$ 4,832.00		80%	\$ 4,832.00		80%	\$ 4,832.00		80%	\$ 4,832.00
Adlder 12x6x7		80%	\$ 2,800.00		80%	\$ 2,800.00		80%	\$ 2,800.00		80%	\$ 2,800.00
Conduit Per Dist Foot		100%	\$ 0.73		100%	\$ 0.73		100%	\$ 0.73		100%	\$ 0.73

Hard Rock - Manhole

Unit	DENSITY 201-650			DENSITY 651-850			DENSITY 851-2550			DENSITY 2551-5000		
	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost
Handhole 3x5 or 4x6		75%	\$ 1,308.00		75%	\$ 1,308.00		75%	\$ 1,308.00		75%	\$ 1,308.00
Manhole 48x7		90%	\$ 4,124.93		90%	\$ 4,124.93		90%	\$ 4,124.93		90%	\$ 4,124.93
Manhole 12x6x7		80%	\$ 5,152.00		80%	\$ 5,152.00		80%	\$ 5,152.00		80%	\$ 5,152.00
Adlder 12x6x7		80%	\$ 2,960.00		80%	\$ 2,960.00		80%	\$ 2,960.00		80%	\$ 2,960.00
Conduit Per Dist Foot		100%	\$ 0.73		100%	\$ 0.73		100%	\$ 0.73		100%	\$ 0.73

Normal - Manhole

Unit	DENSITY 5001-10000			DENSITY >10001		
	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost
Handhole 3x5 or 4x6		75.00%	\$ 1,008.00		75.00%	\$ 1,008.00
Manhole 48x7		90.00%	\$ 3,404.93		90.00%	\$ 3,404.93
Manhole 12x6x7		80.00%	\$ 4,512.00		80.00%	\$ 4,512.00
Adder 12x6x7		80.00%	\$ 2,640.00		80.00%	\$ 2,640.00
Conduit Per Duct Foot		100.00%	\$ 0.73		100.00%	\$ 0.73

Soft Rock - Manhole

Unit	DENSITY 5001-10000			DENSITY >10001		
	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost
Handhole 3x5 or 4x6		75%	\$ 1,158.00		75%	\$ 1,158.00
Manhole 48x7		90%	\$ 3,764.93		90%	\$ 3,764.93
Manhole 12x6x7		80%	\$ 4,832.00		80%	\$ 4,832.00
Adder 12x6x7		80%	\$ 2,800.00		80%	\$ 2,800.00
Conduit Per Duct Foot		100%	\$ 0.73		100%	\$ 0.73

Hard Rock - Manhole

Unit	DENSITY 5001-10000			DENSITY >10001		
	Cost Adjustment	% Assigned Telephone	Unit Cost	Cost Adjustment	% Assigned Telephone	Unit Cost
Handhole 3x5 or 4x6		75%	\$ 1,308.00		75%	\$ 1,308.00
Manhole 48x7		90%	\$ 4,124.93		90%	\$ 4,124.93
Manhole 12x6x7		80%	\$ 5,152.00		80%	\$ 5,152.00
Adder 12x6x7		80%	\$ 2,960.00		80%	\$ 2,960.00
Conduit Per Duct Foot		100%	\$ 0.73		100%	\$ 0.73

Feeder Spacing Table

Density	In Feet			Relative Pole Units
	Mainline Spacing	Pole Spacing	Guy Spacing	
0	450	250	1500	6.00
6	450	250	1500	6.00
101	450	250	1500	6.00
201	450	250	1500	6.00
651	450	150	1000	6.67
851	450	150	500	3.33
2551	450	150	500	3.33
5001	450	150	500	3.33
10001	450	150	500	3.33

Distribution Spacing Table

Density	In Feet			Relative Pole Units
	Mainline Spacing	Pole Spacing	Guy Spacing	
0	450	250	1500	6.00
6	450	250	1500	6.00
101	450	250	1500	6.00
201	450	250	1500	6.00
651	450	150	1000	6.67
851	450	150	500	3.33
2551	450	150	500	3.33
5001	450	150	500	3.33
10001	450	150	500	3.33

Distribution Plant Mix Table

Normal Terrain				
Density	Underlaid %	Buried %	Aerial %	
0	0.80%	87.50%	11.70%	
6	1.00%	87.10%	11.90%	
101	1.10%	86.70%	12.20%	
201	1.20%	86.40%	12.40%	
651	1.20%	86.10%	12.70%	
851	1.30%	85.90%	12.80%	
2551	1.40%	85.60%	13.00%	
5001	1.40%	85.50%	13.10%	
10001	1.50%	85.30%	13.20%	

Copper Plant Mix Table

Normal Terrain				
Density	Underlaid %	Buried %	Aerial %	
0	12.00%	84.70%	3.30%	
6	14.00%	82.90%	3.10%	
101	15.70%	81.40%	2.90%	
201	17.10%	80.10%	2.80%	
651	18.30%	79.00%	2.70%	
851	19.40%	78.10%	2.50%	
2551	20.30%	77.20%	2.50%	
5001	21.20%	76.50%	2.30%	
10001	21.90%	75.80%	2.30%	

Fiber Plant Mix Table (Loop)

Normal Terrain - Loop				
Density	Underlaid %	Buried %	Aerial %	
0	23.50%	74.40%	2.10%	
6	25.80%	72.10%	2.10%	
101	28.60%	69.40%	2.00%	
201	31.80%	66.20%	2.00%	
651	35.80%	62.30%	1.90%	
851	40.80%	57.40%	1.80%	
2551	47.20%	51.10%	1.70%	
5001	55.80%	42.70%	1.50%	
10001	67.80%	30.80%	1.40%	

Soft Rock Terrain				
Density	Underlaid %	Buried %	Aerial %	
0	0.80%	87.50%	11.70%	
6	1.00%	87.10%	11.90%	
101	1.10%	86.70%	12.20%	
201	1.20%	86.40%	12.40%	
651	1.20%	86.10%	12.70%	
851	1.30%	85.90%	12.80%	
2551	1.40%	85.60%	13.00%	
5001	1.40%	85.50%	13.10%	
10001	1.50%	85.30%	13.20%	

Soft Rock Terrain				
Density	Underlaid %	Buried %	Aerial %	
0	12.00%	84.70%	3.30%	
6	14.00%	82.90%	3.10%	
101	15.70%	81.40%	2.90%	
201	17.10%	80.10%	2.80%	
651	18.30%	79.00%	2.70%	
851	19.40%	78.10%	2.50%	
2551	20.30%	77.20%	2.50%	
5001	21.20%	76.50%	2.30%	
10001	21.90%	75.80%	2.30%	

Soft Rock Terrain - Loop				
Density	Underlaid %	Buried %	Aerial %	
0	23.50%	74.40%	2.10%	
6	25.80%	72.10%	2.10%	
101	28.60%	69.40%	2.00%	
201	31.80%	66.20%	2.00%	
651	35.80%	62.30%	1.90%	
851	40.80%	57.40%	1.80%	
2551	47.20%	51.10%	1.70%	
5001	55.80%	42.70%	1.50%	
10001	67.80%	30.80%	1.40%	

Hard Rock Terrain				
Density	Underlaid %	Buried %	Aerial %	
0	0.80%	87.50%	11.70%	
6	1.00%	87.10%	11.90%	
101	1.10%	86.70%	12.20%	
201	1.20%	86.40%	12.40%	
651	1.20%	86.10%	12.70%	
851	1.30%	85.90%	12.80%	
2551	1.40%	85.60%	13.00%	
5001	1.40%	85.50%	13.10%	
10001	1.50%	85.30%	13.20%	

Hard Rock Terrain				
Density	Underlaid %	Buried %	Aerial %	
0	12.00%	84.70%	3.30%	
6	14.00%	82.90%	3.10%	
101	15.70%	81.40%	2.90%	
201	17.10%	80.10%	2.80%	
651	18.30%	79.00%	2.70%	
851	19.40%	78.10%	2.50%	
2551	20.30%	77.20%	2.50%	
5001	21.20%	76.50%	2.30%	
10001	21.90%	75.80%	2.30%	

Hard Rock Terrain - Loop				
Density	Underlaid %	Buried %	Aerial %	
0	23.50%	74.40%	2.10%	
6	25.80%	72.10%	2.10%	
101	28.60%	69.40%	2.00%	
201	31.80%	66.20%	2.00%	
651	35.80%	62.30%	1.90%	
851	40.80%	57.40%	1.80%	
2551	47.20%	51.10%	1.70%	
5001	55.80%	42.70%	1.50%	
10001	67.80%	30.80%	1.40%	

Fiber Plant Cable (Transport)

Density	Underground %	Buried %	Aerial %
0	23.50%	74.40%	2.10%
6	25.80%	72.10%	2.10%
101	28.60%	69.40%	2.00%
201	31.80%	66.20%	2.00%
651	35.80%	62.30%	1.90%
851	40.80%	57.40%	1.80%
2551	47.20%	51.10%	1.70%
5001	55.80%	42.70%	1.50%
10001	67.80%	30.80%	1.40%

Density	Underground %	Buried %	Aerial %
0	23.50%	74.40%	2.10%
6	25.80%	72.10%	2.10%
101	28.60%	69.40%	2.00%
201	31.80%	66.20%	2.00%
651	35.80%	62.30%	1.90%
851	40.80%	57.40%	1.80%
2551	47.20%	51.10%	1.70%
5001	55.80%	42.70%	1.50%
10001	67.80%	30.80%	1.40%

Density	Underground %	Buried %	Aerial %
0	23.50%	74.40%	2.10%
6	25.80%	72.10%	2.10%
101	28.60%	69.40%	2.00%
201	31.80%	66.20%	2.00%
651	35.80%	62.30%	1.90%
851	40.80%	57.40%	1.80%
2551	47.20%	51.10%	1.70%
5001	55.80%	42.70%	1.50%
10001	67.80%	30.80%	1.40%

Average Number of Housing Units Per Dwelling For Each Census Data Range

Units per Dwelling	0-5	6-100	101-200	201-250	251-255	256-500	501-1000	1001-2000	2001-5000	5001-10000	>10000
2	2	2	2	2	2	2	2	2	2	2	2
3-4	3	3	3	3	3	3	3	3	3	3	3
5-9	7	7	7	7	7	7	7	7	7	7	7
10-19	15	15	15	15	15	15	15	15	15	15	15
20-49	35	35	35	35	35	35	35	35	35	35	35
>50	55	55	55	55	55	55	55	55	55	55	55
Other	1	1	1	1	1	1	1	1	1	1	1

Density Cable Sizing Factor Table

Density	Factor
0	53.48%
6	54.21%
101	54.94%
201	55.67%
651	56.39%
851	57.12%
2551	57.85%
5001	58.57%
10001	59.30%

Density Hh T	Household			
	Percent Single Family	Percent Multi Unit Dwelling	Percent Multi Family Dwellings	Less per Household
0	96.00%	2.80	4.00%	97.43%
6	93.90%	3.20	6.10%	95.81%
101	89.00%	4.50	11.00%	91.44%
201	83.40%	5.20	16.60%	86.59%
651	74.20%	5.70	25.80%	78.73%
851	74.20%	5.70	25.80%	78.73%
2551	59.40%	5.90	40.60%	66.28%
5001	59.40%	7.10	40.60%	65.12%
10001	22.00%	7.10	78.00%	32.99%

Structure Allocation Table (Percent of Structure Assigned to Facility)

Cable Size	Cable		Filter Structure %
	Structure %	Structure %	
0	50.00%	50.00%	
200	50.00%	50.00%	
900	50.00%	50.00%	
2400	50.00%	50.00%	
4200	50.00%	50.00%	
>4200	75.00%	25.00%	

Voice Grade Ratio Table

Time To Orig	% Switched To VO	% Switched To DS1	% Switched To VO	% Switched To DS1
0	100.00%	0.00%	100.00%	0.00%
2017	65.00%	35.00%	50.00%	50.00%
10000	50.00%	50.00%	30.00%	70.00%
20000	75.00%	25.00%	10.00%	90.00%

Digital Loop Carrier Remote System Cost Table

DLC Size	Fixed Cost	VG	COIN	DSX	4W	BIS	COIN	ADSL	HDSL
0	\$ 23,158.57	\$ 98.59							
25	\$ 23,158.57	\$ 98.59							
49	\$ 26,928.10	\$ 98.59							
97	\$ 26,928.10	\$ 98.59							
121	\$ 36,675.90	\$ 98.59							
193	\$ 36,675.90	\$ 98.59							
241	\$ 125,031.75	\$ 68.02							
385	\$ 130,818.01	\$ 68.02							
673	\$ 128,568.72	\$ 68.02							
1345	\$ 166,109.52	\$ 68.02							

DLC COT Investment Table

COT Size	Fixed Cost
0	\$ 1,264.02
25	\$ 1,264.02
49	\$ 1,264.02
97	\$ 1,264.02
121	\$ 1,264.02
193	\$ 1,264.02
241	\$ 8,311.56
385	\$ 8,540.09
673	\$ 9,297.59
1345	\$ 10,055.09

Variable	Value	Description
Cable & Wire Inputs		
PairPerHousingUnit		2 Distribution pairs per residential housing unit
PairPerBusinessLocation		6 Minimum number of pairs per business location
MaxSizeFDI	4200	Maximum Size Feeder Distribution Interface Cabinet (Cross Connect)
MaxFiberSize	288	Maximum Fiber Cable Size
MaxFeederSize	4,200	Maximum Copper Feeder Cable Size
MaxDistSize	3600	Maximum Copper Distribution Cable Size
CprMaxDist	12,000	Maximum length of copper cable in the CBG distribution area
FiberCableDiscount	0.00%	Fiber Cable Discount %
CopperCableDiscount	0.00%	Copper Cable Discount %
InvLoopCap	\$ 10,000	Loop Investment Cap Expense
BreakPoint	12,000	Cable Break Point
Terrain Inputs and Surface Impacts		
CriticalWaterDepth		3 Depth in feet at which water impacts placement costs
WaterFactor	30.00%	% Cost increase for presence of water within critical depth
NewTerrainTrigger		5 Value that triggers new terrain variable multiplier
NewTerrainFactor	1	Cost multiplier when new terrain variable exceeds trigger point
MinSlopeTrigger	12	Point at which minimum slope effects placement distance
MinSlopeFactor	1.10	Change in distance due to increased average slope
MaxSlopeTrigger	30	Point where presence of very high slope causes yet more cable distance
MaxSlopeFactor	1.05	Change in distance due to a maximum only slope presence
CombSlopeFactor	1.20	Secondary change in distance due to substantial slope presence
Census Data Inputs - State Specific		
BusinessPrem	10	Average Number of Business lines per location
Trench Depth		
NormalUBuriedCover	34.00	Minimum Cover Depth in inches for Buried/Underground Copper Cable
NormalFiberCover	36.00	Minimum Cover Depth in inches for Buried/Underground Fiber

Digital Electronics	
Optical Cost	\$ 75,000.00
Copper T1	\$ 2,500.00
Per Term Frame	\$ -
D4 Bank	\$ -
Electronic Fill	\$ 85.00%
Hi Cap Fill	95.00%
Small DLC Discount	0.00%
Large DLC Discount	0.00%
Max COTDLC	2016
Max COTDLC	240
COTDLC Per Line	\$ 17.18
COTDLC Per Line	\$ 13.17
Financial Data	
Return On Equity	13.12%
Debt Rate	7.8%
Debt Ratio	32.82%
Tax Data	
Federal Tax Rate	35.0%
State Tax Rate	5.3%
Ad Valorem Insurance, etc.	0.0%
Other Tax Rate	0.7%
Tax Depreciation	
Book Survival Curves	CG&S
Book Convention	Mid Year
Book ELG, VG	ELG / VG
Book WL, RL	Remaining Life WL / PL
Calculated Results	
DLC - S Discount	100.00%
DLC - L Discount	100.00%
Fiber Cost Ratio	100.00%
Copper Cost Ratio	26
Copper Gauge	26
Version 3 Input Change: Extended Range Line Card Layouts	
COTDLC Per Line Ex Range	\$ -
COTDLC Per Line Ex Range	\$ -
RTDLC Per Line Ex Range	\$ 105.88
RTDLC Per Line Ex Range	\$ 132.26
Break Point Ex Range	13,600
Wire Center Call Length	
Call Length	11

INPUT DOCUMENTATION

This section contains documentation supporting the loop cost inputs. It includes descriptions of inputs for the following:

- Drop Wire Costs
- NID Costs
- Fiber Feeder Costs
- Indoor and Outdoor SAI Costs
- Drop Terminal Costs
- Copper Distribution and Fiber Feeder Costs
- Strand Costs

Drop Wire Costs

Buried The installed cost per foot for this component is \$.74. This cost was calculated based on current material and installation costs.

Aerial The installed cost per foot for this component is \$.80. This cost was calculated based on current material and installation costs.

NID Costs

Residential The installed cost for a residential NID in Sprint of Florida is \$58.95. This includes current material costs for the NID and grounding, and the cost of installation (NID.xls).

Business The installed cost for a business NID in Sprint of Florida is \$99.85. This includes current material costs for the NID and grounding, and the cost of installation (NID.xls).

Fiber Feeder Costs

A bottoms-up approach was used to develop fiber feeder costs for this study (Cable.xls).

Indoor and Outdoor SAI Costs

Installed costs were developed for each of the pair sizes in the BCPM Model based on the equipment and installation times appropriate for Sprint of Florida. The equipment components include the cabinet, mounting frame and template. The labor includes placing and splicing (SAI.xls).

Drop Terminal Costs

Buried The installed costs for 6-, 12-, and 25-pair buried drop terminals are shown on the spreadsheet entitled Drop Term.xls.

Drop Terminal Costs (Continued)

Aerial The installed costs for 6-, 12-, and 25-pair buried drop terminals are shown on the spreadsheet entitled Drop Term.xls.

Copper Distribution and Feeder Costs

A bottoms-up approach was used to develop copper distribution and feeder costs for this study (Cable.xls).

Strand Costs

The installed cost for 6m, 10m, 16m and 25m strand was developed by researching the current material cost and the cost of installing this component (Strand.xls).

Sprint - Florida
Underground Fiber Cable Placement

Material Overhead = 0.21
Labor O/H Factor = 1.586
Tax = 0.0659

Fiber Size	Per Foot Mat. Cost	Per Foot Inner Duct	Material Overhead	Tax	Total Material	Place Cable	Splicing Cost	Engineer/ Permits	UG Price Per Foot
288	\$7.01	\$0.31	\$1.54	\$0.48	\$9.35	\$1.70	\$3.17	\$0.79	\$15.01
144	\$3.78	\$0.31	\$0.86	\$0.27	\$5.22	\$1.70	\$1.70	\$0.79	\$9.41
96	\$2.63	\$0.31	\$0.62	\$0.19	\$3.75	\$1.70	\$1.27	\$0.79	\$7.51
72	\$1.95	\$0.31	\$0.48	\$0.15	\$2.89	\$1.70	\$1.17	\$0.79	\$6.55
60	\$1.66	\$0.31	\$0.42	\$0.13	\$2.52	\$1.70	\$1.06	\$0.79	\$6.07
48	\$1.39	\$0.31	\$0.36	\$0.11	\$2.17	\$1.70	\$0.86	\$0.79	\$5.51
36	\$1.02	\$0.31	\$0.28	\$0.09	\$1.70	\$1.70	\$0.73	\$0.79	\$4.91
24	\$0.83	\$0.31	\$0.24	\$0.08	\$1.46	\$1.70	\$0.63	\$0.79	\$4.58
18	\$0.75	\$0.31	\$0.22	\$0.07	\$1.35	\$1.70	\$0.59	\$0.79	\$4.43
12	\$0.63	\$0.31	\$0.20	\$0.06	\$1.20	\$1.70	\$0.54	\$0.79	\$4.23

Sprint - Florida
Buried Fiber Cable Placement

Material Overhead = 0.42
Labor O/H Factor = 1.391
Tax = 0.0659

Fiber Size	Per Foot Mat. Cost	Material Overhead	Tax	Total Material	Place Cable	Splicing Cost	Engineer/ Permits	Buried Per Foot
288	\$7.01	\$2.98	\$0.20	\$10.18	\$0.70	\$2.78	\$0.60	\$14.26
144	\$3.78	\$1.61	\$0.11	\$5.49	\$0.70	\$1.49	\$0.60	\$8.28
96	\$2.63	\$1.12	\$0.07	\$3.82	\$0.70	\$1.11	\$0.60	\$6.23
72	\$1.95	\$0.83	\$0.05	\$2.83	\$0.70	\$1.03	\$0.60	\$5.16
60	\$1.66	\$0.71	\$0.05	\$2.41	\$0.70	\$0.93	\$0.60	\$4.64
48	\$1.39	\$0.59	\$0.04	\$2.02	\$0.70	\$0.75	\$0.60	\$4.07
36	\$1.02	\$0.43	\$0.03	\$1.48	\$0.70	\$0.64	\$0.60	\$3.42
24	\$0.83	\$0.35	\$0.02	\$1.21	\$0.70	\$0.56	\$0.60	\$3.06
18	\$0.75	\$0.32	\$0.02	\$1.09	\$0.70	\$0.51	\$0.60	\$2.90
12	\$0.63	\$0.27	\$0.02	\$0.92	\$0.70	\$0.47	\$0.60	\$2.68

Sprint - Florida
Aerial Fiber Cable Placement

Material Overhead = 0.11
Labor O/H Factor = 1.63
Tax = 0.0659

Fiber Size	Per Foot Mat. Cost	Material Overhead	Tax	Total Material	Place Cable	Splicing Cost	Engineer/ Permits	Aerial Per Foot
288	\$7.68	\$0.81	\$0.51	\$9.00	\$1.09	\$3.26	\$0.55	\$13.90
144	\$3.78	\$0.40	\$0.25	\$4.43	\$1.09	\$1.74	\$0.55	\$7.82
96	\$2.57	\$0.27	\$0.17	\$3.01	\$1.09	\$1.30	\$0.55	\$5.96
72	\$2.12	\$0.22	\$0.14	\$2.48	\$1.09	\$1.21	\$0.55	\$5.33
60	\$1.66	\$0.18	\$0.11	\$1.95	\$1.09	\$1.09	\$0.55	\$4.68
48	\$1.39	\$0.15	\$0.09	\$1.63	\$1.09	\$0.88	\$0.55	\$4.15
36	\$1.12	\$0.12	\$0.07	\$1.31	\$1.09	\$0.75	\$0.55	\$3.70
24	\$0.79	\$0.08	\$0.05	\$0.93	\$1.09	\$0.65	\$0.55	\$3.22
18	\$0.67	\$0.07	\$0.04	\$0.79	\$1.09	\$0.60	\$0.55	\$3.03
12	\$0.54	\$0.06	\$0.04	\$0.63	\$1.09	\$0.55	\$0.55	\$2.83

Indoor Serving Area Interface (SAI) - FL USF							
Pair			Hours to	Total	Loaded	Total	
Sizes	Total Material Cost	Hours to Place	Splice	Labor Hours	Labor Rate	Labor Cost	Total Cost
4200	\$ 28,105.40	21	60	81	\$75.20	\$ 6,091.20	\$ 34,196.60
3600	\$ 24,090.35	18	50	68	\$75.20	\$ 5,113.60	\$ 29,203.95
3000	\$ 20,075.29	15	40	55	\$75.20	\$ 4,136.00	\$ 24,211.29
2400	\$ 16,060.23	12	35	47	\$75.20	\$ 3,534.40	\$ 19,594.63
2100	\$ 14,052.70	10.5	30	40.5	\$75.20	\$ 3,045.60	\$ 17,098.30
1800	\$ 12,045.17	9	30	39	\$75.20	\$ 2,932.80	\$ 14,977.97
1200	\$ 8,030.12	6	20	26	\$75.20	\$ 1,955.20	\$ 9,985.32
900	\$ 6,539.74	5	15	20	\$75.20	\$ 1,504.00	\$ 8,043.74
600	\$ 4,359.83	4	10	14	\$75.20	\$ 1,052.80	\$ 5,412.63
400	\$ 2,906.55	3	8	11	\$75.20	\$ 827.20	\$ 3,733.75
300	\$ 2,179.91	2	6	8	\$75.20	\$ 601.60	\$ 2,781.51
200	\$ 1,453.28	2	5	7	\$75.20	\$ 526.40	\$ 1,979.68
100	\$ 726.64	1	4	5	\$75.20	\$ 376.00	\$ 1,102.64
50	\$ 450.83	1	3	4	\$75.20	\$ 300.80	\$ 751.63
25	\$ 283.73	1	2	3	\$75.20	\$ 225.60	\$ 509.33
Note: Costs for pair sizes 25-900 are based on Indoor Building Terminals.							
Costs for pair sizes 1200-7200 are based on CO Equipment Terminals.							

Outdoor Serving Area Interface (SAI) - FL TSLRIC									
Pair Size	Total Equipment Cost with Svc. Fee and Tax	Labor To Place Crossbox		Labor To Splice		Total		Total	
		Placement Hours	Loaded Labor Rate	Total Cost	Splicing S-1. Loaded Labor Rate	Splicing Hours	Total Cost	Total Labor	Total Equipment and Labor
25	\$ 318.40	2	\$75.20	\$150.40	0.42	60	\$31.33	\$181.73	\$ 498.13
50	\$ 662.42	2	\$75.20	\$150.40	0.83	60	\$62.67	\$213.07	\$ 875.49
100	\$ 921.94	2	\$75.20	\$150.40	1.67	60	\$125.33	\$275.73	\$ 1,187.67
200	\$ 970.52	2	\$75.20	\$150.40	3.33	60	\$250.67	\$401.07	\$ 1,371.59
300	\$ 1,064.14	2	\$75.20	\$150.40	5.00	60	\$376.00	\$526.40	\$ 1,590.54
400	\$ 1,142.35	2	\$75.20	\$150.40	6.67	60	\$501.33	\$651.73	\$ 1,794.08
600	\$ 1,545.26	2	\$75.20	\$150.40	10.00	60	\$752.00	\$902.40	\$ 2,447.66
800	\$ 1,932.75	4	\$75.20	\$300.80	15.00	60	\$1,128.00	\$1,428.80	\$ 3,361.55
1200	\$ 2,234.93	4	\$75.20	\$300.80	20.00	60	\$1,504.00	\$1,804.80	\$ 4,039.73
1800	\$ 3,179.98	4	\$75.20	\$300.80	30.00	60	\$2,256.00	\$2,556.80	\$ 5,736.78
2100	\$ 3,601.25	6	\$75.20	\$451.20	35.00	60	\$2,632.00	\$3,083.20	\$ 6,684.45
2400	\$ 3,851.02	6	\$75.20	\$451.20	40.00	60	\$3,008.00	\$3,459.20	\$ 7,110.22
3000	\$ 4,412.39	6	\$75.20	\$451.20	50.00	60	\$3,760.00	\$4,211.20	\$ 8,623.59
3600	\$ 5,121.62	6	\$75.20	\$451.20	60.00	60	\$4,512.00	\$4,963.20	\$ 10,084.82
4200	\$ 7,148.81	6	\$75.20	\$451.20	70.00	60	\$5,264.00	\$5,715.20	\$ 12,862.01
Notes: (1) Based on 1 man crew									
(2) Based on 2 man crew									

Florida TSLRIC Loop Cost Study

	Block	Terminal	Labor	Total
Buried Drop Terminal Costs				
6 Pair	\$23.90	\$48.29	\$45.00	\$117.19
12 Pair	\$42.00	\$48.29	\$55.00	\$145.29
25 Pair	\$102.94	\$56.82	\$60.00	\$219.76
Aerial Drop Terminal Costs				
6 Pair	\$20.44	\$59.88	\$70.00	\$150.32
12 Pair	\$40.28	\$59.88	\$80.00	\$180.16
25 Pair	\$96.48	\$96.51	\$90.00	\$282.99

Sprint - Florida
Underground Copper Cable Placement

Material Overhead = 0.31
Labor O/H Factor = 1.225
Tax = 0.0659

Copper Size	Per Foot Material	Material Overhead	Tax	Total Material	Pull Cable	Splicing Per Foot	Engineer/Permits	24 Gauge UG Price Per Foot
4200	\$33.99	\$10.58	\$2.24	\$46.81	\$1.07	\$13.03	\$0.79	\$61.69
3600	\$27.28	\$8.49	\$1.80	\$37.57	\$1.07	\$11.19	\$0.79	\$50.61
3000	\$23.59	\$7.34	\$1.55	\$32.49	\$1.07	\$9.31	\$0.79	\$43.65
2400	\$16.14	\$5.02	\$1.06	\$22.23	\$1.07	\$7.43	\$0.79	\$31.51
2100	\$14.01	\$4.36	\$0.92	\$19.29	\$1.07	\$6.53	\$0.79	\$27.68
1800	\$11.87	\$3.69	\$0.78	\$16.35	\$1.07	\$5.59	\$0.79	\$23.80
1200	\$6.27	\$1.95	\$0.41	\$8.63	\$1.07	\$3.72	\$0.79	\$14.21
900	\$5.63	\$1.75	\$0.37	\$7.75	\$1.07	\$2.78	\$0.79	\$12.39
600	\$3.79	\$1.18	\$0.25	\$5.22	\$1.07	\$1.88	\$0.79	\$8.95
400	\$2.55	\$0.79	\$0.17	\$3.51	\$1.07	\$3.14	\$0.79	\$8.51
300	\$2.09	\$0.65	\$0.14	\$2.88	\$1.07	\$2.37	\$0.79	\$7.10
200	\$1.50	\$0.47	\$0.10	\$2.07	\$1.07	\$1.55	\$0.79	\$5.47
100	\$0.69	\$0.21	\$0.05	\$0.95	\$1.07	\$1.23	\$0.79	\$4.03
50	\$0.40	\$0.12	\$0.03	\$0.55	\$1.07	\$1.10	\$0.79	\$3.51
25	\$0.23	\$0.07	\$0.02	\$0.32	\$1.07	\$1.06	\$0.79	\$3.23
18	\$0.26	\$0.08	\$0.02	\$0.36	\$1.07	\$0.61	\$0.79	\$2.83
12	\$0.17	\$0.05	\$0.01	\$0.23	\$1.07	\$0.45	\$0.79	\$2.54

Copper Size	Per Foot Material	Material Overhead	Tax	Total Material	Pull Cable	Splicing Per Foot	Engineer/Permits	26 Gauge UG Price Per Foot
4200	\$27.65	\$8.60	\$1.82	\$38.08	\$1.07	\$13.03	\$0.79	\$52.96
3600	\$21.85	\$6.80	\$1.44	\$30.09	\$1.07	\$11.19	\$0.79	\$43.13
3000	\$19.06	\$5.93	\$1.26	\$26.25	\$1.07	\$9.31	\$0.79	\$37.41
2400	\$12.52	\$3.90	\$0.83	\$17.24	\$1.07	\$7.43	\$0.79	\$26.53
2100	\$10.84	\$3.37	\$0.71	\$14.93	\$1.07	\$6.53	\$0.79	\$23.32
1800	\$9.15	\$2.85	\$0.60	\$12.60	\$1.07	\$5.59	\$0.79	\$20.05
1200	\$4.46	\$1.39	\$0.29	\$6.14	\$1.07	\$3.72	\$0.79	\$11.71
900	\$4.27	\$1.33	\$0.28	\$5.88	\$1.07	\$2.78	\$0.79	\$10.51
600	\$2.88	\$0.90	\$0.19	\$3.97	\$1.07	\$1.88	\$0.79	\$7.70
400	\$1.95	\$0.61	\$0.13	\$2.69	\$1.07	\$3.14	\$0.79	\$7.69
300	\$1.64	\$0.51	\$0.11	\$2.26	\$1.07	\$2.37	\$0.79	\$6.48
200	\$1.20	\$0.37	\$0.08	\$1.65	\$1.07	\$1.55	\$0.79	\$5.06
100	\$0.54	\$0.17	\$0.04	\$0.74	\$1.07	\$1.23	\$0.79	\$3.82
50	\$0.32	\$0.10	\$0.02	\$0.44	\$1.07	\$1.10	\$0.79	\$3.40
25	\$0.19	\$0.06	\$0.01	\$0.26	\$1.07	\$1.06	\$0.79	\$3.18
18	\$0.23	\$0.07	\$0.02	\$0.32	\$1.07	\$0.61	\$0.79	\$2.78
12	\$0.15	\$0.05	\$0.01	\$0.21	\$1.07	\$0.45	\$0.79	\$2.51

Sprint - Florida
Buried Copper Cable Placement

Material Overhead 0.40
Labor O/H Factor = 1.225
Tax = 0.0659

Copper Size	Per Foot Mat. Cost	Material Overhead	Tax	Total Material	Place Cable	Splicing Cost	Engineer/Permits	24 Gauge Buried Per Foot
4200	\$33.99	\$13.68	\$2.24	\$49.91	\$0.49	\$2.34	\$0.65	\$53.39
3600	\$27.28	\$10.98	\$1.80	\$40.06	\$0.49	\$2.01	\$0.65	\$43.21
3000	\$23.59	\$9.49	\$1.55	\$34.64	\$0.49	\$1.68	\$0.65	\$37.45
2400	\$16.14	\$6.49	\$1.06	\$23.70	\$0.49	\$1.34	\$0.65	\$26.18
2100	\$14.01	\$5.64	\$0.92	\$20.57	\$0.49	\$1.47	\$0.65	\$23.18
1800	\$11.87	\$4.78	\$0.78	\$17.43	\$0.49	\$1.26	\$0.65	\$19.83
1200	\$6.27	\$2.52	\$0.41	\$9.21	\$0.49	\$1.11	\$0.65	\$11.46
900	\$5.63	\$2.27	\$0.37	\$8.27	\$0.49	\$0.83	\$0.65	\$10.24
600	\$3.79	\$1.53	\$0.25	\$5.56	\$0.49	\$0.85	\$0.65	\$7.55
400	\$2.55	\$1.03	\$0.17	\$3.74	\$0.49	\$1.41	\$0.65	\$6.30
300	\$2.09	\$0.84	\$0.14	\$3.07	\$0.49	\$1.07	\$0.65	\$5.27
200	\$1.50	\$0.60	\$0.10	\$2.20	\$0.49	\$1.16	\$0.65	\$4.51
100	\$0.69	\$0.28	\$0.05	\$1.01	\$0.49	\$0.92	\$0.65	\$3.07
50	\$0.40	\$0.16	\$0.03	\$0.59	\$0.49	\$0.83	\$0.65	\$2.55
25	\$0.23	\$0.09	\$0.02	\$0.34	\$0.49	\$0.80	\$0.65	\$2.27
18	\$0.26	\$0.10	\$0.02	\$0.38	\$0.49	\$0.46	\$0.65	\$1.98
12	\$0.17	\$0.07	\$0.01	\$0.25	\$0.49	\$0.34	\$0.65	\$1.73

Copper Size	Per Foot Mat. Cost	Material Overhead	Tax	Total Material	Place Cable	Splicing Cost	Engineer/Permits	26 Gauge Buried Per Foot
4200	\$27.65	\$11.13	\$1.82	\$40.60	\$0.49	\$2.34	\$0.65	\$44.08
3600	\$21.85	\$8.79	\$1.44	\$32.08	\$0.49	\$2.01	\$0.65	\$35.24
3000	\$19.06	\$7.67	\$1.26	\$27.99	\$0.49	\$1.68	\$0.65	\$30.80
2400	\$12.52	\$5.04	\$0.83	\$18.38	\$0.49	\$1.34	\$0.65	\$20.86
2100	\$10.84	\$4.36	\$0.71	\$15.92	\$0.49	\$1.47	\$0.65	\$18.53
1800	\$9.15	\$3.68	\$0.60	\$13.43	\$0.49	\$1.26	\$0.65	\$15.83
1200	\$4.46	\$1.79	\$0.29	\$6.55	\$0.49	\$1.11	\$0.65	\$8.80
900	\$4.27	\$1.72	\$0.28	\$6.27	\$0.49	\$0.83	\$0.65	\$8.24
600	\$2.88	\$1.16	\$0.19	\$4.23	\$0.49	\$0.85	\$0.65	\$6.21
400	\$1.95	\$0.78	\$0.13	\$2.86	\$0.49	\$1.41	\$0.65	\$5.42
300	\$1.64	\$0.66	\$0.11	\$2.41	\$0.49	\$1.07	\$0.65	\$4.61
200	\$1.20	\$0.48	\$0.08	\$1.76	\$0.49	\$1.16	\$0.65	\$4.07
100	\$0.54	\$0.22	\$0.04	\$0.79	\$0.49	\$0.92	\$0.65	\$2.85
50	\$0.32	\$0.13	\$0.02	\$0.47	\$0.49	\$0.83	\$0.65	\$2.44
25	\$0.19	\$0.08	\$0.01	\$0.28	\$0.49	\$0.80	\$0.65	\$2.22
18	\$0.23	\$0.09	\$0.02	\$0.34	\$0.49	\$0.46	\$0.65	\$1.94
12	\$0.15	\$0.06	\$0.01	\$0.22	\$0.49	\$0.34	\$0.65	\$1.70

Sprint - Florida
Aerial Copper Cable Placement

Material Overhead = 0.12
Labor O/H Factor = 1.51
Tax = 0.0659

Copper Size	Per Foot Mat. Cost	Material Overhead	Tax	Total Material	Place Cable	Splicing Cost	Engineer/ Permits	24 Gauge Aerial
								Per Foot
4200	\$33.99	\$3.91	\$2.24	\$40.14	\$1.51	\$2.89	\$0.60	\$45.14
3600	\$27.28	\$3.14	\$1.80	\$32.21	\$1.51	\$2.48	\$0.60	\$36.81
3000	\$23.59	\$2.71	\$1.55	\$27.86	\$1.51	\$2.07	\$0.60	\$32.03
2400	\$16.14	\$1.86	\$1.06	\$19.06	\$1.51	\$1.65	\$0.60	\$22.82
2100	\$14.01	\$1.61	\$0.92	\$16.54	\$1.51	\$1.81	\$0.60	\$20.47
1800	\$11.87	\$1.37	\$0.78	\$14.02	\$1.51	\$1.55	\$0.60	\$17.68
1200	\$6.27	\$0.72	\$0.41	\$7.40	\$1.51	\$1.37	\$0.60	\$10.89
900	\$5.63	\$0.65	\$0.37	\$6.65	\$1.51	\$1.03	\$0.60	\$9.79
600	\$3.79	\$0.44	\$0.25	\$4.48	\$1.51	\$1.04	\$0.60	\$7.63
400	\$2.55	\$0.29	\$0.17	\$3.01	\$0.42	\$1.74	\$0.60	\$5.78
300	\$2.09	\$0.24	\$0.14	\$2.47	\$0.42	\$1.31	\$0.60	\$4.80
200	\$1.50	\$0.17	\$0.10	\$1.77	\$0.42	\$1.43	\$0.60	\$4.23
100	\$0.69	\$0.08	\$0.05	\$0.81	\$0.42	\$1.13	\$0.60	\$2.97
50	\$0.40	\$0.05	\$0.03	\$0.47	\$0.42	\$1.02	\$0.60	\$2.51
25	\$0.23	\$0.03	\$0.02	\$0.27	\$0.42	\$0.98	\$0.60	\$2.28
18	\$0.26	\$0.03	\$0.02	\$0.31	\$0.42	\$0.57	\$0.60	\$1.90
12	\$0.17	\$0.02	\$0.01	\$0.20	\$0.42	\$0.42	\$0.60	\$1.64

Copper Size	Per Foot Mat. Cost	Material Overhead	Tax	Total Material	Place Cable	Splicing Cost	Engineer/ Permits	26 Gauge Aerial
								Per Foot
4200	\$27.65	\$3.18	\$1.82	\$32.65	\$1.51	\$2.89	\$0.60	\$37.65
3600	\$21.85	\$2.51	\$1.44	\$25.80	\$1.51	\$2.48	\$0.60	\$30.40
3000	\$19.06	\$2.19	\$1.26	\$22.51	\$1.51	\$2.07	\$0.60	\$26.68
2400	\$12.52	\$1.44	\$0.83	\$14.78	\$1.51	\$1.65	\$0.60	\$18.54
2100	\$10.84	\$1.25	\$0.71	\$12.80	\$1.51	\$1.81	\$0.60	\$16.72
1800	\$9.15	\$1.05	\$0.60	\$10.81	\$1.51	\$1.55	\$0.60	\$14.47
1200	\$4.46	\$0.51	\$0.29	\$5.27	\$1.51	\$1.37	\$0.60	\$8.75
900	\$4.27	\$0.49	\$0.28	\$5.04	\$1.51	\$1.03	\$0.60	\$8.18
600	\$2.88	\$0.33	\$0.19	\$3.40	\$1.51	\$1.04	\$0.60	\$6.55
400	\$1.95	\$0.22	\$0.13	\$2.30	\$0.42	\$1.74	\$0.60	\$5.07
300	\$1.64	\$0.19	\$0.11	\$1.94	\$0.42	\$1.31	\$0.60	\$4.27
200	\$1.20	\$0.14	\$0.08	\$1.42	\$0.42	\$1.43	\$0.60	\$3.87
100	\$0.54	\$0.06	\$0.04	\$0.64	\$0.42	\$1.13	\$0.60	\$2.79
50	\$0.32	\$0.04	\$0.02	\$0.38	\$0.42	\$1.02	\$0.60	\$2.42
25	\$0.19	\$0.02	\$0.01	\$0.22	\$0.42	\$0.98	\$0.60	\$2.23
18	\$0.23	\$0.03	\$0.02	\$0.27	\$0.42	\$0.57	\$0.60	\$1.86
12	\$0.15	\$0.02	\$0.01	\$0.18	\$0.42	\$0.42	\$0.60	\$1.62

Florida TSLRIC Loop Study

Strand Costs

	6m Strand	10m Strand	16m Strand	25m Strand
Material Cost	\$0.1340	\$0.1431	\$0.3003	\$0.3848
Installed Cost/Ft.	0.1500	0.1500	0.1500	0.1500
Total Cost	\$0.2840	\$0.2931	\$0.4503	\$0.5348

This section contains documentation supporting the manhole inputs. It includes description of inputs for the following:

- Manhole Costs
- Conduit Costs

Normal, Soft rock and hard Rock manhole Costs

Material	Costs for the Manhole input material utilized the BCPM default values.
Installation	The BCPM default was used for this input.
% Assigned Telephone	The percent assigned to telephone default was used.

Normal, Soft Rock and Hard Rock Conduit Costs

Material	The conduit material costs were obtained from the Florida field team and verified with supplier pricing.
% Assigned telephone	The % assigned telephone defaults were used.

BCPM "Spacing Inputs"

The Spacing Inputs contains the inputs for:

Feeder and Distribution Manhole Spacing Inputs

Manhole Spacing	Manhole spacing was provided by the Florida Engineering & Construction team representing actual spacing.
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Cost for both the High and Low Density DLC configurations were obtained from current vendor quotes and compiled with input provided by the Florida engineering staff.

High Density DLC

Cost components included in the High Density DLC input consist of the following:

- Central Office equipment required to install the Digital Loop Carrier terminal in a TR303 Single Ended configuration (line cards in Remote Terminal only)
- DLC Central Office Terminal equipment
- OC3 Fiber Optic Central Office Terminal (to provide OC3 fiber capacity from the COT to the RT)
- OC3 Fiber Optic Remote Terminal (to provide OC3 fiber capacity from the COT to the RT)
- Remote DLC Cabinet, Cool Cell, Batteries, DLC Terminal, and Cross Connect Cabinet at the field site
- Site Preparation consisting of: Site leveling, Pad installation, Power conduit installation, Telephone conduit installation, and Landscaping if required

Site preparation cost for High density DLC input was determined by averaging actual invoices from 1997 and 1998 Florida work orders.

Low Density DLC

Cost components for the Low Density consist of the following:

- Central Office equipment required to install the Digital Loop Carrier terminal in a TR303 Single Ended configuration (line cards in both the Remote Terminal only).
- DLC Central Office Terminal equipment
- Remote DLC Cabinet, Batteries, DLC Terminal, and Cross Connect Cabinet at the field site
- Site Preparation consisting of: Site leveling, Pad installation, Power conduit installation, Telephone conduit installation, Landscaping if required.

Florida does not have historical data on the Low density DLC site preparation due to the high access line growth and high density serving areas. Costing was obtained by averaging Missouri,

Wyoming, and Washington High density vs Low density site preparation costs and applying the same ratio to the Florida Low density site preparation input.

FLORIDA LARGE TR-303 NGDLC

DMS 100

SCM

TR-303

Terminal supports 5

TR 303 terminal cost included in switching inputs

Dual POTS line cards = \$136.05
Line card cost /line = \$68.02

TOTAL ALLOCATED SYSTEM

COT Invest. \$8,540.09 (672 Lines)

RT Invest. \$128,598.01 (672 Lines)

CSA

RT

Cabinet
Site Preparation
Cool Cell

Material = \$73,595.52
Tax = \$4,849.94
Labor = \$8,145.42
Cool Cell = \$7,769.97
Site Cost = \$10,780.00

Total RT Cost = \$105,140.85

Allocated Cost = \$2,138.45

COT

COT supports 15 RT's

TRUNK SIDE CONNECTION

Material = \$23,963.70
Tax = \$1,579.21
Labor = \$ 6,533.88
Total Cost = \$32,076.78

Allocated Cost = \$6,401.63

OC3

FOT supports 4 RT's

COT FOT

Material = \$20,367.77
Tax = \$1,342.24
Labor = \$3,896.52
Total Cost = \$25,606.53

OC3

RT FOT

Material = \$19,982.64
Tax = \$1,316.86
Labor = \$2,157.66
Total Cost = \$23,457.16

FLORIDA SMALL DLC TR303

TOTAL SYSTEM COST

COT Investment \$ 1,264.02 (120 Lines)

RT Investment \$25,442.90 (120 Lines)

DMS 100

SCM

RT POTS card 6Lns./card = \$591.54

Total POTS cost/line = \$98.59

COT

CSA

RT

Cabinet
Site Preparation

Material	= \$	12,728.00
Tax		\$838.78
Labor	= \$	5,393.52

Total COT Cost = \$ 18,960.30

Material	=	\$15,039.26
Tax	=	\$991.09
Labor	=	\$2,297.76
Site Prep	=	\$7,114.80

Total Allocated COT Cost = \$ 1,264.02

Total RT Cost = \$25,442.90

FLORIDA Large DLC (TR303)

COT Misc. Equip. (Supports 15 RT's)

Description	Ext. Cost
Total Material	\$9,342.03
Tax	\$615.64
COT Misc. Equip. Total	\$9,957.67

COT DLC

Total Material	\$14,621.67
Tax	\$963.57
Labor	\$6,533.88
COT DLC Total	\$22,119.12
TOTAL COT (672 Lines)	\$32,076.78

COOL CELL CABINET

Description	Ext. Cost
Total Material	\$5,923.70
Tax	\$390.37
Labor	\$1,455.90
COOL CELL Total	\$7,769.97

OC3 FOT (COT)

Description	Ext. Cost
Total Material	20,367.77
Tax	1,342.24
Labor	3,896.52

COT FOT Total (672 Lines)	25,606.53
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OC3 FOT (RT)

Description	Ext. Cost
Total Material	19,982.64
Tax	1,316.86
Labor	2,157.66

RT FOT Total (672 Lines)	23,457.16
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REMOTE TERMINAL (copper dist.)

Description	Ext. Cost
Total Material	\$53,920.32
Tax	\$3,553.35
RT Total	\$57,473.67

TERMINAL EQUIPMENT

Description	Ext. Cost
Total Material	\$19,675.20
Tax	\$1,296.60
Labor	\$8,145.42
Terminal Cost Total	\$29,117.21
TOTAL RT wo/ Line cards (672 Lines)	\$86,590.88

BCPM INPUT (With labor, SNS & Tax)

RT 241-384 lines Basic Common Eqpt.Invest	\$122,811.75
RT 385-672 lines Basic Common Eqpt.Invest	\$128,598.01
RT 673-1344 lines Basic Common Eqpt.Invest	\$126,348.72
RT 1345-2016 lines Basic Common Eqpt.Invest	\$163,889.52
COT 241-384 lines Basic Common Eqpt.Invest (allocate)	\$8,311.56
COT 385-672 lines Basic Common Eqpt.Invest (allocate)	\$8,540.09
COT 673-1344 lines Basic Common Eqpt.Invest (allocate)	\$9,297.59
COT 1345-2016 lines Basic Common Eqpt.Invest (allocate)	\$10,055.09
POTS Channel Unit Investment (cost/line)	\$68.02
Coin Channel Investment (cost/line)	\$431.81
COT DLC Cost/Line	\$17.18
COT DLC Cost/Line Ext. Range Line Card	\$0.00
RT DLC Cost/Line Ext. Range Line Card/dua	\$211.76
	\$105.88

SYSTEM ALLOCATION

COT (15 RT's per)	\$2,138.45
OC# FOT (COT) (4 RT's per)	\$6,401.63
Total (672 Lines)	\$8,540.09

SITE COST

Description	Ext. Cost
Site Prep. (Mat. & Labor)	\$2,780.00
Easement	1 8,000.00
Site Cost Total	\$10,780.00

FLORIDA Small DLC (TR-303)

LET

Total Material	\$12,728.00
Sales Tax	\$838.78
Labor	5,393.52
LET Total	\$18,960.30

COIN Channel Cards

card totals

RT Channel Card	\$744.52
Tax	\$49.06
Total channel unit 6 lines / card	\$793.58
Total Channel Unit Investment Cost/Line	\$132.26

Total DS1 spans/ 4 FIBERS/DS1- SPANS

5

SITE COST

Description	Quantity	Cost
Site Prep. (Mat. & Labor)	1	7,114.80
Site Cost Total		\$7,114.80

SYSTEM ALLOCATION

LET (15 RT's per)	\$1,264.02
Total	\$1,264.02

REMOTE TERMINAL (copper dist.)

Total Material	\$11,502.78
Sales Tax	\$758.03
Labor	\$2,297.76

RT Total (48 lines)

Total Material	\$15,039.26
Sales Tax	\$991.09
Labor	\$2,297.76

RT Total (120 lines)

Total Material	\$24,184.39
Sales Tax	\$1,593.75
Labor	\$2,297.76

RT Total (240 lines)

\$28,075.90

POTS Channel Cards

card totals

RT Channel Card	\$558.39
Tax	\$33.15
Total Channel Unit 6 lines / card	\$591.54
Total Channel Unit Investment Cost/Line	\$98.59

BCPM INPUT (With labor, SNS & Tax)

RT 0-48 lines Basic Common Eqpt.Invest	\$21,673.37
RT 49-120 lines Basic Common Eqpt.Invest	\$25,442.90
RT 121-240 lines Basic Common Eqpt.Invest	\$35,190.70
COT 0-240 lines Basic Common Eqpt.Invest (allocated)	\$1,264.02
POTS Channel Unit Investment (cost/line)	\$98.59
Coin Channel Investment (cost/line)	\$132.26
COT DLC Cost/Line	96Line Avg \$13.17
RT DLC Cost/Line Ext. Range Line Card/6 Lns./card	\$793.58 \$132.26

PLANT MIX

This section contains documentation supporting the plant mix inputs. It includes description of inputs for the following:

- Plant Mix
- Average Number of Housing Units per Dwelling for Each Census Data Range
- Density Cable Sizing Factor Table
- Density Hh Table
- Structure Allocation Table
- Voice Grade Ratio Table

A copy of the plant mix inputs supporting documents follows this summary.

Copper and Fiber Plant Mix Inputs

% Underground

% Buried

% Aerial

For both copper and fiber, the percentage of each of these categories was calculated using data from plant records in Facility Data Warehouse (FDW). The amount in each category was weighted by the number of lines, and a weighted average percent was calculated by density (see Plant_Mix.xls). The same input was used for all terrain types and type of application (feeder vs distribution).

Average Number of Housing Units

Units per Dwelling

The BCPM model defaults were used for these inputs.

Density Cable Sizing Factor Inputs

Feeder Fill %

The feeder fill percent was calculated using an analysis of the outside plant main feeder cables for each Sprint wire center in Florida. A weighted average fill for each density was developed using the lines served by each wire center. This average fill was normalized across all BCPM input densities.

Distribution Fill %

The BCPM model defaults were used for these inputs.

Density Household Inputs

Percent Single Family

The BCPM default values were used for these inputs.

HH per MUD

The BCPM default values were used for these inputs.

Percent MFD

The BCPM default values were used for these inputs.

Lots per HH

The BCPM default values were used for these inputs.

Structure Allocation Inputs

Cable Structure % The BCPM default values were used for these inputs.

Fiber Structure % The BCPM default values were used for these inputs.

Voice Grade Ratio Inputs

% Switched to VG The BCPM default values were used for these inputs.

% Switched to DS1 The BCPM default values were used for these inputs.

% Special to VG The BCPM default values were used for these inputs.

% Special to DS1 The BCPM default values were used for these inputs.

STRUCTURE

This section contains documentation supporting the structure inputs. It includes description of inputs for the following:

- Conduit and Buried Cable Structure Costs
- Pole Costs
- Anchor & Guy Costs

Structure Costs per foot Inputs**Base Cost per Foot**

The cost per foot for each underground and buried structure activity was developed using the average contractor costs for Florida. The costs for Plow, Rocky Plow, Trench & Backfill, Rocky Trench, Backhoe Trench, and Hand Dig Trench are the same since the contract does not differentiate among these six activities; instead, they are all included as part of "Bury Cable (or Fiber) Any Method". The costs for Cut & Restore Asphalt, Cut & Restore Concrete, and Cut & Restore Sod were calculated assuming a two-foot wide trench.

% Activity

The percent of each activity used for underground and buried structure was developed from an analysis of 1997 contractor activities used in the actual placement of cable.

% Assigned Telephone

The model default inputs were used for the percent of each activity assigned to the telephone company.

STRUCTURE (continued)**Pole Costs**

Base Cost per Unit	The material cost for poles was calculated as the purchase price of a 45' Class 5 pole plus a material overhead loading.
Installation Cost	The installation cost for poles was based on the actual 1996 labor and overhead cost per pole, split between pole installation and anchor/guy installation at the same ratio as the default inputs.
% Assigned Telephone	The amount of pole cost sharing was developed through an analysis of the number of foreign poles contacted by Sprint in Florida and the number of foreign utility contacts on Sprint poles. The number of poles, both Sprint-owned and in total, was multiplied by the average annual pole cost in order approximate the total cost of maintaining poles. Joint use revenues reduced these costs before the percent assigned to telephone was calculated.

Anchor & Guy Costs

Base Cost per Unit	The material cost for anchors and guys was calculated as the sum of the purchase prices for those items comprising a typical anchor and guy installation, plus a material overhead loading.
Installation Cost	The installation cost for anchors and guys was based on the actual 1996 labor and overhead cost per pole, split between pole installation and anchor/guy installation at the same ratio as the default inputs.
% Assigned Telephone	On the recommendation of outside plant engineers, the default of 100% was used.



Switching costs were developed for the following:

- Local switching
- EAS switching
- Port
- Switched Access
- Features

Local switching, EAS switching and port costs were included in basic local service costs. Switching costs were added to transport for total switched access costs. The following is a summary of the development of switching costs. Worksheets showing the development of local, EAS and switched access costs are at the end of this section. A summary of feature costs is also at the end of this section.

LOCAL AND EAS SWITCHING

The investment for the central office switching equipment was developed using the Switching Cost Information System/Model Office (SCIS/MO or SCIS). SCIS is a PC-based Bellcore model that determines the forward-looking cost of a switch. SCIS investment dollars were used as input to the Switching Model (SWIM). SWIM further separated investments into unit costs for line, trunk and tandem set-up, fixed line, line and trunk tandem, and umbilical usage.

These costs are applied to each switch line type based on usage and is summarized below.

Local and EAS Switching Cost Summary

	Switching Cost (\$/MOU)	
	Local	EAS
	0.003220	0.003155
Usage (MOU/month)		
Voice-grade, flat-rate residential local exchange service	754.49	198.24
Voice-grade, flat-rate business local exchange service	832.39	183.49
ESSX/Centrex service	779.87	365.31
PBX trunk service	1,328.81	42.86
Other multi-line circuit-switched business services	528.83	371.41
Cost (\$/mo)		
Voice-grade, flat-rate residential local exchange service	2.43	0.63
Voice-grade, flat-rate business local exchange service	2.68	0.58
ESSX/Centrex service	2.51	1.15
PBX trunk service	4.28	0.14
Other multi-line circuit-switched business services	1.70	1.17

PORT

A port cost of \$1.79 was developed using results from the SWIM model. An annual charge factor of .2310 was applied to the equivalent port cost of \$92.99 per customer and dividing by twelve.

SWITCHED ACCESS

Costs for switched access were developed using the same methodology as local and EAS switching costs, resulting in switching costs associated with switched access of \$.003155 per minute of use. A switched access annual charge factor was used for development of the switched access cost.

Switching costs were added to transport costs to yield total switched access costs. Transport costs are developed in the transport section.

FEATURES

The investment for the Centrex, CLASS, and Custom Calling features was developed using the Switching Cost Information System Intelligent Network (SCIS/IN). SCIS/IN is a PC-based Bellcore model that determines the cost of a feature. SCIS/IN allows Sprint to develop costs that can be specific to each switch or a state-wide average. A summary of feature costs is at the end of this section.

FLORIDA TSLRIC STUDY

LOCAL SWITCHING DEVELOPMENT

SWIM RESULTS SUMMARY

Line Side Set-Up Cost (LCS)	Fixed Line Cost	Line CCS Cost (RLSO/RLST)	Umbilical CCS Cost (RUO/RUT)
\$ 0.000900	\$ 1.79	\$ 0.000870	\$ 0.000290

COST PER SWITCH ELEMENT

Fixed Line Cost Per Month	Intra-Remote Local Cost Per MOU	Inter-Remote EAS Cost Per MOU
\$ 1.79	\$ 0.002930	\$ 0.003220

TSLRIC SWITCHING FORMULAS

IntraOffice Within Remote(2-Way Local) (RLSO + RUO + LCS + RLST)
InterOffice Remote To Remote (2-Way EAS) (RLSO + RUO + LCS + RUT + RLST)

FLORIDA TSLRIC STUDY

EAS AND SWITCHED ACCESS DEVELOPMENT

SWIM RESULTS SUMMARY

Line CCS Cost (RLSO/RLST)	Trunk Set-up Cost (TCS)	Trunk CCS Cost (TSO/TST)	Tandem Trk. Set-up Cost (TTCS)	Tandem Trk. CCS Cost (TTCCS)	Umbilical CCS Cost (RUO/RUT)
\$ 0.000860	\$ 0.000910	\$ 0.000820	\$ 0.000410	\$ 0.000730	\$ 0.000280

COST PER SWITCH ELEMENT

Sw. Access Orig. Cost Per MOU	Sw. Access Term. Cost Per MOU
\$ 0.003155	\$ 0.003155

TSLRIC SWITCHING FORMULAS

Switched Access From Remote
Switched Access To Remote

$$\begin{aligned} & (\text{RLSO} + \text{RUO} + \text{TCS} + \text{TSO}) + (\text{TTS} + \text{TTCCS}) \cdot .25 \\ & (\text{RLST} + \text{RUT} + \text{TCS} + \text{TST}) + (\text{TTS} + \text{TTCCS}) \cdot .25 \end{aligned}$$

FLORIDA TSLRIC STUDY

SWITCHED INTRALATA TOLL DEVELOPMENT

SWIM RESULTS SUMMARY

(A) Line CCS Cost (RLSO/RLST)	(B) Trunk Set-up Cost (TCS)	(C) Trunk CCS Cost (TSO/TST)	(D) Tandem Trk. Set-up Cost (TTCS)	(E) Tandem Trk. CCS Cost (TTCCS)	(F) Umbilical CCS Cost (RUO/RUT)
0.00085	0.00091	0.00082	0.00041	0.00073	0.00028

INTEROFFICE= 0.00286

TANDEM= 0.000228

TOTAL 0.003088

INTEROFFICE= (C+B+A+F)

TANDEM= (D+E)*.2

Feature Description	SCIS Feature #	SCIS Other Investment	SCIS Hardware Investment	SCIS SS7 Investment	Software Investment	Total Investment	ACF	Monthly Recurring Cost
Three-Way Calling	1	\$ 0.7520	\$ 1.5418			\$ 2.2938	23.10%	\$ 0.0442
Call Waiting	5	\$ 0.2359	\$ 0.0265			\$ 0.2624	23.10%	\$ 0.0051
Call Forward Don't Answer	507	\$ 0.8826				\$ 0.8826	23.10%	\$ 0.0170
Call Forward Busy	508	\$ 0.4529				\$ 0.4529	23.10%	\$ 0.0087
Automatic Callback	9	\$ 1.0026	\$ 2.2462	\$ 0.3471		\$ 3.5959	23.10%	\$ 0.069
Automatic Recall	10	\$ 1.9223	\$ 2.2611	\$ 0.6769		\$ 4.8603	23.10%	\$ 0.094
Calling Name & Number Delivery	19	\$ 5.0598	\$ 28.2536	\$ 11.7792		\$ 45.0926	23.10%	\$ 0.868
				Total	\$ 61.19	\$ 61.19	23.10%	\$ 1.178
Automatic Callback	312	\$ 9.73866	\$ -	\$ -		\$ 9.73866	23.10%	\$ 0.1875
Basic Business Group	200	\$ 141.64092	\$ -	\$ -		\$ 141.64092	23.10%	\$ 2.7266
Basic Business Set	207	\$ 15.52369	\$ -	\$ -		\$ 15.52369	23.10%	\$ 0.2988
Call Forwarding Busy Line	27	\$ 0.78459	\$ -	\$ -		\$ 0.78459	23.10%	\$ 0.0151
Call Forwarding Don't Answer	29	\$ 1.26285	\$ -	\$ -		\$ 1.26285	23.10%	\$ 0.0243
Call Forwarding Variable	24	\$ 18.37910	\$ -	\$ -		\$ 18.37910	23.10%	\$ 0.3538
Call Park	327	\$ 3.93667	\$ -	\$ -		\$ 3.93667	23.10%	\$ 0.0758
Call Pick-up	61	\$ 0.45110	\$ -	\$ -		\$ 0.45110	23.10%	\$ 0.0087
Call Waiting Terminating	35	\$ 6.32759	\$ 0.25254	\$ -		\$ 6.58013	23.10%	\$ 0.1267
Directed Call Pick-Up w/Barge-In	62	\$ 3.05492	\$ 0.41283	\$ -		\$ 3.46775	23.10%	\$ 0.0668
Directed Call Pick-Up w/o Barge-In	63	\$ 1.87413	\$ -	\$ -		\$ 1.87413	23.10%	\$ 0.0361
Group Intercom	208	\$ 18.07143	\$ -	\$ -		\$ 18.07143	23.10%	\$ 0.3479
Last Number Redial	329	\$ 2.94589	\$ -	\$ -		\$ 2.94589	23.10%	\$ 0.0567
Permanent Hold	326	\$ 6.58626	\$ -	\$ -		\$ 6.58626	23.10%	\$ 0.1268
Speed Calling-2 Digits-Control Line	50	\$ 4.78811	\$ -	\$ -		\$ 4.78811	23.10%	\$ 0.0922
Code Restr and Diversion (Tone)	322	\$ 1.53300	\$ -	\$ -		\$ 1.53300	23.10%	\$ 0.0295
Code Restr and Diversion (Ann)	322	\$ 2.13734	\$ -	\$ -		\$ 2.13734	23.10%	\$ 0.0411
Speed Calling Ind-2 Dig (50 entries)	48	\$ 3.66167	\$ -	\$ -		\$ 3.66167	23.10%	\$ 0.0705
Speed Calling Ind-2 Dig (30 entries)	48	\$ 3.52998	\$ -	\$ -		\$ 3.52998	23.10%	\$ 0.0680
Toll Restricted Service (Tone)	60	\$ 2.60297	\$ -	\$ -		\$ 2.60297	23.10%	\$ 0.0501
Toll Restricted Service (Ann)	60	\$ 3.81986	\$ -	\$ -		\$ 3.81986	23.10%	\$ 0.0735
Conference Calling-6-Way Station Contr	66	\$ 2.40105	\$ 72.62994	\$ -		\$ 75.03099	23.10%	\$ 1.444347
3-Way Conference/Consultation Hold/Tra	362	\$ 16.55192	\$ 42.24223	\$ -		\$ 58.79415	23.10%	\$ 1.131787
Dial Transfer to Tandem Tie Line	292	\$ 2.90488	\$ 1.05567			\$ 3.96055	23.10%	\$ 0.076241
Direct Connect	53	\$ 0.91931	\$ -	\$ -		\$ 0.91931	23.10%	\$ 0.0177
Meet-Me Conference	325	\$ 86.43359	\$ 463.08462			\$ 549.51821	23.10%	\$ 10.578226
Multiline Hunt Service	90	\$ 2.79353	\$ -	\$ -		\$ 2.79353	23.10%	\$ 0.053775
Selective Call Rejection	15	\$ 21.36195	\$ 6.37374	\$ 0.32737		\$ 28.06306	23.10%	\$ 0.540214
Call Waiting Deluxe (Options)	990	\$ 12.06054	\$ 1.74942	\$ -		\$ 13.80996	23.10%	\$ 0.265842
Call Waiting Display (ID)	785	\$ 1.13637	\$ 22.59398	\$ -		\$ 23.73035	23.10%	\$ 0.456809

The TSLRIC transport costs were developed using the Transport Cost Model (TCM). Sprint believes that the development of TSLRIC interoffice transport costs should be based on the following key items, all of which are incorporated in the TCM:

- Utilization of forward looking technology
- Capable of costing OC3, OC12 and OC48 transport rings
- Reflect the use of existing wire centers and network topology

Assumptions used in the TCM:

1. The material costs used in the model are based on either recent purchase costs or on manufacturers' quotes. The installation costs reflect Florida-specific engineering and labor costs.
2. The terminal utilization factors used within the cost model are based on current utilized bandwidth adjusted for expected growth.
3. The ring configurations are based on the currently provisioned and planned configurations and are consistent with forward-looking applications.

EAS Transport

For the EAS study, the TCM utilized annual charge factors developed to reflect the costs of providing local service. The annual charge factors used in the model are described in the Annual Charge Factor Narrative.

The TCM was used to calculate the monthly cost per DS1 of termination and transit for each of the 67 rings in the Company's Florida service territories. The ring-specific DS1 costs generated by the TCM were used in conjunction with more than 450 representative point-to-point EAS routes to develop the statewide average EAS transport cost per minute of use.

First, the rings utilized in completing a call between the two end points of each route were identified. Then, the DS1 termination and transit costs for each ring utilized in the route were determined from the TCM results. These ring-specific DS1 costs were summed for each route. Similarly, the total working DS1s of each ring utilized in the calling route were determined and summed. The total DS1 costs of all rings in each route were then weighted by the total working DS1s for that route. Finally, the resulting weighted average cost per DS1 for all EAS routes was converted into an average cost per minute assuming 9,000 minutes of use per month per voice-grade DS0.

Intrastate Access

For the Intrastate Switched Access transport study, the TCM was run with annual charge factors developed to reflect the costs of providing access service. The annual charge factors used in the model are described in the Annual Charge Factor Narrative.

The TCM was used to develop the monthly cost per DS1 for both termination and transit for each of the 67 rings in the Company's Florida service territories. The ring-specific DS1 costs generated by the TCM were used in conjunction with calling routes from the Company's end offices to their respective access tandems to develop the statewide average intrastate access transport cost per minute of use.

First, the rings utilized in completing a call from each end office to its tandem were identified. Then the DS1 termination and transit costs for each ring utilized in the route were determined from the TCM results. These ring-specific DS1 costs were summed for each route and weighted by the total 1997 intrastate access minutes of use for that end office. Finally, the resulting weighted average cost per DS1 for all end office to tandem routes studied was converted into an average cost per minute assuming 9,000 minutes of use per month per voice-grade DS0.

IntraLATA Toll

For the IntraLATA Toll transport study, the TCM was run with annual charge factors developed to reflect the costs of providing toll service. The annual charge factors used in the model are described in the Annual Charge Factor Narrative.

The TCM was used to calculate the monthly cost per DS1 of both termination and transit for each of the 67 rings in the Company's Florida service territories. The ring-specific DS1 costs generated by the TCM were used in conjunction with 100 intraLATA toll routes to develop the statewide average intraLATA toll transport cost per minute of use.

First, the rings utilized in completing a call between the two end points of each toll route were identified. Then the DS1 termination and transit costs for each ring utilized in the route were determined from the TCM results. These ring-specific DS1 costs were summed for each route and weighted by the total 1997 intraLATA toll minutes for that route. Finally, the resulting weighted average cost per DS1 for all toll routes studied was converted into an average cost per minute assuming 9,000 minutes of use per month per voice-grade DS0.

Sprint Florida, Inc
Summary Results: Statewide Average

Local/EAS Transport Costs

Monthly Cost per DS1: \$ 159.89
Cost per Local/EAS MOU: \$ 0.0007402

		Rings Utilized				DS1 Total Termination & Transit Cost per Month							
Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s	
1 R Alford	R Cottondale	SR 26C CTDL-ALFD	CTDL-MRNN										
2 R Alford	Marianna	SR 26C CTDL-ALFD	CTDL-MRNN										
3 Altamonte Springs	Apopka		WNPX-APPK										
4 Altamonte Springs	Celebration*		WNPX-APPK	WNGR-WNPX	SR 21B WKSM-POC								
5 Altamonte Springs	Casselberry		WNPX-CSLB										
6 Altamonte Springs	East Orange*		WNPX-APPK	WNPX-ORLD SBT									
7 Altamonte Springs	Geneva*		WNPX-APPK	WNPX-ORLD SBT									
8 Altamonte Springs	Goldenrod		WNPX-CSLB										
9 Altamonte Springs	Reedy Creek		WNPX-APPK	WNGR-WNPX	WNGR-CLMT								
10 Altamonte Springs	Lake Buena Vista*		WNPX-APPK	WNGR-WNPX	SR 21B WKSM-POC								
11 Altamonte Springs	Lake Brantley		WNPX-APPK										
12 Altamonte Springs	Maitland		WNPX-APPK										
13 Altamonte Springs	R Montverde	SR 26B WNGR-MTVR	WNPX-APPK										
14 Altamonte Springs	Orlando*		WNPX-APPK	WNPX-ORLD SBT									
15 Altamonte Springs	Oviedo*		WNPX-APPK	WNPX-ORLD SBT									
16 Altamonte Springs	Sanford*		WNPX-APPK	WNPX-ORLD SBT									
17 Altamonte Springs	R Windermere	SR 26C WNGR-WNDR	WNPX-APPK										
18 Altamonte Springs	Winter Garden		WNPX-APPK	WNGR-WNPX									
19 Altamonte Springs	Winter Park		WNPX-CSLB										
20 R Alva	Bonita Springs	PNGR-PTCT	FTMY-BNSP										
21 R Alva	Cape Coral	PNGR-PTCT	FTMY-BNSP	FTMY-NFMY									
22 R Alva	North Cape Coral	PNGR-PTCT	FTMY-NFMY	FTMY-NFMY									
23 R Alva	Fort Myers Beach	PNGR-PTCT	FTMY-NFMY	SR 9 NFMY-FTMY									
24 R Alva	Fort Myers	PNGR-PTCT											
25 R Alva	East Fort Meyers	PNGR-PTCT	FTMY-BNSP										
26 R Alva	South Fort Meyers	PNGR-PTCT	FTMY-NFMY										
27 R Alva	Lehigh Acres	PNGR-PTCT	FTMY-BNSP										
28 R Alva	North Fort Myers	PNGR-PTCT	FTMY-NFMY										
29 R Alva	Pine Island	PNGR-PTCT	FTMY-NFMY	SR 9 NFMY-FTMY									
30 R Alva	Sanibel-Captiva Islands	PNGR-PTCT	FTMY-NFMY	SR 9 NFMY-FTMY									
31 Apopka	Celebration*		WNGR-WNPX	SR 21B WKSM-POC									
32 Apopka	Casselberry		WNPX-CSLB	WNPX-APPK									
33 Apopka	East Orange*		WNPX-APPK	WNPX-ORLD SBT									
34 Apopka	Goldenrod		WNPX-CSLB	WNPX-APPK									
35 Apopka	Reedy Creek		WNGR-WNPX	WNGR-CLMT									
36 Apopka	Lake Buena Vista*		WNGR-WNPX	SR 21B WKSM-POC									

Sprint Florida, Inc
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Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s
37	Apopka	Lake Brantley	WNPX-APPK									
38	Apopka	Maitland	WNPX-APPK									
39	Apopka	R Montverde	SR 26B WNGR-MTVRLSBG-TVRS									
40	Apopka	Orlando*	WNPX-APPK									
41	Apopka	R V'ndermere	SR 26C WNGR-WNDRWNGR-WNPX									
42	Apopka	Winter Garden	WNGR-WNPX									
43	Apopka	Winter Park	WNPX-APPK									
44	R Astor	Clermont	SR 5 ASTR-ESTS	LSBG-TVRS								
45	R Astor	Eustis	SR 5 ASTR-ESTS	LSBG-TVRS								
46	R Astor	R Groveland	SR 5 ASTR-ESTS	LSBG-TVRS								
47	R Astor	R Howey	SR 5 ASTR-ESTS	LSBG-TVRS								
48	R Astor	Lady Lake	SR 5 ASTR-ESTS	LSBG-TVRS								
49	R Astor	Leesburg	SR 5 ASTR-ESTS	LSBG-TVRS								
50	R Astor	Mt. Dora	SR 5 ASTR-ESTS	LSBG-TVRS								
51	R Astor	Tavares	SR 5 ASTR-ESTS	LSBG-TVRS								
52	R Astor	R Umatilla	SR 5 ASTR-ESTS	LSBG-TVRS								
53	Baker	Crestview	SR 26A CRVW-BAKR									
54	Bellevue	Citra*	OCAL-BLVW	SR 21B OCAL-CITRA								
55	Bellevue	Dunnellon*	OCAL-BLVW	SR 21A BVHL-DNLN								
56	Bellevue	Lady Lake (B21)	LSBG-LDLK									
57	Bellevue	McIntosh*	OCAL-BLVW	SR 21B OCAL-CITRA								
58	Bellevue	Ocala	OCAL-BLVW									
59	Bellevue	R Highlands	SR 22 OCAL-HLDS	OCAL-OKLW								
60	Bellevue	R Forest	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	OCAL-BLVW							
61	Bellevue	Okechawha	OCAL-OKLW	OCAL-BLVW								
62	Bellevue	Orange Springs *	OCAL-BLVW	SR 21B OCAL-CITRA								
63	Bellevue	R Salt Springs	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	OCAL-BLVW							
64	Bellevue	R Silver Springs Shores	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	OCAL-BLVW							
65	R Bonifay	R Reynolds Hill	SR 26B BNFY-RYHL	CTDL-MRNN	SR 26B BNFY-RYHL							
66	R Bonifay	R Westville	WSTV-BNFY	CTDL-MRNN	WSTV-BNFY							
67	Bonita Springs	Cypress Lake	FTMY-BNSP									
68	Bonita Springs	Fort Myers Beach	FTMY-BNSP	SR 9 NFMY-FTMY								
69	Bonita Springs	Fort Myers	FTMY-BNSP									
70	Bonita Springs	East Fort Meyers	FTMY-BNSP									
71	Bonita Springs	Goldengate	FTMY-BNSP									
72	Bonita Springs	Naples	FTMY-BNSP									

Sprint Florida, Inc
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Local/EAS Transport Costs

Monthly Cost per DS1: \$ 159.89
Cost per Local/EAS MOU: \$ 0.0007402

		Rings Utilized				DS1 Total Termination & Transit Cost per Month							
	Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s
73	Bonita Springs	Naples		FTMY-BNSP									
74	Bonita Springs	Naples Southeast		FTMY-BNSP									
75	Bonita Springs	Naples Moorings		FTMY-BNSP									
76	Bushnell	R Wildwood	LSBG-LDLK	OCAL-BLVW									
77	Beverly Hills	R Chassahowitzka	SR 26B CHSW-HMSP	BVHL-INVR									
78	Beverly Hills	Crystal River		BVHL-INVR									
79	Beverly Hills	R Homosassa Springs		BVHL-INVR									
80	Beverly Hills	Inverness		BVHL-INVR									
81	R Bowling Green	Wauchula	SR 26C BWLG-WCHL	PNGR-PTCT									
82	R Bowling Green	R Zolfo Springs	SR 26C BWLG-WCHL	PNGR-PTCT	PNGR-PTCT								
83	Crawfordville	R Panacea	SR22B CFVL-PANC										
84	Crawfordville	Sopchoppy		CLHN-SPCP									
85	Crawfordville	R St. Marks	SR 22B CFVL-STMK										
86	Crawfordville	Tallahassee Blairstone		CLHN-SPCP									
87	R Cherry Lake	R Greenville	SR 22B MOSN-CHLK	GNVL-MOSN									
88	R Cherry Lake	R Lee	SR 22B MOSN-CHLK	SR 22B MOSN-LEE									
89	R Cherry Lake	Madison	SR 22B MOSN-CHLK										
90	R Chassahowitzka	Crystal River	SR 26B CHSW-HMSP	BVHL-INVR									
91	R Chassahowitzka	R Homosassa Springs	SR 26B CHSW-HMSP										
92	R Chassahowitzka	Inverness	SR 26B CHSW-HMSP	BVHL-INVR									
93	Clermont	Eustis		LSBG-TVRS									
94	Clermont	R Groveland	OCAL-BLVW	OCAL-BLVW									
95	Clermont	R Howey	SR 26B LSBG-HOWY	LSBG-TVRS									
96	Clermont	Lady Lake		OCAL-BLVW	LSBG-LDLK								
97	Clermont	Leesburg		LSBG-TVRS									
98	Clermont	Mt. Dora		LSBG-TVRS									
99	Clermont	Tavares		LSBG-TVRS									
100	Clermont	R Umatilla	SR 5 ASTR-ESTS	LSBG-TVRS									
101	Cape Coral	North Cape Coral		FTMY-NFMY									
102	Cape Coral	Cypress Lake		FTMY-NFMY									
103	Cape Coral	Fort Myers Beach		FTMY-NFMY	SR 9 NFMY-FTMY								
104	Cape Coral	Fort Myers		FTMY-NFMY									
105	Cape Coral	East Fort Myers		FTMY-NFMY									
106	Cape Coral	North Fort Myers		FTMY-NFMY									
107	Cape Coral	Pine Island		FTMY-NFMY	SR 9 NFMY-FTMY								
108	Cape Coral	Sanibel-Captiva Islands		FTMY-NFMY	SR 9 NFMY-FTMY								

Sprint Florida, Inc

Summary Results: Statewide Average

Local/EAS Transport Costs

Monthly Cost per DS1: \$ 159.89

Cost per Local/EAS MOU: \$ 0.0007402

			Rings Utilized				DS1 Total Termination & Transit Cost per Month						
Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s	
109	North Cape Coral	North Fort Myers	FTMY-NFMY										
110	North Cape Coral	Pine Island	FTMY-NFMY	SR 9 NFMY-FTMY									
111	North Cape Coral	Sanibel-Captiva Islands	FTMY-NFMY	SR 9 NFMY-FTMY									
112	Crystal River	Homosassa Springs	BVHL-INVR										
113	Crystal River	Inverness	BVHL-INVR										
114	Crystal River	Yankeetown*	BVHL-INVR	SR 21B HMSP-POC									
115	Crestview	Laurel Hill*	SR 21B CRVW-LRHL										
116	Casselberry	Celebration*	WNPK-CSLB	WNGR-WNPK	SR 21B WKSM-POC								
117	Casselberry	East Orange*	WNPK-CSLB	WNPK-ORLD SBT									
118	Casselberry	Geneva*	WNPK-CSLB	WNPK-ORLD SBT									
119	Casselberry	Goldenrod	WNPK-CSLB										
120	Casselberry	Reedy Creek	WNPK-CSLB	WNGR-WNPK	WNGR-CLMT								
121	Casselberry	Lake Buena Vista*	WNPK-CSLB	WNGR-WNPK	SR 21B WKSM-POC								
122	Casselberry	Lake Brantley	WNPK-APPK	WNPK-CSLB									
123	Casselberry	Maitland	WNPK-APPK	WNPK-CSLB									
124	Casselberry	R Montverde	SR 26B WNGR-MTVR	WNGR-WNPK	WNPK-CSLB								
125	Casselberry	Orlando*	WNPK-CSLB	WNPK-ORLD SBT									
126	Casselberry	Oviedo*	WNPK-CSLB	WNPK-ORLD SBT									
127	Casselberry	Sanford*	WNPK-CSLB	WNPK-ORLD SBT									
128	Casselberry	R Windermere	SR 26C WNGR-WNDR	WNGR-WNPK	WNPK-CSLB								
129	Casselberry	Winter Garden	WNPK-CSLB	WNGR-WNPK									
130	Casselberry	Winter Park	WNPK-CSLB										
131	R Cottontale	Marianna	CTDL-MRNN										
132	Cypress Lake	North Cape Coral	FTMY-NFMY										
133	Cypress Lake	Fort Myers Beach	SR 9 NFMY-FTMY										
134	Cypress Lake	Fort Myers	FTMY-BNSP										
135	Cypress Lake	East Fort Meyers	FTMY-BNSP										
136	Cypress Lake	South Fort Meyers	FTMY-BNSP										
137	Cypress Lake	Lehigh Acres	FTMY-BNSP										
138	Cypress Lake	North Fort Myers	SR 9 NFMY-FTMY										
139	Cypress Lake	Pine Island	SR 9 NFMY-FTMY										
140	Cypress Lake	Sanibel-Captiva Islands	SR 9 NFMY-FTMY										
141	Dade City	R San Antonio	SR21A DDCY-SNAN										
142	Dade City	R Trilacoochee	SR21A DDCY-SNAN	SR 26C DDCY-TLCH									
143	Destin	Fort Walton Beach	FTWB-DEST										
144	Destin	Shalimar	FTWB-DEST										

Sprint Florida, Inc

Summary Results: Statewide Average

Local/EAS Transport Costs

Monthly Cost per DS1: \$ 159.89

Cost per Local/EAS MOU: \$ 0.0007402

Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating		Terminating		Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s
145	Destin	R	Santa Rosa Beach	SR 22A DEST-SGBH										
146	Destin	R	Niceville		FTWB-DEST									
147	Destin		Valparaiso		FTWB-DEST									
148	DeFuniak Springs	R	Freeport	FTWB-DEST										
149	DeFuniak Springs	R	Glendale	SR 26A DFSP-GLDL										
150	DeFuniak Springs	R	Ponce de Leon	DFSP-PNLN										
151	DeFuniak Springs		Paxon*		FTWB-DEST	SR 21B CRVW-LRHL								
152	Eustis	R	Groveland	LSBG-TVRS	OCAL-BLVW									
153	Eustis	R	Howey	LSBG-TVRS	SR 26B LSBG-HOWY									
154	Eustis		Lady Lake		LSBG-TVRS	LSBG-LDLK								
155	Eustis		Leesburg		LSBG-TVRS									
156	Eustis		Mt. Dora		LSBG-TVRS									
157	Eustis		Tavares		LSBG-TVRS									
158	Eustis	R	Umatilla	LSBG-TVRS	LSBG-TVRS									
159	Fort Myers Beach		North Cape Coral		SR 9 NFMY-FTMY	FTMY-NFMY								
160	Fort Myers Beach		Lehigh Acres		SR 9 NFMY-FTMY	FTMY-BNSP								
161	Fort Myers Beach		North Fort Myers		SR 9 NFMY-FTMY									
162	Fort Myers Beach		Pine Island		SR 9 NFMY-FTMY									
163	Fort Myers Beach		Sanibel-Captiva Islands		SR 9 NFMY-FTMY									
164	Fort Myers		North Cape Coral		FTMY-NFMY									
165	Fort Myers		Fort Myers Beach		SR 9 NFMY-FTMY									
166	Fort Myers		Lehigh Acres		FTMY-BNSP									
167	Fort Myers		North Fort Myers		FTMY-NFMY									
168	Fort Myers		Pine Island		SR 9 NFMY-FTMY									
169	Fort Myers		Sanibel-Captiva Islands		SR 9 NFMY-FTMY									
170	East Fort Meyers		North Cape Coral		FTMY-NFMY									
171	East Fort Meyers		Fort Myers Beach		SR 9 NFMY-FTMY									
172	East Fort Meyers		Fort Myers		FTMY-BNSP									
173	East Fort Meyers		South Fort Meyers		FTMY-BNSP									
174	East Fort Meyers		Lehigh Acres		FTMY-BNSP									
175	East Fort Meyers		North Fort Myers		FTMY-NFMY									
176	East Fort Meyers		Pine Island		SR 9 NFMY-FTMY									
177	East Fort Meyers		Sanibel-Captiva Islands		SR 9 NFMY-FTMY									
178	Fort Walton Beach		Holley-Navarre*		SR 21B FTWB-POC									
179	Fort Walton Beach		Shalimar		FTWB-DEST									
180	Fort Walton Beach	R	Santa Rosa Beach	SR 22A DEST-SGBH	FTWB-DEST									

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Local/EAS Transport Costs

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Cost per Local/EAS MOU: \$ 0.0007402

		Rings Utilized				DS1 Total Termination & Transit Cost per Month							
Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s	
181	Fort Walton Beach	R Niceville	FTWB-DEST	FTWB-DEST									
182	Fort Walton Beach	Valparaiso		FTWB-DEST									
183	Grand Ridge	Marianna		SR 22A MRNN-MALN									
184	Grand Ridge	R Sneads	SR 22A MRNN-MALN	SR 22A MRNN-MALN									
185	Goldengate	Marco Island		FTMY-BNSP									
186	Goldengate	North Naples		FTMY-BNSP									
187	Goldengate	Naples		FTMY-BNSP									
188	Goldengate	Naples Southeast		FTMY-BNSP									
189	Goldengate	Naples Moorings		FTMY-BNSP									
190	Goldenrod	Celebration*		WNPB-CSLB	WNGR-WNPB				SR 21B WKSM-POC				
191	Goldenrod	East Orange*		WNPB-CSLB	WNPB-ORLD SBT								
192	Goldenrod	Geneva*		WNPB-CSLB	WNPB-ORLD SBT								
193	Goldenrod	Reedy Creek		WNPB-CSLB	WNGR-WNPB				WNGR-CLMT				
194	Goldenrod	Lake Buena Vista*		WNPB-CSLB	WNGR-WNPB				SR 21B WKSM-POC				
195	Goldenrod	Lake Brantley		WNPB-APPK	WNPB-CSLB								
196	Goldenrod	Maitland		WNPB-APPK	WNPB-CSLB								
197	Goldenrod	R Montverde	SR 26B WNGR-MTVR	WNGR-WNPB	WNPB-CSLB								
198	Goldenrod	Orlando*		WNPB-CSLB	WNPB-ORLD SBT								
199	Goldenrod	Oviedo*		WNPB-CSLB	WNPB-ORLD SBT								
200	Goldenrod	Sanford*		WNPB-CSLB	WNPB-ORLD SBT								
201	Goldenrod	R Windermere	SR 26C WNGR-WNDR	WNGR-WNPB	WNPB-CSLB								
202	Goldenrod	Winter Garden		WNPB-CSLB	WNGR-WNPB								
203	Goldenrod	Winter Park		WNPB-CSLB									
204	R Greenville	R Lee	GNVL-MDSN	SR 22B MDSN-LEE									
205	R Greenville	Madison	GNVL-MDSN										
206	R Greenville	Monticello	GNVL-MDSN	CLJH-GNVL									
207	R Greenville	Tallahassee-Calhoun	GNVL-MDSN	CLJH-GNVL									
208	R Greenwood	R Malone	SR 22A MRNN-MALN	SR 22A MRNN-MALN									
209	R Greenwood	Marianna	SR 22A MRNN-MALN										
210	R Groveland	R Howey-in-the-Hills	OCAL-BLVW	OCAL-BLVW	SR 26B LSBG-HOWY								
211	R Groveland	Lady Lake	OCAL-BLVW	OCAL-BLVW	LSBG-LDLK								
212	R Groveland	Leesburg	OCAL-BLVW	OCAL-BLVW									
213	R Groveland	Mt. Dora	OCAL-BLVW	OCAL-BLVW	LSBG-TVRS								
214	R Groveland	Tavares	OCAL-BLVW	OCAL-BLVW	LSBG-TVRS								
215	R Groveland	R Umatilla	OCAL-BLVW	OCAL-BLVW	LSBG-TVRS				SR 5 ASTR-ESTS				
216	R Homosassa Springs	Inverness	BVHL-INVR	BVHL-INVR									

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Local/EAS Transport Costs

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			Rings Utilized				DS1 Total Termination & Transit Cost per Month					
Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s
217 R	Howey-In-The-Hills	Lady Lake	SR 26B LSBG-HOWY	LSBG-LDLK								
218 R	Howey-In-The-Hills	Leesburg	SR 26B LSBG-HOWY									
219 R	Howey-In-The-Hills	Mt. Dora	SR 26B LSBG-HOWY	LSBG-TVRS								
220 R	Howey-In-The-Hills	Tavares	SR 26B LSBG-HOWY	LSBG-TVRS								
221 R	Howey-In-The-Hills	R Umatilla	SR 26B LSBG-HOWY	LSBG-TVRS	SR 5 ASTR-ESTS							
222 R	Kingsley Lake	R Lawley	SR 26B KGLK-LWTY	SR 26B KGLK-LWTY								
223 R	Kingsley Lake	R Buford*	SR 21B STRK-RFRD	SR 21B STRK-RFRD								
224 R	Kingsley Lake	Starke	SR 26B KGLK-LWTY									
225 R	Kenansville	Kissimmee	KSSM-STCD									
226 R	Kenansville	West Kissimmee	KSSM-STCD	KSSM-STCD								
227 R	Kenansville	St. Cloud	KSSM-STCD									
228	Kissimmee	Celebration*		WNGR-WNPK	SR 21B WKSM-POC							
229	Kissimmee	West Kissimmee		WNGR-WNPK								
230	Kissimmee	St. Cloud		KSSM-STCD								
231	West Kissimmee	Celebration*		SR 21B WKSM-POC								
232	Reedy Creek	Celebration*		WNGR-CLMT	SR 21B WKSM-POC							
233	Reedy Creek	East Orange*		WNGR-CLMT	WNGR-WNPK							
234	Reedy Creek	West Kissimmee		WNGR-CLMT								
235	Reedy Creek	Lake Buena Vista*		WNGR-CLMT	SR 21B WKSM-POC							
236	Reedy Creek	Orlando*		WNGR-CLMT	WNGR-WNPK							
237	Reedy Creek	R Windermere	SR 26C WNGR-WNDR	WNGR-CLMT								
238	Reedy Creek	Winter Garden		WNGR-CLMT								
239	Reedy Creek	Winter Park		WNGR-CLMT	WNGR-WNPK							
240 R	Buena Ventura Lakes	Kissimmee	WNGR-WNPK									
241	Lady Lake (753)	Leesburg		LSBG-LDLK								
242	Lady Lake (753)	Mt. Dora		LSBG-LDLK	LSBG-TVRS							
243	Lady Lake (753)	Tavares		LSBG-LDLK	LSBG-TVRS							
244	Lady Lake (753)	R Umatilla	SR 5 ASTR-ESTS	LSBG-TVRS	LSBG-LDLK							
245	Lady Lake (821)	Leesburg		LSBG-LDLK								
246	Lady Lake (821)	Mt. Dora		LSBG-LDLK	LSBG-TVRS							
247	Lady Lake (821)	Ocala		LSBG-LDLK	OCAL-BLWW							
248	Lady Lake (821)	Oklawaha		LSBG-LDLK	OCAL-OKLW							
249	Lady Lake (821)	R Salt Springs	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	OCAL-OKLW							
250	Lady Lake (821)	R Silver Springs Shores	SR 5 HLDS-SSPR	OCAL-OKLW	LSBG-LDLK							
251	Lady Lake (821)	Tavares		LSBG-LDLK	LSBG-TVRS							
252	Lady Lake (821)	R Umatilla	SR 5 ASTR-ESTS	LSBG-TVRS	LSBG-LDLK							



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		Rings Utilized				DS1 Total Termination & Transit Cost per Month								
Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s		
253 R Lee	Madison	SR 22B MDSN-LEE												
254 Lake Brantley	Celebration*		WNPK-APPK	WNGR-WNPK	SR 21B WKSM-POC									
255 Lake Brantley	East Orange*		WNPK-APPK	WNPK-ORLD SBT										
256 Lake Brantley	Geneva*		WNPK-APPK	WNPK-ORLD SBT										
257 Lake Brantley	Reedy Creek		WNPK-APPK	WNGR-WNPK	WNGR-CLMT									
258 Lake Brantley	Lake Buena Vista*		WNPK-APPK	WNGR-WNPK	SR 21B WKSM-POC									
259 Lake Brantley	Maitland		WNPK-APPK											
260 Lake Brantley	R Montverde	SR 26B WNGR-MTVR	WNGR-WNPK	WNPK-APPK										
261 Lake Brantley	Orlando*		WNPK-APPK	WNPK-ORLD SBT										
262 Lake Brantley	Oviedo*		WNPK-APPK	WNPK-ORLD SBT										
263 Lake Brantley	Sanford*		WNPK-APPK	WNPK-ORLD SBT										
264 Lake Brantley	R Windermere	SR 26C WNGR-WNDR	WNGR-WNPK	WNPK-APPK										
265 Lake Brantley	Winter Garden		WNPK-APPK	WNGR-WNPK										
266 Lake Brantley	Winter Park		WNPK-APPK											
267 Leesburg	Mt. Dora		LSBG-TVRS											
268 Leesburg	Tavares		LSBG-TVRS											
269 Leesburg	R Umatilla	LSBG-TVRS	LSBG-TVRS	SR 5 ASTR-ESTS										
270 R Lawley	Railford*	SR 26B KGLK-LWTY	SR 21B STRK-RFRD											
271 R Lawley	Starke	SR 26B KGLK-LWTY												
272 R Malone	Marianna	SR 22A MRNN-MALN												
273 Monticello	Tallahassee-Calhoun		CLHN-GNVL											
274 Marco Island	North Naples		FTMY-BNSP											
275 Marco Island	Naples		FTMY-BNSP											
276 Marco Island	Naples Southeast		FTMY-BNSP											
277 Marco Island	Naples Moorings		FTMY-BNSP											
278 Marianna	Altha *		SR 21B MRNN-POC											
279 Marianna	R Sneads	SR 22A MRNN-SNDS												
280 Mt. Dora	Tavares		LSBG-TVRS											
281 Mt. Dora	R Umatilla	SR 5 ASTR-ESTS	LSBG-TVRS											
282 Maitland	Celebration*		WNPK-APPK	WNGR-WNPK	SR 21B WKSM-POC									
283 Maitland	East Orange*		WNPK-APPK	WNPK-ORLD SBT										
284 Maitland	Geneva*		WNPK-APPK	WNPK-ORLD SBT										
285 Maitland	Reedy Creek		WNPK-APPK	WNGR-WNPK	WNGR-CLMT									
286 Maitland	Lake Buena Vista*		WNPK-APPK	WNGR-WNPK	SR 21B WKSM-POC									
287 Maitland	R Montverde	SR 26B WNGR-MTVR	WNGR-WNPK	WNPK-APPK										
288 Maitland	Orlando*		WNPK-APPK	WNPK-ORLD SBT										

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Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s
289	Maitland	Oviedo*	WNPK-APPK	WNPK-ORLD SBT								
290	Maitland	Sanford*	WNPK-APPK	WNPK-ORLD SBT								
291	Maitland	R Wintermere	SR 26C WNGR-WNDR WNGR-WNPK	WNPK-APPK								
292	Maitland	Winter Garden	WNPK-APPK	WNGR-WNPK								
293	Maitland	Winter Park	WNPK-APPK									
294	R Montverde	Celebration*	SR 26B WNGR-MTVR WNGR-CLMT	SR 21B WKSM-POC								
295	R Montverde	East Orange*	SR 26B WNGR-MTVR WNGR-WNPK	WNPK-ORLD SBT								
296	R Montverde	Reedy Creek	SR 26B WNGR-MTVR WNGR-CLMT									
297	R Montverde	Lake Buena Vista*	SR 26B WNGR-MTVR WNGR-CLMT	SR 21B WKSM-POC								
298	R Montverde	Orlando*	SR 26B WNGR-MTVR WNGR-WNPK	WNPK-ORLD SBT								
299	R Montverde	R Wintermere	SR 26B WNGR-MTVR SR 26C WNGR-WNDR									
300	R Montverde	Winter Garden	SR 26B WNGR-MTVR									
301	R Montverde	Winter Park	SR 26B WNGR-MTVR WNGR-WNPK									
302	North Fort Myers	Pine Island	SR 9 NFMY-FTMY									
303	North Fort Myers	Sanibel-Captiva Islands	SR 9 NFMY-FTMY									
304	Naples	North Naples	FTMY-BNSP									
305	Naples	Naples SouthEast	FTMY-BNSP									
306	Naples Southeast	North Naples	FTMY-BNSP									
307	Naples Moorings	North Naples	FTMY-BNSP									
308	Naples Moorings	Naples SouthEast	FTMY-BNSP									
309	Ocala	Citra*	OCAL-BLVW	SR 21B OCAL-CITRA								
310	Ocala	Dunnellon*	OCAL-BLVW	SR 21A BVHL-DNLN								
311	Ocala	McIntosh*	OCAL-BLVW	SR 21B OCAL-CITRA								
312	Ocala	Shady Road	OCAL-BLVW									
313	Ocala	Oklawaha	OCAL-OKLW									
314	Ocala	Orange Springs*	OCAL-BLVW	SR 21B OCAL-CITRA								
315	Ocala	R Salt Springs	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS								
316	Ocala	R Silver Springs	SR 22 OCAL-HLDS									
317	Ocala	R Silver Springs Shores	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS								
318	R Highlands	Citra*	SR 22 OCAL-HLDS	SR 21B OCAL-CITRA								
319	R Highlands	Dunnellon*	SR 22 OCAL-HLDS	OCAL-BLVW	SR 21A BVHL-DNLN							
320	R Highlands	Lady Lake (B21)	SR 22 OCAL-HLDS	OCAL-BLVW	LSBG-LDLK							
321	R Highlands	McIntosh*	SR 22 OCAL-HLDS	SR 21B OCAL-CITRA								
322	R Highlands	Ocala	SR 22 OCAL-HLDS									
323	R Highlands	Shady Road	SR 22 OCAL-HLDS	OCAL-BLVW								
324	R Highlands	Oklawaha	SR 22 OCAL-HLDS	OCAL-OKLW								



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Rings Utilized

DS1 Total Termination & Transit Cost per Month

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325 R Highlands	Orange Springs*	SR 22 OCAL-HLDS	SR 21B OCAL-CITRA									
326 R Highlands	R Salt Springs	SR 22 OCAL-HLDS	SR 22 OCAL-HLDS	SR 5 HLDS-SSPR								
327 R Forest	Citra*	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	SR 21B OCAL-CITRA								
328 R Forest	Dunnellon*	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	OCAL-BLVW	SR 21A BVHL-DNLN							
329 R Forest	Lady Lake (821)	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	OCAL-BLVW	LSBG-LDLK							
330 R Forest	Ocala	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS									
331 R Forest	R Highlands	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS									
332 R Forest	Oklawaha	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	OCAL-OKLW								
333 R Forest	Orange Springs*	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	SR 21B OCAL-CITRA								
334 R Forest	R Salt Springs	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	SR 5 HLDS-SSPR								
335 R Forest	R Silver Springs Shores	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	SR 22 OCAL-HLDS								
336 Oklawaha	Citra*		OCAL-OKLW	SR 21B OCAL-CITRA								
337 Oklawaha	Dunnellon*		OCAL-OKLW	OCAL-BLVW	SR 21A BVHL-DNLN							
338 Oklawaha	McIntosh*		OCAL-OKLW	SR 21B OCAL-CITRA								
339 Oklawaha	Orange Springs*		OCAL-OKLW	SR 21B OCAL-CITRA								
340 Oklawaha	R Salt Springs	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	OCAL-OKLW								
341 Oklawaha	R Silver Springs Shores	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	OCAL-OKLW								
342 Orange City	DeBary*		SR 21A ORCY-DBRY									
343 R Panacea	Sopchoppy	SR22B CFVL-PANC	CLHN-SPCP									
344 R Panacea	R St. Marks	SR22B CFVL-PANC	SR 22B CFVL-STMK									
345 R Panacea	Tallahassee Blairstone	SR22B CFVL-PANC	CLHN-SPCP									
346 Pine Island	Sanibel-Captiva Islands		SR 9 NFMY-FTMY									
347 R Reynolds Hill	R Westville	SR 26B BNFY-RYHL	CTDL-MRNN	WSTV-BNFY								
348 Sebring	R Spring Lake	PNGR-PTCT										
349 Shalimar	Valparaiso		FTWB-DEST									
350 R San Antonio	R Trilacoochee	SR21A DDCY-SNAN	SR 26C DDCY-TLCH									
351 R Santa Rosa Beach	R Seagrove Beach	SR 22A DEST-SGBH	SR 22A DEST-SGBH									
352 Sopchoppy	R St. Marks	SR 22B CFVL-STMK	CLHN-SPCP									
353 Sopchoppy	Tallahassee Blairstone		CLHN-SPCP									
354 R Salt Springs	Citra*	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	SR 21B OCAL-CITRA								
355 R Salt Springs	Dunnellon*	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	OCAL-BLVW	SR 21A BVHL-DNLN							
356 R Salt Springs	R Silver Springs Shores	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS	SR 5 HLDS-SSPR								
357 St. Cloud	Celebration*		WNGR-WNPK	SR 21B WKSM-POC								
358 St. Cloud	West Kissimmee		WNGR-WNPK									
359 R St. Marks	Tallahassee Blairstone	SR 22B CFVL-STMK	CLHN-SPCP									
360 Starke	Raiford*		SR 21B STRK-RFRD									

Sprint Florida, Inc
Summary Results: Statewide Average

Local/EAS Transport Costs

Monthly Cost per DS1: \$ 159.89

Cost per Local/EAS MOU: \$ 0.0007402

Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s
361 R Silver Springs Shores	Citra*	OCAL-OKLW	SR 21B OCAL-CITRA									
362 R Silver Springs Shores	Dunnellon*	OCAL-OKLW	OCAL-BLVW	SR 21A BVHL-DNLN								
363 Tallahassee-Calhoun	Perry		CUHN-GNVL	GNVL-PRRY GULF								
364 Tallahassee-Calhoun	Tallahassee-Willis		WLLS-PRKN									
365 Tallahassee-Calhoun	Tallahassee-Mabry		WLLS-PRKN									
366 Tallahassee-Calhoun	Tallahassee-FSU		WLLS-PRKN									
367 Tallahassee-Calhoun	Tallahassee-Thomasville		WLLS-PRKN	WLLS-TMSV								
368 Tallahassee-Calhoun	Tallahassee-Perkins		WLLS-PRKN									
369 Tallahassee-Mabry	Tallahassee-Willis		WLLS-PRKN									
370 Tallahassee-Mabry	Tallahassee-Thomasville		WLLS-PRKN	WLLS-TMSV								
371 Tallahassee-Mabry	Tallahassee-Perkins		WLLS-PRKN									
372 Tallahassee Blairstone	Tallahassee-Calhoun		MBRY-BLRN									
373 Tallahassee Blairstone	Tallahassee-Willis		WLLS-BLRN									
374 Tallahassee Blairstone	Tallahassee-Mabry		MBRY-BLRN									
375 Tallahassee Blairstone	Tallahassee-FSU		WLLS-PRKN	MBRY-BLRN								
376 Tallahassee Blairstone	Tallahassee-Thomasville		WLLS-TMSV	WLLS-BLRN								
377 Tallahassee Blairstone	Tallahassee-Perkins		WLLS-PRKN	WLLS-BLRN								
378 Tallahassee-FSU	Tallahassee-Willis		WLLS-PRKN									
379 Tallahassee-FSU	Tallahassee-Mabry		WLLS-PRKN									
380 Tallahassee-FSU	Tallahassee - Thomasville		WLLS-PRKN	WLLS-TMSV								
381 Tallahassee-FSU	Tallahassee-Perkins		WLLS-PRKN									
382 Tallahassee Thomasville	Tallahassee-Willis		WLLS-TMSV									
383 Tallahassee-Perkins	Tallahassee-Willis		WLLS-PRKN									
384 Tallahassee-Perkins	Tallahassee-Thomasville		WLLS-PRKN	WLLS-TMSV								
385 Tavares	R Umatilla	SR 5 ASTR-ESTS	LSBG-TVRS									
386 R Niceville	Shalimar	FTWB-DEST	FTWB-DEST									
387 Wauchula	R Zolfo Springs	PNGR-PTCT	PNGR-PTCT									
388 R Williston	Bronson*	OCAL-BLVW	SR 21B WLST-POC									
389 R Windermere	Celebration*	SR 26C WNGR-WNDRWNGR-WNPK	SR 21B WKSM-POC									
390 R Windermere	East Orange*	SR 26C WNGR-WNDRWNGR-WNPK	WNPK-ORLD SBT									
391 R Windermere	Lake Buena Vista*	SR 26C WNGR-WNDRWNGR-WNPK	WNGR-WNPK									
392 R Windermere	Orlando*	SR 26C WNGR-WNDRWNGR-WNPK	WNPK-ORLD SBT									
393 R Windermere	Winter Garden	SR 26C WNGR-WNDR										
394 R Windermere	Winter Park	SR 26C WNGR-WNDRWNGR-WNPK										
395 Winter Garden	Celebration*	WNGR-CLMT	SR 21B WKSM-POC									
396 Winter Garden	East Orange*	WNGR-WNPK	WNPK-ORLD SBT									

Sprint Florida, Inc

Summary Results: Statewide Average

Local/EAS Transport Costs

Monthly Cost per DS1: \$ 159.89

Cost per Local/EAS MOU: \$ 0.0007402

Rings Utilized						DS1 Total Termination & Transit Cost per Month						
Originating	Terminating	Host/Remote Ring	Filing 1	Ring 2	Ring 3	Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s
397	Winter Garden	Lake Buena Vista*	WNGR-WNPK	WNGR-WNPK								
398	Winter Garden	Orlando*	WNGR-WNPK	WNPK-ORLD SBT								
399	Winter Garden	Winter Park	WNGR-WNPK									
400	Winter Park	Celebration*	WNGR-WNPK	SR 21B WKSM-POC								
401	Winter Park	East Orange*	WNPK-ORLD SBT									
402	Winter Park	Geneva*	WNPK-ORLD SBT									
403	Winter Park	Lake Buena Vista*	WNGR-WNPK	SR 21B WKSM-POC								
404	Winter Park	Orlando*	WNPK-ORLD SBT									
405	Winter Park	Oviedo*	WNPK-ORLD SBT									
406	Winter Park	Sanford*	WNPK-ORLD SBT									
407	R Astor	R Montverde	SR 5 ASTR-ESTS	SR 5 ASTR-ESTS	LSBG-TVRS	SR 26B WNGR-MTVR						
408	Clermont	Celebration*	WNGR-CLMT	SR 21B WKSM-POC								
409	Clermont	Reedy Creek	WNGR-CLMT									
410	Clermont	Lake Buena Vista*	WNGR-CLMT	SR 21B WKSM-POC								
411	Clermont	R Montverde	LSBG-TVRS	LSBG-TVRS	SR 26B WNGR-MTVR							
412	Clermont	Orlando*	LSBG-TVRS	WNGR-WNPK	WNPK-ORLD SBT							
413	Clermont	R Windermere	SR 26C WNGR-WNDR	LSBG-TVRS	WNGR-WNPK							
414	Clermont	Winter Garden	LSBG-TVRS									
415	Dade City	Zephyrhills*	SR 21A DDCY-ZPHL									
416	Eustis	R Montverde	SR 26B WNGR-MTVR	LSBG-TVRS								
417	R Fort Meade	Barlow*	SR 26C BWLG-WCHL	SR 21B FTMD-POC								
418	R Fort Meade	Lakeland*	SR 26C BWLG-WCHL	SR 21B FTMD-POC								
419	R Groveland	R Montverde	OCAL-BLVW	OCAL-BLVW	LSBG-TVRS	SR 26B WNGR-MTVR						
420	R Howey-In-The-Hills	R Montverde	SR 26B LSBG-HOWY	LSBG-TVRS	SR 26B WNGR-MTVR							
421	Kissimmee	Haines City * (427)		KSSM-STCD								
422	West Kissimmee	Haines City*(427)		WNGR-WNPK	KSSM-STCD							
423	Lady Lake (753)	R Montverde	LSBG-LDLK	LSBG-TVRS	SR 26B WNGR-MTVR							
424	Lady Lake (821)	R Montverde	LSBG-LDLK	LSBG-TVRS	SR 26B WNGR-MTVR							
425	Leesburg	R Montverde	SR 26B WNGR-MTVR	LSBG-TVRS								
426	R Montverde	Mt. Dora	SR 26B WNGR-MTVR	LSBG-TVRS	LSBG-TVRS							
427	R Montverde	Tavares	SR 26B WNGR-MTVR	LSBG-TVRS	LSBG-TVRS							
428	R Montverde	R Umatilla	SR 26B WNGR-MTVR	LSBG-TVRS	SR 5 ASTR-ESTS							
429	Orange City	Deland*		SR 21A ORCY-DELD								
430	Orange City	DeLeon Springs*		SR 21A ORCY-DELD								
431	R San Antonio	Zephyrhills*	SR 21A DDCY-ZPHL	SR 21A DDCY-ZPHL								
432	Starke	Keystone Heights*		SR 26B KGLK-LWTY	SR 21B STRK-KSTN							

Sprint Florida, Inc

Summary Results: Statewide Average

Local/EAS Transport Costs

Monthly Cost per DS1: \$ 159.89

Cost per Local/EAS MOU: \$ 0.0007402

Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s
433 R	Trilacoochee	Zephyrhills*	SR 21A DDCY-ZPHL	SR 21A DDCY-ZPHL								
434	Tallahassee-Calhoun	Bristol*		WLLS-PRKN	WLLS-QNCY							
435	Tallahassee-Calhoun	Greensboro*		WLLS-PRKN	WLLS-QNCY							
436	Tallahassee-Calhoun	Gretna*		WLLS-PRKN	WLLS-QNCY							
437	Tallahassee-Calhoun	Havana*		WLLS-PRKN	WLLS-QNCY							
438	Tallahassee-Calhoun	Hostford*		WLLS-PRKN	WLLS-QNCY							
439	Tallahassee-Calhoun	Quincy*		WLLS-PRKN	WLLS-QNCY							
440	Tallahassee-Willi	Bristol*		WLLS-QNCY								
441	Tallahassee-Willi	Greensboro*		WLLS-QNCY								
442	Tallahassee-Willi	Gretna*		WLLS-QNCY								
443	Tallahassee-Willi	Havana*		WLLS-QNCY								
444	Tallahassee-Willi	Hostford*		WLLS-QNCY								
445	Tallahassee-Willi	Quincy*		WLLS-QNCY								
446	Tallahassee-Mabry	Bristol*		WLLS-PRKN	WLLS-QNCY							
447	Tallahassee-Mabry	Greensboro*		WLLS-PRKN	WLLS-QNCY							
448	Tallahassee-Mabry	Gretna*		WLLS-PRKN	WLLS-QNCY							
449	Tallahassee-Mabry	Havana*		WLLS-PRKN	WLLS-QNCY							
450	Tallahassee-Mabry	Hostford*		WLLS-PRKN	WLLS-QNCY							
451	Tallahassee-Mabry	Quincy*		WLLS-PRKN	WLLS-QNCY							
452	Tallahassee-Blairstone	Bristol*		WLLS-BLRN	WLLS-QNCY							
453	Tallahassee-Blairstone	Greensboro*		WLLS-BLRN	WLLS-QNCY							
454	Tallahassee-Blairstone	Gretna*		WLLS-BLRN	WLLS-QNCY							
455	Tallahassee-Blairstone	Havana*		WLLS-BLRN	WLLS-QNCY							
456	Tallahassee-Blairstone	Hostford*		WLLS-BLRN	WLLS-QNCY							
457	Tallahassee-Blairstone	Quincy*		WLLS-BLRN	WLLS-QNCY							
458	Tallahassee-FSU	Bristol*		WLLS-PRKN	WLLS-QNCY							
459	Tallahassee-FSU	Greensboro*		WLLS-PRKN	WLLS-QNCY							
460	Tallahassee-FSU	Gretna*		WLLS-PRKN	WLLS-QNCY							
461	Tallahassee-FSU	Havana*		WLLS-PRKN	WLLS-QNCY							
462	Tallahassee-FSU	Hostford*		WLLS-PRKN	WLLS-QNCY							
463	Tallahassee-FSU	Quincy*		WLLS-PRKN	WLLS-QNCY							
464	Tallahassee-Thomasville	Bristol*		WLLS-TMSV	WLLS-QNCY							
465	Tallahassee-Thomasville	Greensboro*		WLLS-TMSV	WLLS-QNCY							
466	Tallahassee-Thomasville	Gretna*		WLLS-TMSV	WLLS-QNCY							
467	Tallahassee-Thomasville	Havana*		WLLS-TMSV	WLLS-QNCY							
468	Tallahassee-Thomasville	Hostford*		WLLS-TMSV	WLLS-QNCY							

Spiri, Florida, Inc
 Summary Results: Statewide Average
 Local/EAS Transport Costs

Monthly Cost per DS1: \$ 159.89
 Cost per Local/EAS MOU: \$ 0.0007402

Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote Ring	Ring 1	Ring 2	Ring 3	Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Working DS1s	DS1 Costs Weighted by DS1s
469	Tallahassee-Thomasville	Quincy*	WLLS-TMSV	WLLS-QNCY								
470	Tallahassee-Perkins	Bristol*	WLLS-PRKN	WLLS-QNCY								
471	Tallahassee-Perkins	Greensboro*	WLLS-PRKN	WLLS-QNCY								
472	Tallahassee-Perkins	Gretna*	WLLS-PRKN	WLLS-QNCY								
473	Tallahassee-Perkins	Havana*	WLLS-PRKN	WLLS-QNCY								
474	Tallahassee-Perkins	Hosford*	WLLS-PRKN	WLLS-QNCY								
475	Tallahassee-Perkins	Quincy*	WLLS-PRKN	WLLS-QNCY								

\$ 159.89

Summary Results: Statewide Average Intrastate Access Transport Costs

Monthly Cost per DS1: \$ 107.64

Cost per Access MOU: \$ 0.0004983

Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote	Ring	Ring 1	Ring 2	Ring 3
Arcadia	Avon Park			PNGR-PTCT		
Avon Park	Avon Park			PNGR-PTCT		
R Bowling Green	Avon Park	SR 26C BWLG-WCHL		PNGR-PTCT		
R Ft. Meade	Avon Park	SR 26C BWLG-WCHL		PNGR-PTCT		
R Lake Placid	Avon Park	PNGR-PTCT		PNGR-PTCT		
Okeechobee	Avon Park			KSSM-STCD		
Sebring	Avon Park			PNGR-PTCT		
R Spring Lake	Avon Park	PNGR-PTCT		PNGR-PTCT		
Wauchula	Avon Park			PNGR-PTCT	SR 26C BWLG-WCHL	
R Zolfo Springs	Avon Park	PNGR-PTCT		PNGR-PTCT		
Baker	Crestview			SR 26A CRVW-BAKR		
DeFuniak Springs	Crestview			FTWB-DEST		
R Freeport	Crestview	FTWB-DEST		FTWB-DEST		
R Glendale	Crestview	SR 26A DFSP-GLDL		FTWB-DEST		
R Ponce De Leon	Crestview	DFSP-PNLN		FTWB-DEST		
R Alva	Ft. Myers	FTMY-BNSP		FTMY-BNSP		
R Boca Grande	Ft. Myers	SR 9 NFMY-FTMY		SR 9 NFMY-FTMY		
Bonita Springs	Ft. Myers			FTMY-BNSP		
Cape Coral	Ft. Myers			FTMY-NFMY		
North Cape Coral	Ft. Myers			FTMY-NFMY		
Cypress Lake	Ft. Myers			FTMY-NFMY		
Ft. Myers Beach	Ft. Myers			SR 9 NFMY-FTMY		
Ft. Myers	Ft. Myers			FTMY-BNSP		
East Ft. Myers	Ft. Myers			FTMY-BNSP		
South Ft. Myers	Ft. Myers			FTMY-NFMY		
Goldengate	Ft. Myers			FTMY-BNSP		
R Immokalee	Ft. Myers	FTMY-BNSP		FTMY-BNSP		
LaBelle	Ft. Myers			PNGR-PTCT		
LeHigh Acres	Ft. Myers			FTMY-BNSP		
Marco Island	Ft. Myers			FTMY-BNSP		

Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Access MOU	DS1 Costs Weighted by MOU
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Summary Results: Statewide Average Intrastate Access Transport Costs

Monthly Cost per DS1: \$ 107.64

Cost per Access MOU: \$ 0.0004983

Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote	Ring	Ring 1	Ring 2	Ring 3	Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Access MOU	DS1 Costs Weighted by MOU
R Moore Haven	Fl. Myers	PNGR-PTCT		PNGR-PTCT									
North Ft. Myers	Fl. Myers			SR 9 NFMY-FTMY									
Suncoast	Fl. Myers			SR 9 NFMY-FTMY									
Naples	Fl. Myers			FTMY-BNSP									
Naples Southeast	Fl. Myers			FTMY-BNSP									
Naples Moorings	Fl. Myers			FTMY-BNSP									
Punta Gorda	Fl. Myers			PNGR-PTCT									
Pine Island	Fl. Myers			SR 9 NFMY-FTMY									
Pt. Charlotte	Fl. Myers			PNGR-PTCT									
Sanibel/Captiva	Fl. Myers			SR 9 NFMY-FTMY									
Destin	Fl. Walton Beach			FTWB-DEST									
Fl. Walton Beach	Fl. Walton Beach			FTWB243-FTWB662									
Fl. Walton Beach	Fl. Walton Beach			FTWB243-FTWB662									
R Seagrove Beach	Fl. Walton Beach	SR 22A DEST-SGBH		FTWB-DEST									
Shalimar	Fl. Walton Beach			FTWB-DEST									
R Santa Rosa	Fl. Walton Beach	SR 22A DEST-SGBH		FTWB-DEST									
R Niceville	Fl. Walton Beach	FTWB-DEST											
Valparaiso	Fl. Walton Beach			FTWB-DEST									
R Alford	Marianna	SR 26C CTDL-ALFD		CTDL-MRNN									
R Bonifay	Marianna	WSTV-BNFI		CTDL-MRNN									
R Cottondale	Marianna			CTDL-MRNN									
Grand Ridge	Marianna			SR 22A MRNN-SNDS									
R Greenwood	Marianna	SR 22A MRNN-MALN											
R Malone	Marianna	SR 22A MRNN-MALN											
R Reynolds Hill	Marianna	CTDL-MRNN		CTDL-MRNN	WSTV-BNFI	SR 26B BNFI-RYHL							
R Sneads	Marianna	SR 22A MRNN-SNDS											
R Westville	Marianna	WSTV-BNFI		CTDL-MRNN									

Summary Results: Statewide Average Intrastate Access Transport Costs

Monthly Cost per DS1: \$ 107.64

Cost per Access MOU: \$ 0.0004983

Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote	Ring	Ring 1	Ring 2	Ring 3	Host/ Remote Cost	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Access MOU	DS1 Costs Weighted by MOU
R Astor	Ocala	SR 5 ASTR-ESTS	LSBG-ESTS	OCAL-BLVW									
Belleview	Ocala		OCAL-BLVW										
Bushnell	Ocala		OCAL-BLVW										
Beverly Hills	Ocala		OCAL-BLVW										
R Chassahowitzka	Ocala	SR 26B CHSW-HMSP	OCAL-BLVW	BVHL-INVR									
Clermont	Ocala		OCAL-BLVW										
Crystal River	Ocala		OCAL-BLVW	BVHL-INVR									
Dade City	Ocala		OCAL-BLVW										
Eustis	Ocala		OCAL-BLVW	LSBG-ESTS									
R Groveland	Ocala	OCAL-BLVW	OCAL-BLVW										
R Homosassa Springs	Ocala	BVHL-INVR	OCAL-BLVW										
R Howey-in-the-Hills	Ocala	SR 26B LSBG-HOWY	OCAL-BLVW										
Inverness	Ocala		OCAL-BLVW										
Lady Lake	Ocala		OCAL-BLVW	LSBG-LDLX									
Leesburg	Ocala		OCAL-BLVW										
Mt. Dora	Ocala		OCAL-BLVW	LSBG-TVRS									
Shady Road	Ocala		OCAL-BLVW										
R Highlands	Ocala	SR 22 OCAL-HLDS											
R Forest	Ocala	SR 5 HLDS-SSPR	SR 22 OCAL-HLDS										
Oklawaha	Ocala		OCAL-OKLW										
R San Antonio	Ocala	SR21A DDCY-SNAN	OCAL-BLVW										
R Salt Springs	Ocala	SR 26B FORS-SSPR	SR 22 OCAL-HLDS										
R Silver Springs	Ocala	SR 22 OCAL-HLDS	SR 22 OCAL-HLDS										
R Silver Springs Shores	Ocala	OCAL OKLW	OCAL-OKLW										
R Trilacoochee	Ocala	SR 26C DDCY-TLCH	OCAL-BLVW										
Tavares	Ocala		OCAL-BLVW	LSBG-TVRS									
R Umatilla	Ocala	SR 5 ASTR-ESTS	LSBG-ESTS	OCAL-BLVW									
R Wildwood	Ocala	LSBG-LDLX	OCAL-BLVW										
Crawfordville	Tallahassee		CLHN-SPCP										
R Cherry Lake	Tallahassee	SR 22B MDSN-CHLK	GNVL-MDSN	CLHN-GNVL									
R Greenville	Tallahassee	CLHN-GNVL											
R Lee	Tallahassee	SR 22B MDSN-LEE	GNVL-MDSN	CLHN-GNVL									

Summary Results: Statewide Average Intrastate Access Transport Costs

Monthly Cost per DS1: \$ 107.64

Cost per Access MOU: \$ 0.0004983

Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote	Ring	Ring 1	Ring 2	Ring 3
Madison	Tallahassee			CLHN-GNVL	GNVL-MOSN	
Monticello	Tallahassee			CLHN-GNVL		
R Panacea	Tallahassee	SR22B CFVL-PANC		CLHN-SPCP		
Sopchoppy	Tallahassee			CLHN-SPCP		
R St. Marks	Tallahassee	SR 22B CFVL-STMK		CLHN-SPCP		
Tallahassee - Wiles	Tallahassee			WLLS-PRKN		
Tallahassee - Mabry	Tallahassee			WLLS-PRKN		
Tallahassee - Blair	Tallahassee			WLLS-BLRN		
Tallahassee - FSU	Tallahassee			WLLS-PRKN		
Tallahassee - Thomas	Tallahassee			WLLS-BLRN	WLLS-TMSV	
Tallahassee - Perkins	Tallahassee			WLLS-PRKN		
Altamonte Springs	Winter Park			WNPK-CSLB		
Apopka	Winter Park			WNPK-APPK		
Casselberry	Winter Park			WNPK-CSLB		
Goldenrod	Winter Park			WNPK-CSLB		
R Kenansville	Winter Park	WNGR-WNPK		WNGR-WNPK		
Kissimmee	Winter Park			WNGR-WNPK		
West Kissimmee	Winter Park			WNGR-WNPK		
R Buenaventura Lakes	Winter Park	WNGR-WNPK		WNGR-WNPK		
Lake Brantley	Winter Park			WNPK-APPK		
R Lake Helen	Winter Park	WNPK-CSLB		WNPK-CSLB		
R Maitland	Winter Park	WNPK-APPK		WNPK-APPK		
R Montverde	Winter Park	SR 26B WNGR-MTVR		WNGR-WNPK		
Orange City	Winter Park			WNPK-CSLB		
R Deltona Lakes	Winter Park	WNPK-CSLB		WNPK-CSLB		
St. Cloud	Winter Park			WNGR-WNPK		
R Windermere	Winter Park	SR 26C WNGR-WNDR		WNGR-WNPK		
Winter Garden	Winter Park			WNGR-WNPK		

Host/ Remote Costs	Ring 1 Costs	Ring 2 Costs	Ring 3 Costs	Total Ring Costs	Access MOU	DS1 Costs Weighted by MOU
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\$ 107.64

Sprint Florida, Inc

Summary Results: Statewide Average IntraLATA Toll Transport Costs

Monthly Cost per DS1: \$ 134.82

Cost per IntraLATA Toll MOU: \$ 0.0006241

Rings Utilized

DS1 Total Termination & Transit Cost per Month

	Originating	Terminating	Host/Remote	Ring 1	Ring 2	Remove Costs	Ring 1 Costs	Ring 2 Total Ring Costs	IntraLATA Toll MOU	DS1 Costs Weighted by MOU
1	VALPARAISO	CRESTVIEW			FTWB-DEST					
2	FORT MYERS	NAPLES			FTMY-BNSP					
3	FTWALTNBCH	CRESTVIEW			FTWB-DEST					
4	SEBRING	AVON PARK			KSSM-STCD					
5	LEESBURG	BUSHNELL			OCAL-BLVW					
6	SEBRING	R LAKEPLACID	PNGR-PTCT							
7	FORT MYERS	PUNTAGORDA			PNGR-PTCT					
8	FORT MYERS	LA BELLE			PNGR-PTCT					
9	LEESBURG	R WILDWOOD	LSBG-LDLK							
10	FORT MYERS	R NO NAPLES			FTMY-BNSP					
11	NAPLES	R IMMOKALEE	FTMY-BNSP							
12	TALLAHASSE	MADISON			CUHN-GNVL					
13	VALPARAISO	DFUNIAXSPG			FTWB-DEST					
14	KISSIMMEE	REEDYCREEK			WNGR-WNPK					
15	VALPARAISO	R FREEPORT	FTWB-DEST		FTWB-DEST					
16	R CLEWISTON	R MOOREHAVEN	PNGR-PTCT		PNGR-PTCT					
17	R NOFT MYERS	LEHIGHACRS			FTMY-BNSP					
18	PTCHARLOTT	ARCADIA			PNGR-PTCT					
19	KISSIMMEE	WINTERPARK			WNGR-WNPK					
20	VALPARAISO	SANROSABCH			FTWB-DEST					
21	FORT MYERS	R IMMOKALEE	FTMY-BNSP		FTMY-BNSP					
22	CRESTVIEW	DFUNIAXSPG			FTWB-DEST					
23	NCAPECORAL	LEHIGHACRS			FTMY-NFMY					
24	FTWALTNBCH	DFUNIAXSPG			FTWB-DEST					
25	TALLAHASSE	CRESTVIEW			MBRY-BLRN					
26	DESTIN	CRESTVIEW			FTWB-DEST					
27	LA BELLE	R CLEWISTON	PNGR-PTCT							
28	LADY LAKE	BELLEVIEW			LSBG-LDLK					
29	SHALIMAR	CRESTVIEW			FTWB-DEST					
30	R LAKEPLACID	R SPRINGLAKE	PNGR-PTCT		PNGR-PTCT					
31	VALPARAISO	R SEAGR V BCH	SR 22A DEST-SGBH		FTWB-DEST					
32	R WILDWOOD	LADY LAKE	LSBG-LDLK		LSBG-LDLK					
33	NAPLES	R EVERGLADES	FTMY-BNSP		FTMY-BNSP					
34	OCALA	OCALA			OCAL-BLVW					
35	FORT MYERS	FORT MYERS			FTWB-DEST					
36	R LAKEPLACID	AVON PARK	PNGR-PTCT		PNGR-PTCT					

Sprint Florida, Inc

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Cost per IntraLATA Toll MOU: \$ 0.0006241

Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote	Ring 1	Ring 2	Host/Remote Costs	Ring 1 Costs	Ring 2 Total Ring Costs	IntraLATA Toll MOU	DS1 Costs Weighted by MOU
37 R	SEAGRV BCH	DESTIN	SR 22A DEST-SGBH						
38	VALPARAISO	BAKER		SR 26A CRVW-BAKR		FTWB-DEST			
39	LA BELLE	R IMMOKALEE	FTMY-BNSP			FTMY-BNSP			
40	LEHIGHACRS	CAPE CORAL		FTMY-BNSP		FTMY-NFMY			
41 R	WILDWOOD	BELLEVIEW	LSBG-LDLK	LSBG-LDLK					
42 R	SEAGRV BCH	FTWALTNBCH	SR 22A DEST-SGBH	FTMY-BNSP		FTWB243-FTWB062			
43	SANROSABCH	R FREEPORT	SR 22A DEST-SGBH	FTWB-DEST					
44	FTWALTNBCH	R FREEPORT	FTWB-DEST	FTWB-DEST		FTWB243-FTWB062			
45	FTWALTNBCH	BAKER		FTWB243-FTWB062		FTWB-DEST			
46	DFUNIAKSPG	DESTIN		FTWB-DEST					
47	WAUCHULA	ARCADIA		PNGR-PTCT					
48	WAUCHULA	SEBRING		PNGR-PTCT					
49	MONTICELLO	MADISON		CLJN-GNVL		GNVL-MDSN			
50	WAUCHULA	AVON PARK		PNGR-PTCT					
51 R	SPRINGLAKE	AVON PARK	PNGR-PTCT	PNGR-PTCT					
52 R	FREEPORT	DESTIN	FTWB-DEST	FTWB-DEST					
53 R	MALONE	GRANDRIDGE	SR 22A MRNN-MALN	SR 22A MRNN-SNDS					
54	KISSIMMEE	KISSIMMEE		WNGR-WNPK					
55	SANROSABCH	DFUNIAKSPG		FTWB-DEST		SR 22A DEST-SGBH			
56 R	GREENWOOD	GRANDRIDGE	SR 22A MRNN-MALN	SR 22A MRNN-SNDS					
57 R	FORT MEADE	R BOWLINGGREN	PNGR-PTCT	PNGR-PTCT					
58 R	SEAGRV BCH	R FREEPORT	SR 22A DEST-SGBH	FTWB-DEST					
59	ZOLFO SPG	ARCADIA		PNGR-PTCT					
60	OCKLAWAHA	LADY LAKE		OCAL-OKLW		LSBG-LDLK			
61	OCALA	R WILDWOOD	LSBG-LDLK	OCAL-BLVW					
62	LEHIGHACRS	LA BELLE		FTMY-BNSP					
63	BELLEVIEW	BELLEVIEW		LSBG-LDLK					
64 R	SEAGRV BCH	DFUNIAKSPG	SR 22A DEST-SGBH	FTWB-DEST					
65	WINTERPARK	ST CLOUD		WNGR-WNPK					
66	PUNTAGORDA	ARCADIA		PNGR-PTCT					
67	GRANDRIDGE	R COTTONDALE	SR 22A MRNN-SNDS	CTDL-MRNN					
68 R	BOCAGRANDE	PTCHARLOTT	PNGR-PTCT	PNGR-PTCT					
69	LEHIGHACRS	R IMMOKALEE	FTMY-BNSP	FTMY-BNSP					
70	PUNTAGORDA	NCAPECORAL		PNGR-PTCT		FTMY-NFMY			
71	SHALIMAR	DFUNIAKSPG		FTWB-DEST					
72	WISSIMMEE	WINTERPARK		WNGR-WNPK					

Sprint Florida, Inc

Summary Results: Statewide Average IntraLATA Toll Transport Costs

Monthly Cost per DS1: \$ 134.82

Cost per IntraLATA Toll MOU: \$ 0.0006241

Rings Utilized

DS1 Total Termination & Transit Cost per Month

Originating	Terminating	Host/Remote	Ring 1	Ring 2	Host/ Remote Costs	Ring 1 Costs	Ring 2 Total Costs	IntraLATA Toll MOU	DS1 Costs Weighted by MOU
73 R	NOFT MYERS	R	NOFT MYERS	PNGR-PTCT					
74	VALPARAISO	R	PONCE LEON	DFSP-PNLN					
75	VALPARAISO	R	GLENDALE	SR 26A DFSP-GLDL					
76	LEESBURG		LEESBURG	OCAL-BLVW					
77	WINTERPARK		WINTERPARK	WNGR-WNPK					
78	ST CLOUD		ST CLOUD	WNGR-WNPK					
79	PTCHARLOTT		PTCHARLOTT	PNGR-PTCT					
80 R	GREENWOOD	R	COTTONDALE	SR 22A MRNN-MALN					
81	NAPLES		FTMYERSBCH	FTMY-BNSP					
82	MARIANNA	R	BOHIFAY	WSTV-BNFI					
83	GRANDRIDGE	R	ALFORD	SR 22A MRNN-SNDS					
84	FTWALTNBCH		FTWALTNBCH	CTDL-MRNN					
85 R	SNEADS	R	MALONE	SR 22A MRNN-SNDS					
86	DFUNIAKSPG		BAKER	FTWB-DEST					
87	PUNTAGORDA	R	NOFT MYERS	PNGR-PTCT					
88 R	PONCE LEON	R	FREEPORT	DFSP-PNLN					
89	NCAPECORAL		NCAPECORAL	FTMY-NFMY					
90	SEBRING		OKEECHOBEE	PNGR-PTCT					
91	MONTICELLO		CRAWFORDVL	CLHN-GNVL					
92	DESTIN		BAKER	FTWB-DEST					
93 R	MALONE	R	COTTONDALE	SR 22A MRNN-MALN					
94 R	GREENWOOD	R	ALFORD	SR 22A MRNN-MALN					
95 R	PONCE LEON	R	GLENDALE	DFSP-PNLN					
96	OKEECHOBEE	R	MOOREHAVEN	PNGR-PTCT					
97 R	SNEADS	R	GREENWOOD	SR 22A MRNN-SNDS					
98	LEHIGHACRS		LEHIGHACRS	FTMY-BNSP					
99 R	SLRSPGSHRS	R	SLRSPGSHRS	FTMY-BNSP					
100	SEBRING		SEBRING	FTMY-BNSP					

\$ 134.82



Annual charge factors were developed and applied to investment in basic network functions to calculate TSLRIC costs in this proceeding. All costs included in TSLRIC cost meet the criteria of cost causation relative to the services being studied. FCC Accounts representing investment in basic network functions are digital switching (2212), circuit equipment (2232), and cable & wire facilities (2411 through 2441). Although services studied in this proceeding are intrastate jurisdictional services, TSLRIC costs and investments used in the development of annual charge factors were not jurisdictionalized to an intrastate level.

Three sets of TSLRIC factors were developed in this proceeding. Factors were developed for basic network functions used in the provision of: services within the local exchange, intrastate switched access services, and intralata toll services.

TSLRIC factors are calculated as total TSLRIC cost divided by total TSLRIC investment. They include cost of money, depreciation, federal and state income tax, ad valorem tax, and direct maintenance. These cost components are reflected in the percentage rates in the column entitled "Charge Factor" in the TSLRIC Factor Development schedules. In addition, TSLRIC factors include costs of light and heavy trucks, costs of special purpose vehicles, network operations expenses (6530), uncollectibles (5301), and services expenses (6623) relating to ordering, billing, collection and investigation of toll messages. Factors also include a reduction to expense for service connection charges. This cost reduction recognizes that a portion of maintenance expense is recovered by service connection charges, which are not included in the scope of this filing. Taxes, maintenance, vehicle costs, uncollectibles, network operations expenses, services expenses, and service connection charge offsets are all based on data specific to Sprint of Florida.

The overall cost of money used in factor development was 11.25%, the FCC authorized rate of return. Depreciation lives are based on recommendations of consultants for the forward-looking lives of digital switching, circuit equipment, and cable & wire facilities accounts. For light and heavy truck and special purpose vehicle accounts, forward-looking depreciation lives are based on Sprint's depreciation lives for external reporting purposes. Maintenance expenses are primarily based on 1997 actual Sprint of Florida expense. Where 1997 maintenance expense was not representative of a forward-looking level, trended Sprint of Florida amounts were used. Ad valorem tax is based on 1997 Sprint of Florida expense.

Factors for basic network functions used in the provision of services in the local exchange were developed based on loop, interoffice transport, and switching investment. Since all loop investment is associated with the provision of local services, loop investment is not included in the calculation of factors for basic network functions used in the provision of access and toll services.

Other differences between factors for local services and factors for access and toll services are: vehicle costs and network operations expenses related only to loop investment have been excluded from factors for access and toll services; amounts used in the service connection offset were taken from local service connection charge accounts for the local TSLRIC factor, and from access charge accounts for the access services factor; and, uncollectibles and services expenses were specifically identified as pertaining to local, access or toll services.

FLORIDA TSLRIC STUDY

SPRINT OF FLORIDA TSLRIC FACTOR DEVELOPMENT - LOCAL 1997

ANNUAL CHARGE FACTOR

Asset	Description	Total Investment	Charge Factor	Charge Factor Times Investment	Assign Vehicle Cost	Assign Network Operations Expense	Service Connections	TSLRIC Cost Before Items Alloc. on Cost	Assign Items Alloc. on Cost	TSLRIC Cost	TSLRIC Factor
2212 1, 6, 7	Digital Electronic Switch	\$ 776,136,278	19.69%	\$ 152,821,233	\$ 1,433,008	\$ 17,746,156	\$ (9,355,904)	\$ 162,244,485	\$ 17,061,267	\$ 179,305,752	23.102
2232 2 & 5	Circuit Eq-Digital	439,048,958	19.13%	83,990,068	905,016	10,886,087	(5,518,772)	90,282,396	9,491,791	99,774,187	22.721
2232 3	Circuit Eq-Digital Fib Optic	119,232,421	17.56%	20,937,213	245,775	2,956,332	(1,498,732)	22,640,588	2,360,833	25,001,422	20.985
2411 1	Pole Line	18,534,147	21.34%	3,928,387	34,082	397,888	(207,831)	3,752,625	394,818	4,147,443	25.083
2421 1	Aerial Cable, Metallic	62,290,606	24.49%	15,254,991	128,400	1,487,312	(782,894)	16,087,719	1,692,800	17,780,520	28.560
2421 2	Aerial Cable, Fiber Optic	1,154,297	19.41%	224,049	2,379	30,861	(14,509)	242,780	25,520	268,310	23.244
2421 6	Aerial Cable, Metallic-Drop	30,347,281	29.37%	8,912,966	62,555	729,472	(381,460)	9,323,563	980,445	10,304,008	33.954
2422 1	Underground Cable, Metallic	121,276,232	19.30%	23,408,313	249,968	2,915,176	(1,524,422)	25,047,065	2,633,892	27,680,947	22.825
2422 2	Underground Cable, Fib Optic	20,989,865	16.15%	3,389,863	43,267	580,807	(263,639)	3,729,898	382,228	4,122,126	19.839
2423 1	Buried Cable, Metallic	1,057,439,234	20.31%	214,766,908	2,179,706	25,418,181	(13,291,835)	229,071,964	24,068,094	253,160,057	23.941
2423 2	Buried Cable, Fiber Optic	98,278,356	15.82%	15,547,636	202,582	2,458,919	(1,235,343)	16,973,794	1,784,928	18,758,720	19.087
2423 6	Buried Cable, Metal-Drop	213,731,923	24.32%	51,979,804	440,568	5,137,578	(2,688,579)	54,871,178	5,770,120	60,641,306	28.373
2441	Underground Conduit	87,685,508	13.49%	11,828,775	180,747	2,142,274	(1,102,192)	13,049,804	1,372,267	14,422,071	16.447
Total		\$ 3,044,145,195		\$ 608,587,004	6,106,078	72,878,945	\$ (38,364,398)	\$ 647,307,657	\$ 68,069,421	\$ 715,377,078	23.500

5201 Uncollectibles
6623 Business Office
6623 Billing Expense
6623 Collecting Expense

\$ 4,778,044
49,854,441
11,357,198
2,279,738
\$ 68,069,421

ANNUAL CHARGE FACTOR

FLORIDA TSLRIC STUDY

SPRINT OF FLORIDA TSLRIC FACTOR DEVELOPMENT - ACCESS 1997

Asset	Description	Total Investment	Charge Factor	Charge Factor Investment	Assign Vehicle Cost	Assign Network Operations Expense	Offnet Service Connections	TSLRIC Cost Before Items Alloc. on Cost	Assign Items Alloc. on Cost	TSLRIC Cost	TSLRIC Factor
2212 1, 6, 7	Digital Electronic Switch	776,136,278	19.69%	\$ 152,821,233	\$ 1,433,006	\$ 17,748,158	\$ (4,883,331)	\$ 167,017,068	\$ 8,709,202	\$ 175,726,270	22.641
2232 2 & 5	Circuit Ex-Digital	118,845,829	19.13%	22,735,169	244,978	3,212,703	(783,071)	25,429,778	1,326,051	26,755,829	22.513
2232 3	Circuit Ex-Digital Fib Optic	32,274,879	17.56%	5,667,469	66,529	872,473	(207,227)	6,399,243	333,692	6,732,936	20.861
2411 1	Pole Line	178,849	21.34%	38,124	-	4,842	(1,147)	41,819	2,181	44,000	24.629
2421 1	Aerial Cable, Metallic	-	24.49%	-	-	-	-	-	-	-	-
2421 2	Aerial Cable, Fiber Optic	1,015,050	19.41%	197,021	-	27,514	(8,517)	218,018	11,269	229,368	22.599
2421 6	Aerial Cable, Metallic-Drop	-	29.37%	-	-	-	-	-	-	-	-
2422 1	Underground Cable, Metallic	-	19.30%	-	-	468,250	(117,312)	3,341,669	174,254	3,515,944	19.243
2422 2	Underground Cable, Fib Optic	18,270,901	18.15%	2,950,750	13,001	-	-	5,689,774	298,697	5,988,471	19.625
2423 1	Buried Cable, Metallic	-	20.31%	-	-	852,931	(202,037)	-	-	-	-
2423 2	Buried Cable, Fiber Optic	31,488,551	15.82%	4,978,008	60,872	-	-	-	-	-	-
2423 6	Buried Cable, Metallic-Drop	-	24.32%	-	-	-	-	-	-	-	-
2441	Underground Conduit	11,254,875	13.49%	1,518,283	54,311	305,074	(72,264)	1,805,404	94,144	1,899,548	18.879
Total		\$ 989,442,812		\$ 190,906,057	\$ 1,872,699	23,516,945	(8,352,905)	\$ 209,942,795	10,947,589	\$ 220,890,384	22.325
5301	Uncollectibles								\$ 269,041		
6623	National Access Services Center								4,244,702		
6623	Billing Expense								8,433,845		
									\$ 10,947,589		

FLORIDA TSLRIC STUDY

ANNUAL CHARGE FACTOR

SPRINT OF FLORIDA
TSLRIC FACTOR DEVELOPMENT - TOLL
1997

Asset	Description	Total Investment	Charge Factor	Charge Factor Investment	Assign Vehicle Cost	Assign Network Operations Expenses	TSLRIC Cost Before Items Alloc. to Cost	Assign Items Alloc. to Cost	TSLRIC Cost	TSLRIC Factor
2212 1, 6, 7	Digital Electronic Switch	776,136,278	19.69%	\$ 152,821,233	\$ 1,433,008	\$ 17,746,158	\$ 172,000,398	\$ 3,337,857	\$ 178,338,304	\$2.881
2232 2 & 5	Circuit Eq-Digital	119,845,829	19.13%	22,735,160	244,978	3,212,703	95,182,349	508,318	95,701,168	\$2.467
2232 3	Circuit Eq-Digital Fto Optic	32,274,879	17.56%	5,667,469	66,529	872,473	6,806,470	128,210	6,934,680	\$0.867
2411 1	Pole Line	178,649	21.34%	38,124	-	4,842	42,866	834	43,800	\$4.518
2421 1	Aerial Cable, Metallic	-	24.49%	-	-	-	-	-	-	-
2421 2	Aerial Cable, Fiber Optic	1,015,050	19.41%	197,521	-	27,514	224,536	4,357	228,892	\$2.660
2421 6	Aerial Cable, Metallic-Drop	-	29.37%	-	-	-	-	-	-	-
2432 1	Underground Cable, Metallic	-	19.30%	-	-	-	-	-	-	-
2432 2	Underground Cable, Fto Optic	18,270,901	16.15%	2,950,765	13,001	495,259	3,458,001	87,128	3,545,129	19.298
2433 1	Buried Cable, Metallic	-	20.31%	-	-	-	-	-	-	-
2433 2	Buried Cable, Fiber Optic	31,466,551	15.82%	4,978,008	60,872	862,831	5,391,811	114,341	5,506,152	19.087
2433 6	Buried Cable, Metal-Drop	-	24.32%	-	-	-	-	-	-	-
2441	Underground Conduit	11,254,875	13.49%	1,518,283	54,311	505,074	1,877,668	36,439	1,914,108	17.007
Total		\$ 989,442,812		\$ 190,069,067	\$ 1,872,899	23,516,945	\$ 216,396,701	4,197,682	\$ 220,493,383	\$2.386
5301	Uncollectibles							\$ 1,072,140		
6623	Message Processing Expense							2,849,943		
6623	Central Toll Investigation Expenses							275,489		
								<u>\$ 4,197,572</u>		