

**AMENDMENT TO THE AGREEMENT BETWEEN
GLOBAL CROSSING LOCAL SERVICES, INC. AND
GLOBAL CROSSING TELEMAGEMENT, INC.
AND
BELLSOUTH TELECOMMUNICATIONS, INC.
DATED APRIL 25, 2000**

Pursuant to this Agreement, (the "Amendment"), Global Crossing Local Services, Inc. and Global Crossing Telemagement, Inc. ("Global Crossing"), and BellSouth Telecommunications, Inc. ("BellSouth"), hereinafter referred to collectively as the "Parties," hereby agree to amend that certain Interconnection Agreement between the Parties dated April 25, 2000 ("Agreement").

WHEREAS, BellSouth and Global Crossing entered into the Agreement on April 25, 2000, and;

WHEREAS, the Parties desire to include in the agreement geographically deaveraged rates for unbundled loops pursuant to effective and applicable rules of the Federal Communications Commission;

NOW THEREFORE, in consideration of the mutual provisions contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby covenant and agree as follows:

1. The Unbundled Network Element ("UNE") rates in Attachment 2, Exhibit C of the Interconnection Agreement are hereby deleted and replaced in its entirety, as set forth in Exhibit A of this Amendment.
2. All of the other provisions of the Agreement, dated April 25, 2000, shall remain in full force and effect.
3. Either or both of the Parties is authorized to submit this Amendment to the respective state regulatory authorities for approval subject to Section 252(e) of the Federal Telecommunications Act of 1996.

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment to be executed by their respective duly authorized representatives on the date indicated below.

<p>BellSouth Telecommunications, Inc.</p> <p>BY: _____ Signature on File Signature</p> <p>NAME: _____ Jerry Hendrix Printed Name</p> <p>TITLE: _____ Senior Director</p> <p>DATE: _____ 10/16/00</p>	<p>Global Crossing Local Services, Inc. and Global Crossing Telemagement, Inc.</p> <p>BY: _____ Signature on File Signature</p> <p>NAME: _____ Diane Schoen Signature</p> <p>TITLE: _____</p> <p>DATE: _____ 10/11/00</p>
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DESCRIPTION	USOC	AL	FL	GA	KY	LA	MS	NC	SC	TN
Operational Support Systems										
Recovery of incremental OSS costs, per CLP, per month		NA	NA	NA	NA	NA	NA	\$305.00	NA	NA
RC - OSS OLEC Daily Usage File: Recording, Per Message		\$0.0002	\$0.008	\$0.0001275	\$0.0008611	\$0.00019	\$0.0001179	\$0.0003	\$0.0002862	\$0.008
RC - OSS OLEC Daily Usage File: Message Processing, Per Message		\$0.0033	\$0.004	\$0.0082548	\$0.0032357	\$0.0024	\$0.0032089	\$0.0032	\$0.0032344	\$0.004
RC - OSS OLEC Daily Usage File: Message Distribution, Per Magnetic Tape		\$55.19	\$54.95	\$28.85	\$55.68	\$47.3000	\$54.62	\$54.61	\$54.72	\$54.95
RC - OSS OLEC Daily Usage File: Data Transmission (CONNECT:DIRECT), Per		\$0.00004	\$0.001	\$0.0000434	\$0.0000365	\$0.0000300	\$0.0000354	\$0.00004	\$0.0000357	\$0.001
Access Daily Usage File (ADUF)										
RC - ADUF, Message Processing, per message		\$0.004	\$0.004	\$0.0136327	\$0.004	\$0.004	\$0.004	\$0.004	\$0.004	\$0.004
RC - ADUF, Message Distribution, per Magnetic Tape provisioned		NA	NA	NA	NA	NA	NA	NA	NA	NA
RC - ADUF, Data Transmission (CONNECT:DIRECT), per message		\$0.001	\$0.001	\$0.0000434	\$0.001	\$0.0000305	\$0.001	\$0.001	\$0.001	\$0.001
Enhanced Optional Daily Usage File (EODUF)										
Enhanced Optional Daily Usage File: Message Processing , Per Message		\$0.004	\$0.004	\$0.0034555	\$0.004	\$0.004	\$0.004	\$0.004	\$0.004	\$0.004
Enhanced Optional Daily Usage File: Message Processing, per magnetic tape		NA	NA	NA	NA	NA	NA	NA	NA	NA
Enhanced Optional Daily Usage File: Data Transmission (CONNECT:DIRECT), per		NA	NA	NA	NA	NA	NA	NA	NA	NA
SWA 8XX Toll Free Dialing Ten Digit Screening Service (Note 1)										
8XX Access Ten Digit Screening (all types), per call (Note 2)	N/A	\$0.0005	NA	\$0.0004868	NA	\$0.0005305	\$0.0005321	\$0.00050	\$0.0005227	NA
8XX Access Ten Digit Screening Svc. W/8XX No. Delivery										
per query	N/A	NA	\$0.004	NA	\$0.0010	NA	NA	\$0.00365	NA	\$0.004
for 8XX Numbers, with Optional Complex Features, per query	N/A	NA	\$0.0045	NA	\$0.0011	NA	NA	\$0.00431	NA	\$0.0045
8XX Access Ten Digit Screening Svc. W/POTS No. Delivery										
per query	N/A	NA	\$0.004	NA	\$0.0010	NA	NA	\$0.00383	NA	\$0.004
with Optional Complex Features, per query	N/A	NA	\$0.0045	NA	\$0.0011	NA	NA	\$0.00431	NA	\$0.0045
8XX Access Ten Digit Screening Svc. W/800 No. Delivery										
per message	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
for 8XX Numbers, w/Optional Complex Features, per message	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
8XX Access Ten Digit Screening Svc. W/POTS No. Delivery										
per message	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
with Optional Complex Features, per message	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reservation Charge per 8XX number reserved										
NRC - 1st	N8R1X	\$7.13	NA	\$6.57	\$10.05	\$6.29	\$8.46	\$7.05	\$6.38	\$30.00
NRC - Add'l	N8R1X	\$0.97	NA	\$0.76	\$1.19	\$0.73	\$0.96	\$0.96	\$0.9583	\$0.50
NRC - Incremental Charge - Manual Service Order - 1st	SOMAN	\$27.37	NA	\$18.94	NA	\$18.14	\$25.52	\$26.94	\$27.84	NA
NRC - Incremental Charge - Manual Service Order - Add'l	SOMAN	NA	NA	NA	NA	NA	NA	NA	NA	NA
Per 8XX # Established w/o POTS (w/8XX No.) Translations										
NRC - 1st	N/A	\$15.88	NA	\$12.81	\$30.59	\$12.27	\$17.04	\$23.82	\$22.63	\$67.50
NRC - Add'l	N/A	\$1.97	NA	\$1.45	\$3.22	\$1.39	\$1.93	\$2.73	\$2.73	\$1.50
NRC - Disconnect Charge - 1st	N/A	\$10.04	NA	NA	NA	\$8.30	\$11.32	NA	\$42.95	NA
NRC - Disconnect Charge - Add'l	N/A	\$0.97	NA	NA	NA	\$0.73	\$0.96	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - 1st	SOMAN	\$27.37	NA	\$18.94	NA	\$18.14	\$25.52	\$41.35	NA	NA
NRC - Incremental Charge - Manual Service Order - Add'l	SOMAN	NA	NA	NA	NA	NA	NA	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - Disconnect	SOMAN	\$17.75	NA	NA	NA	\$11.40	\$16.05	NA	NA	NA
Per 8XX # Established with POTS Translations										
NRC - 1st	N8FTX	\$15.88	NA	\$12.81	\$30.59	\$12.27	\$17.04	\$23.82	\$22.63	\$67.50
NRC - Add'l	N8FTX	\$1.97	NA	\$1.45	\$3.22	\$1.39	\$1.93	\$2.73	\$2.73	\$1.50
NRC - Disconnect Charge - 1st	N8FTX	\$10.04	NA	NA	NA	\$8.30	\$11.32	NA	\$42.95	NA
NRC - Disconnect Charge - Add'l	N8FTX	\$0.97	NA	NA	NA	\$0.73	\$0.96	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - 1st	SOMAN	\$27.37	NA	\$18.94	NA	\$18.14	\$25.52	\$41.35	NA	NA
NRC - Incremental Charge - Manual Service Order - Add'l	SOMAN	NA	NA	NA	NA	NA	NA	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - Disconnect	SOMAN	\$17.75	NA	NA	NA	\$11.40	\$16.05	NA	NA	NA
Customized Area of Service per 8XX Number										
NRC - 1st	N8FCX	\$5.69	NA	\$4.46	\$6.97	\$4.27	\$5.63	\$5.63	\$5.64	\$3.00
NRC - Add'l	N8FCX	\$2.85	NA	\$2.23	\$3.49	\$2.14	\$2.81	\$2.82	\$2.82	\$1.50
NRC - Incremental Charge - Manual Service Order - 1st	SOMAN	NA	NA	NA	NA	NA	NA	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - Add'l	SOMAN	NA	NA	NA	NA	NA	NA	NA	NA	NA

DESCRIPTION	USOC	AL	FL	GA	KY	LA	MS	NC	SC	TN
Multiple Inter LATA Carrier Routing per Carrier Requested per 8XX #										
NRC - 1st	N8FMX	\$6.66	NA	\$5.22	\$8.16	\$5.00	\$6.59	\$6.59	\$6.60	\$3.50
NRC - Add'l	N8FMX	\$3.81	NA	\$2.99	\$4.67	\$2.86	\$3.77	\$3.77	\$3.78	\$2.00
NRC - Incremental Charge - Manual Service Order - 1st	SOMAN	NA	NA	NA	NA	NA	NA	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - Add'l	SOMAN	NA	NA	NA	NA	NA	NA	NA	NA	NA
Change Charge per request										
NRC - 1st	N8FAX	\$8.10	NA	\$7.33	\$11.24	\$7.01	\$9.42	\$8.01	\$7.34	\$48.50
NRC - Add'l	N8FAX	\$0.97	NA	\$0.76	\$1.19	\$0.73	\$0.96	\$0.96	\$0.9583	\$0.50
NRC - Incremental Charge - Manual Service Order - 1st	SOMAN	\$27.37	NA	\$18.94	NA	\$18.14	\$25.52	\$26.94	\$27.84	NA
NRC - Incremental Charge - Manual Service Order - Add'l	SOMAN	NA	NA	NA	NA	NA	NA	NA	NA	NA
Call Handling and Destination Features										
NRC - 1st	N8FDX	\$5.69	NA	\$4.72	\$6.97	\$4.27	\$5.63	\$5.63	\$5.64	\$3.00
NRC - Add'l	N8FDX	NA	NA	\$4.46	\$6.97	\$4.27	\$5.63	NA	\$5.64	\$3.00
LINE INFORMATION DATABASE ACCESS (LIDB)										
LIDB Common Transport per query	OQT	\$0.00004	\$0.0003	\$0.0000338	\$0.00006	\$0.0000418	\$0.0000446	\$0.0003	\$0.0000442	\$0.0003
LIDB Validation per query	OQU	\$0.041003	\$0.041003	\$0.0105974	\$0.00938	\$0.0103774	\$0.0142132	\$0.013400	\$0.0141003	\$0.041003
LIDB Originating Point Code Establishment or Change - NRC	N/A	\$64.36	NA	\$50.30	\$107.60	\$48.17	\$63.63	\$91.00	\$61.62	NA
NRC - Incremental Charge - Electronic Service Order		NA	NA	NA	NA	NA	NA	\$62.26	NA	NA
NRC - Incremental Charge - Manual Service Order - 1st	SOMAN	\$25.93	NA	\$18.94	NA	\$18.14	\$25.52	\$26.94	\$27.84	\$91.00
NRC - Incremental Charge - Manual Service Order - Add'l	SOMAN	NA	NA	NA	NA	NA	NA	NA	\$27.84	NA
CCS7 SIGNALING TRANSPORT SERVICE										
CCS7 Signaling Connection, per link (A link) per month										
NRC		\$18.79	\$5.00	\$17.05	\$16.31	\$19.48	\$21.58	\$155.00	\$21.79	\$155.00
NRC - Disconnect		\$171.98	\$400.00	\$131.96	\$354.95	\$126.34	\$169.72	\$510.00	\$277.07	\$510.00
NRC - Incremental Charge - Manual Service Order	SOMAN	\$135.70	NA	NA	NA	\$101.10	\$134.08	NA	\$42.95	NA
NRC - Incremental Charge - Manual Service Order - Disconnect	SOMAN	\$25.93	NA	\$18.94	NA	\$18.14	\$25.52	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - Disconnect	SOMAN	\$16.31	NA	NA	NA	\$11.40	\$16.05	NA	NA	NA
CCS7 Signaling Connection, per link (B link) (also known as D link) per month										
NRC		\$18.79	\$5.00	\$17.05	\$16.31	\$19.48	\$21.58	\$155.00	\$21.79	Not available
NRC - Disconnect		\$171.98	\$400.00	\$131.96	\$354.95	\$126.34	\$169.72	\$510.00	\$277.07	\$510.00
NRC - Incremental Charge - Manual Service Order	SOMAN	\$135.70	NA	NA	NA	\$101.10	\$134.08	NA	\$42.95	NA
NRC - Incremental Charge - Manual Service Order - Disconnect	SOMAN	\$25.93	NA	\$18.94	NA	\$18.14	\$25.52	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - Disconnect	SOMAN	\$16.31	NA	NA	NA	\$11.40	\$16.05	NA	NA	NA
CCS7 Signaling Termination, per STP port per month										
		\$148.72	\$113.00	\$133.99	\$174.08	\$161.99	\$161.12	\$132.88	\$156.33	\$355.00
CCS7 Signaling Usage, per ISUP message										
		\$0.00004	\$0.00001	\$0.0000354	\$0.000037893	\$0.0000430	\$0.0000456	\$0.00004	\$0.0000452	\$0.000023
(applicable when measurement and billing capability exists.)										
CCS7 Signaling Usage, per TCAP message										
		\$0.0001	\$0.00004	\$0.0000870	\$0.000102042	\$0.0001052	\$0.0001115	\$0.00009	\$0.0001108	\$0.00005
(applicable when measurement and billing capability exists.)										
CCS7 Signaling Usage Surrogate, per link per LATA per mo (9)										
		\$376.12	\$64.00	\$340.67	\$329.98	\$406.71	\$406.53	\$338.98	\$396.55	\$395.00
CCS7 Signaling Point Code, Establishment or Change, per STP affected										
NRC		\$62.00	\$62.00	\$62.00	\$62.00	\$62.00	\$62.00	\$62.00	\$62.00	\$62.00
OPERATOR CALL PROCESSING										
Operator Provided Call Handling per min - Using BST LIDB										
		N/A	\$1.21	\$1.00	\$0.9680296	\$1.6016	\$0.91	\$1.19	\$1.20	\$1.21
Call Completion Access Termination Charge per call attempt	N/A	\$0.08	NA	NA	NA	NA	NA	NA	\$0.08	NA
Operator Provided Call Handling per min - Using Foreign LIDB										
		N/A	\$1.25	\$1.00	\$1.02	\$1.6249	\$0.96	\$1.24	\$1.25	NA
Call Completion Access Termination Charge per call attempt	N/A	\$0.08	NA	NA	NA	NA	NA	NA	\$0.08	NA
Operator Provided Call Handling, per call										
		N/A	NA	NA	NA	NA	NA	NA	NA	\$0.30
Fully Automated Call Handling per call - Using BST LIDB										
		N/A	\$0.11	\$0.10	\$0.0776409	\$0.0856	\$0.10	\$0.1072884	\$0.11	\$0.1115808
Fully Automated Call Handling per call - Using Foreign LIDB										
		N/A	\$0.13	\$0.10	\$0.0976984	\$0.1071	\$0.12	\$0.1253666	\$0.12	\$0.1293459
Professional recording of name (OCP alone)										
	USOD1	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00
Professional recording of name (DA and OCP alone)										
	USOD1	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00
DRAM or front-end loading, per TOPS switch										
	USOD2	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00
AABS or back-end loading, per IVS										
	USOD2	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00
EBAS or 0- automation loading, per NAV shelf										
	USOD2	\$270.00	\$270.00	\$270.00	\$270.00	\$270.00	\$270.00	\$270.00	\$270.00	\$270.00
Recording Charge per Branded Announcement - Disconnect - Initial										
	N/A	\$9.61	NA	NA	NA	NA	NA	NA	NA	NA

DESCRIPTION	USOC	AL	FL	GA	KY	LA	MS	NC	SC	TN
Recording Charge per Branded Announcement – Disconnect – Subsequent	N/A	\$9.61	NA	NA	NA	NA	NA	NA	NA	NA
INWARD OPERATOR SERVICES										
Verification, per minute	N/A	\$1.16	NA	\$0.921083	NA	\$0.86	\$1.14	\$1.15	\$1.15	NA
Verification and Emergency Interrupt, per minute	N/A	\$1.16	NA	\$0.921083	NA	\$0.86	\$1.14	\$1.15	\$1.15	NA
Verification, per call	VIL	NA	\$0.80	NA	\$1.00	NA	NA	\$0.54	NA	\$0.90
Verification and Emergency Interrupt, per call	N/A	NA	\$1.00	NA	\$1.111	NA	NA	\$0.65	NA	\$1.95
DIRECTORY ASSISTANCE SERVICES										
Directory Assist Call Completion Access Svc (DACC), per call attempt	N/A	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.062	\$0.10	\$0.10
Call Completion Access Term charge per completed call	N/A	NA	NA	NA	NA	NA	NA	NA	\$0.08	NA
Number Services Intercept per query	N/A	\$0.0235	\$0.01	\$0.0097497	\$0.0086	\$0.02	\$0.0188268	\$0.0110	\$0.0124036	\$0.15
Number Services Intercept per Intercept Query Update	N/A	NA	NA	NA	\$0.0055	NA	NA	NA	NA	NA
Directory Assistance Access Service Calls, per call	N/A	\$0.275	\$0.275	\$0.275	\$0.275	\$0.275	\$0.275	\$0.260000	\$0.275	\$0.275
Professional recording of name (DA alone)	N/A	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00
Professional recording of name (DA and OCP alone)	N/A	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00
DRAM or front-end loading, per TOPS switch	N/A	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00
AABS or back-end loading, per IVS	N/A	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00
EBAS or 0- automation loading, per NAV shelf	N/A	\$270.00	\$270.00	\$270.00	\$270.00	\$270.00	\$270.00	\$270.00	\$270.00	\$270.00
Recording Charge per Branded Announcement – Disconnect – Initial	N/A	\$9.61	NA	NA	NA	NA	NA	NA	NA	NA
Recording Charge per Branded Announcement – Disconnect – Subsequent	N/A	\$9.61	NA	NA	NA	NA	NA	NA	NA	NA
Directory Transport										
Directory Transport - Local Channel DS1, per month	N/A	\$35.52	\$43.64	\$38.36	\$36.32	\$43.83	\$38.91	\$35.68	\$37.20	\$133.81
NRC - 1st	N/A	\$503.57	\$242.45	\$356.15	\$637.46	\$339.69	\$494.83	\$534.48	\$534.81	\$868.97
NRC - Add'l	N/A	\$442.84	\$226.44	\$312.89	\$546.94	\$298.29	\$435.28	\$462.69	\$462.81	\$486.83
NRC - Disconnect Charge - 1st	N/A	\$46.28	NA	NA	NA	\$33.02	\$46.85	NA	NA	NA
NRC - Disconnect Charge - Add'l	N/A	\$32.18	NA	NA	NA	\$23.32	\$33.02	NA	NA	NA
NRC - Incremental Charge-Manual Svc Order - NRC - 1st	SOMAN	\$61.99	NA	\$44.22	NA	\$42.34	\$59.58	\$86.15	\$87.99	NA
NRC - Incremental Charge-Manual Svc Order - NRC - add'l		NA	NA	NA	NA	NA	NA	\$1.77	NA	NA
NRC - Incremental Charge-Manual Svc Order - NRC-Disconnect	SOMAN	\$29.27	NA	NA	NA	\$19.48	\$27.41	NA	\$3.11	NA
Directory Transport - Dedicated DS1 Level Interoffice per mile per mo	N/A	\$0.6923	\$0.6013	\$0.4523	\$0.45	\$0.78	\$0.6598	\$0.5753	\$0.7598	\$23.00
Directory Transport - Dedicated DS1 Level Interoffice per facility termination per mo	N/A	\$79.69	\$99.79	\$78.47	\$55.05	\$93.40	\$74.40	\$71.29	\$94.98	\$90.00
NRC - 1st	N/A	\$198.15	\$45.91	\$147.07	\$298.18	\$140.49	\$196.28	\$217.17	\$216.27	\$100.49
NRC - Add'l	N/A	\$148.18	\$44.18	\$111.75	\$231.18	\$106.69	\$147.31	\$163.75	\$162.70	\$100.49
NRC - Disconnect Charge - 1st	N/A	\$25.44	NA	NA	NA	\$20.00	\$26.56	NA	NA	NA
NRC - Disconnect Charge - Add'l	N/A	\$20.42	NA	NA	NA	\$16.34	\$21.61	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - 1st	SOMAN	\$27.37	NA	\$18.94	NA	\$18.14	\$25.52	\$38.07	\$39.63	NA
NRC - Incremental Charge - Manual Service Order - Add'l	SOMAN	\$27.37	NA	NA	NA	\$18.14	\$25.52	\$38.07	\$39.63	NA
NRC - Incremental Charge - Manual Service Order - Disconnect - 1st	SOMAN	\$12.97	NA	NA	NA	\$8.06	\$11.34	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - Disconnect - Add'l	SOMAN	\$12.97	NA	NA	NA	\$8.06	\$11.34	NA	NA	NA
Switched Common Transport per DA Access Service per call	N/A	\$0.0003	\$0.0003	\$0.0002906	\$0.000175	\$0.0003274	\$0.0002997	\$0.00020	\$0.000327	NA
Switched Common Transport per DA Access Service per call per mile	N/A	\$0.00003	\$0.00001	\$0.0000186	\$0.000004	\$0.0000175	\$0.0000202	\$0.00003	\$0.0000303	NA
Access Tandem Switching per DA Access Service per call	N/A	\$0.0023	\$0.00055	\$0.0019152	\$0.000783	\$0.0025257	\$0.0023713	\$0.0021	\$0.0024809	NA
DA Interconnection, per DA Access Service Call	N/A	\$0.00269	NA	\$0.00269	NA	NA	NA	\$0.00	\$0.000269	NA
Directory Transport-Installation NRC, per trunk or signaling connection										
NRC - 1st	N/A	\$260.69	\$206.06	\$204.23	\$501.98	\$195.54	\$257.73	NA	\$407.81	NA
NRC - Add'l	N/A	\$5.95	\$4.71	\$4.42	\$13.32	\$4.23	\$5.85	NA	\$11.00	NA
NRC - Disconnect Charge - 1st	N/A	\$173.46	NA	NA	NA	NA	NA	NA	NA	NA
NRC - Disconnect Charge - Add'l	N/A	\$5.95	NA	NA	NA	NA	NA	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - 1st	SOMAN	NA	NA	\$44.22	NA	\$130.05	\$171.49	NA	NA	NA
NRC - Incremental Charge - Manual Service Order - Add'l	SOMAN	NA	NA	NA	NA	\$4.23	\$5.85	NA	NA	NA
NRC - Manual Service Order - 1st		NA	NA	NA	NA	NA	NA	\$407.53	NA	NA
NRC - Manual Service Order - Add'l		NA	NA	NA	NA	NA	NA	\$10.98	NA	NA
Directory Assistance Database Service (DADS)										
Directory Assistance Database Service charge per listing	N/A	\$0.0446	\$0.001	\$0.0445	\$0.0193	\$0.0443	\$0.0447	\$0.04460	\$0.0444	NA

DESCRIPTION	USOC	AL	FL	GA	KY	LA	MS	NC	SC	TN
Directory Assistance Database Service, per month	DBSOF	\$128.55	\$100.00	\$95.50	\$120.76	\$90.54	\$126.17	\$126.26	\$127.23	NA
AIN (Note 4)										TBD
AIN, per message	CAM	NA	\$0.00004	NA	NA	NA	NA	NA	NA	NA
AIN - BellSouth AIN SMS Access Service	CAM								NA	NA
Service Establishment Charge, per state, initial set-up										
NRC	CAMSE	\$197.49	NA	\$90.25	NA	\$153.31	\$174.03	\$294.77	\$296.16	NA
NRC - Disconnect	CAMSE	\$114.22	NA	NA	NA	\$78.06	\$135.96	NA	NA	NA
Port Connection - Dial/Shared Access										
NRC	CAMDP	\$64.05	NA	\$29.66	NA	\$50.07	\$53.47	\$86.94	\$87.29	NA
NRC - Disconnect	CAMDP	\$27.04	NA	NA	NA	\$18.61	\$37.70	NA	NA	NA
Port Connection - ISDN Access										
NRC	CAM1P	\$64.05	NA	\$29.66	NA	\$50.07	\$53.47	\$86.94	\$87.29	NA
NRC - Disconnect	CAM1P	\$27.04	NA	NA	NA	\$18.61	\$37.70	NA	NA	NA
User ID Codes - per User ID Code										
NRC	CAMAU	\$141.84	NA	\$84.43	NA	\$104.95	\$129.83	\$200.83	\$202.08	NA
NRC - Disconnect	CAMAU	\$70.05	NA	NA	NA	\$48.95	\$79.91	NA	NA	NA
Security Card per User ID Code, initial or replacement										
NRC	CAMRC	\$142.13	NA	\$35.44	NA	\$125.33	\$131.54	\$172.05	\$172.26	NA
NRC - Disconnect	CAMRC	\$35.26	NA	NA	NA	\$24.40	\$45.77	NA	NA	NA
Storage, per unit (100Kb)	N/A	\$0.0026	NA	\$0.0023	NA	\$0.0029	\$0.0029	\$0.0023	\$0.0028	NA
Session per minute	N/A	\$0.0892	NA	\$0.0795604	NA	\$0.10	\$0.0975650	\$0.0791	\$0.0942966	NA
C0. Performed Session, per minute					NA	\$1.97	\$2.09	\$2.08	\$2.07	NA
AIN - BellSouth AIN Toolkit Service										
AIN, Service Creation Tools	CAMBP	NA	TBD	NA	NA	NA	NA	NA	NA	NA
Service Establishment Charge, per state, initial set-up										
NRC	BAPSC	\$192.69	NA	\$86.74	NA	\$153.25	\$169.31	\$290.05	\$291.41	NA
NRC - Disconnect	BAPSC	\$114.22	NA	NA	NA	\$78.05	\$135.96	NA	NA	NA
Training Session, per customer										
NRC	BAPVX	\$8,363.00	NA	\$8,348.00	NA	\$8,315.00	\$8,379.00	\$8,363.00	\$8,333.00	NA
NRC - Disconnect	BAPVX	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trigger Access Charge, per trigger, per DN, Term. Attempt										
NRC	BAPTT	\$49.64	NA	\$19.13	NA	\$41.08	\$39.30	\$72.76	\$73.02	NA
NRC - Disconnect	BAPTT	\$27.04	NA	NA	NA	\$18.60	\$37.70	NA	NA	NA
Trigger Access Charge, per trigger per DN, Off-Hook Delay										
NRC	BAPTD	\$49.64	NA	\$114.80	NA	\$41.08	\$39.30	\$72.76	\$73.02	NA
NRC - Disconnect	BAPTD	\$27.04	NA	NA	NA	\$18.60	\$37.70	NA	NA	NA
Trigger Access Charge, per trigger, per DN, Off-Hook Immediate										
NRC	BAPTM	\$49.64	NA	\$19.13	NA	\$41.08	\$39.30	\$72.76	\$73.02	NA
NRC - Disconnect	BAPTM	\$27.04	NA	NA	NA	\$18.60	\$37.70	NA	NA	NA
Trigger Access Charge, per trigger, per DN, 10-Digit PODP										
NRC	BAPTO	\$117.98	NA	\$70.06	NA	\$92.99	\$106.90	\$149.95	\$150.25	NA
NRC - Disconnect	BAPTO	\$37.90	NA	NA	NA	\$26.73	\$48.44	NA	NA	NA
Trigger Access Charge, per trigger, per DN, CDP										
NRC	BAPTC	\$117.98	NA	\$70.06	NA	\$92.99	\$106.90	\$149.95	\$150.25	NA
NRC - Disconnect	BAPTC	\$37.90	NA	NA	NA	\$26.73	\$48.44	NA	NA	NA
Trigger Access Charge, per trigger, per DN, Feature Code										
NRC	BAPTF	\$117.98	NA	\$70.06	NA	\$92.99	\$106.90	\$149.95	\$150.25	NA
NRC - Disconnect	BAPTF	\$37.90	NA	NA	NA	\$26.73	\$48.44	NA	NA	NA
Query Charge, per query		\$0.024	NA	\$0.0209223	NA	\$0.03	\$0.0256138	\$0.02	\$0.0250662	NA
Type 1 Node Charge, per AIN Toolkit Subscription, per node, per query		\$0.006	NA	\$0.0053137	NA	\$0.0065	\$0.0065161	\$0.005	\$0.0062979	NA
SCP Storage Charge, per SMS Access Acct, per 100 Kb	N/A	\$1.63	NA	\$1.46	NA	\$1.79	\$1.79	\$1.45	\$1.73	NA
Monthly Report - per AIN Toolkit Service Subscription	BAPMS	\$16.00	NA	\$15.96	NA	\$15.89	\$16.01	\$15.98	\$15.93	NA
NRC	BAPMS	\$44.56	NA	\$22.64	NA	\$34.61	\$44.02	\$71.80	\$72.15	NA

DESCRIPTION	USOC	AL	FL	GA	KY	LA	MS	NC	SC	TN
NRC - Disconnect	BAPMS	\$31.84	NA	NA	NA	\$21.97	\$31.28	NA	NA	NA
Special Study - per AIN Toolkit Service Subscription	BAPLS	\$0.10	NA	\$0.0861109	NA	\$0.08	\$0.0810536	\$0.08	\$0.0872769	NA
NRC	BAPLS	\$47.74	NA	\$22.64	NA	\$37.77	\$47.21	\$47.20	\$47.35	NA
NRC - Disconnect	BAPLS	\$15.90	NA	NA	NA	NA	NA	NA	NA	NA
Call Event Report - per AIN Toolkit Service Subscription	BAPDS	\$15.90	NA	\$15.87	NA	\$15.81	\$15.93	\$15.90	\$15.84	NA
NRC	BAPDS	\$44.56	NA	\$22.64	NA	\$34.61	\$44.02	\$71.80	\$72.15	NA
NRC - Disconnect	BAPDS	\$31.84	NA	NA	NA	\$21.97	\$31.28	NA	NA	NA
Call Event special Study - per AIN Toolkit Service Subscription	BAPES	\$0.003	NA	\$0.0028704	NA	\$0.0026	\$0.0027018	\$0.003	\$0.0029092	NA
NRC	BAPES	\$47.74	NA	\$22.64	NA	\$37.77	\$47.21	\$47.20	\$47.35	NA
NRC - Disconnect	BAPES	\$15.90	NA	NA	NA	\$37.77	NA	NA	NA	NA
CALLING NAME (CNAM) QUERY SERVICE										
CNAM (Database Owner), Per Query	N/A	\$0.016	\$0.016	\$0.016	\$0.016	\$0.016	\$0.016	\$0.016	\$0.016	\$0.016
CNAM (Non-Database Owner), Per Query *	N/A	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01
NRC, applicable when CLEC-1 uses the Character Based User Interface (CHUI)	N/A	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00
* Volume and term arrangements are also available.										
SELECTIVE ROUTING (Note 5)										
Per Line or PBX Trunk, each		NA	NA	NA	\$10.00 (Interim)	NA	NA	NA	NA	TBD
NRC		NA	NA	NA	NA	NA	NA	NA	NA	TBD
Customized routing per unique line class code, per request, per switch										
NRC	USRCR	\$230.60	\$229.65	\$180.62	\$229.65	\$229.65	\$227.99	\$229.65	\$226.22	\$229.65
NRC - Incremental Charge - Manual Service Order		\$25.93	NA	\$18.94	NA	NA	\$25.52	NA	\$27.84	NA
VIRTUAL COLLOCATION										
2-wire Cross-Connect										
RC	UEAC2	\$0.28	\$0.524	\$0.30	\$0.31	\$0.26	\$0.3996	\$0.09	\$0.3648	\$0.30
NRC - 1st	UEAC2	\$30.76	\$11.57	\$12.60	\$54.21	\$23.04	\$30.93	\$41.78	\$41.50	\$19.20
NRC - Add'l	UEAC2	\$29.40	\$11.57	\$12.60	\$51.07	\$22.11	\$29.59	\$39.23	\$38.94	\$19.20
NRC - 1st - Manual Service Order		NA	NA	NA	NA	NA	NA	\$4.75	NA	NA
NRC - Add'l - Manual Service Order		NA	NA	NA	NA	NA	NA	\$4.75	NA	NA
NRC - Disconnect - 1st	UEAC2	\$12.75	NA	NA	NA	\$9.48	\$12.76	NA	NA	NA
NRC - Disconnect - Add'l	UEAC2	\$11.38	NA	NA	NA	\$8.54	\$11.43	NA	NA	NA
4-wire Cross-Connect										
RC	UEAC4	\$0.56	\$0.524	\$0.50	\$0.62	\$0.52	\$0.7992	\$0.18	\$0.7297	\$0.50
NRC - 1st	UEAC4	\$66.71	\$11.57	\$12.60	\$54.23	\$23.23	\$31.17	\$41.91	\$41.56	\$19.20
NRC - Add'l	UEAC4	\$50.43	\$11.57	\$12.60	\$50.96	\$22.24	\$29.77	\$39.25	\$38.90	\$19.20
NRC - 1st - Manual Service Order		NA	NA	NA	NA	NA	NA	\$4.73	NA	NA
NRC - Add'l - Manual Service Order		NA	NA	NA	NA	NA	NA	\$4.73	NA	NA
NRC - Disconnect - 1st	UEAC4	\$12.82	NA	NA	NA	\$9.53	\$12.83	NA	NA	NA
NRC - Disconnect - Add'l	UEAC4	\$11.39	NA	NA	NA	\$8.55	\$11.43	NA	NA	NA
2-fiber Cross-Connect										
RC	CNC2F	\$12.10	NA	\$15.64	\$15.64	\$19.13	\$15.64	\$15.99	\$15.06	\$15.64
NRC - 1st	CNC2F	\$55.46	NA	\$41.56	\$41.56	\$41.07	\$41.56	\$67.34	\$69.28	\$41.56
NRC - Add'l	CNC2F	\$39.18	NA	\$29.82	\$29.82	\$29.63	\$29.82	\$48.55	\$48.89	\$29.82
NRC - Disconnect - 1st	CNC2F	\$16.83	NA	NA	NA	\$12.84	\$12.96	NA	NA	NA
NRC - Disconnect - Add'l	CNC2F	\$13.27	NA	NA	NA	\$10.29	\$10.34	NA	NA	NA
4-fiber Cross-Connect										
RC	CNC4F	\$21.75	NA	\$28.11	\$28.11	\$34.38	\$28.11	\$28.74	\$27.08	\$28.11
NRC - 1st	CNC4F	\$66.71	NA	\$50.53	\$50.53	\$49.81	\$50.53	\$82.35	\$84.07	\$50.53
NRC - Add'l	CNC4F	\$50.43	NA	\$38.78	\$38.78	\$38.37	\$38.78	\$63.56	\$63.68	\$38.78
NRC - Disconnect - 1st	CNC4F	\$21.86	NA	NA	NA	\$16.75	\$16.97	NA	NA	NA
NRC - Disconnect - Add'l	CNC4F	\$18.31	NA	NA	NA	\$14.20	\$14.35	NA	NA	NA
DS1 Cross-Connects										
RC		NA	NA	NA	NA	NA	NA	\$0.97	NA	NA
NRC - 1st		NA	NA	NA	NA	NA	NA	\$71.02	NA	NA

DESCRIPTION		USOC	AL	FL	GA	KY	LA	MS	NC	SC	TN
	NRC - Add'l		NA	NA	NA	NA	NA	NA	\$51.08	NA	NA
	NRC - Manual Service Order - 1st		NA	NA	NA	NA	NA	NA	\$4.70	NA	NA
	NRC - Manual Service Order - Add'l		NA	NA	NA	NA	NA	NA	\$4.70	NA	NA
DS3 Cross-Connects											
	RC		NA	NA	NA	NA	NA	NA	\$12.33	NA	NA
	NRC - 1st		NA	NA	NA	NA	NA	NA	\$69.84	NA	NA
	NRC - Add'l		NA	NA	NA	NA	NA	NA	\$49.43	NA	NA
	NRC - Manual Service Order - 1st		NA	NA	NA	NA	NA	NA	\$4.70	NA	NA
	NRC - Manual Service Order - Add'l		NA	NA	NA	NA	NA	NA	\$4.70	NA	NA
If no rate is identified in the contract, the rate for the specific service or function will be as set forth in applicable BellSouth tariff or as negotiated by the parties upon request by either party.											
	Interim rates subject to true-up.										
1	BellSouth and CLEC shall negotiate rates for this offering. If agreement is not reached within sixty (60) days of the Effective Date, either party may petition the Florida PSC to settle the disputed charge or charges. (FL)										
2	This rate element is for those states w/o separate rates for 800 calls with 800 No. Delivery vs. POTS No. Delivery and calls with Optional Complex Features vs. w/o Optional Complex Features.										
3	This charge is only applicable where signaling usage measurement or billing capability does not exist.										
4	Prices for AIN to be determined upon development of mediation device. (TN)										
5	Price for Line Class Codes for Selective Routing shall be determined by the TRA. (TN)										

Exhibit A

Replacement of Attachment 2

Page 1

Attachment 2

Network Elements and Other Services

TABLE OF CONTENTS

1. INTRODUCTION.....	3
2. UNBUNDLED LOOPS, INTEGRATED DIGITAL LOOP CARRIERS, NETWORK INTERFACES DEVICE, UNBUNDLED LOOP CONCENTRATION (ULC) SYSTEM, SUB LOOPS AND DARK FIBER.....	4
3. HIGH FREQUENCY SPECTRUM NETWORK ELEMENT.....	24
4. SWITCHING.....	28
5. UNBUNDLED NETWORK ELEMENT COMBINATIONS.....	37
6. TRANSPORT, CHANNELIZATION AND DARK FIBER.....	45
7. BELLSOUTH SWA 8XX TOLL FREE DIALING TEN DIGIT SCREENING SERVICE	51
8. LINE INFORMATION DATABASE (LIDB).....	53
9. SIGNALING.....	55
10. OPERATOR CALL PROCESSING, INWARD OPERATOR SERVICES AND DIRECTORY ASSISTANCE SERVICES.....	64
11. CALLING NAME (CNAM) DATABASE SERVICE.....	70
12. BASIC 911 AND E911	72
13. TRUE-UP.....	73
LIDB Storage Agreement	Exhibit A
CNAM Database Service	Exhibit B
Rates	Exhibit C

ACCESS TO NETWORK ELEMENTS AND OTHER SERVICES

1. Introduction

- 1.1 This Attachment sets forth the unbundled network elements and combinations of unbundled network elements that BellSouth agrees to offer to Global Crossing in accordance with its obligations under Section 251(c)(3) of the Act. The specific terms and conditions that apply to the unbundled network elements are described below in this Attachment 2. The price for each unbundled network element and combination of unbundled Network Elements are set forth in Exhibit D of this Agreement.
- 1.2 For purposes of this Agreement, “Network Element” is defined to mean a facility or equipment provided by BellSouth on an unbundled basis as is used by the CLEC in the provision of a telecommunications service. These unbundled network elements are consistent with the requirements of the FCC 51.319 rule. For purposes of this Agreement, combinations of Network Elements shall be referred to as “Combinations.”
- 1.2.1 Except as otherwise required by law, BellSouth shall not impose limitation restrictions or requirements or request for the use of the network elements or combinations that would impair the ability of Global Crossing to offer telecommunications service in the manner Global Crossing intends.
- 1.2.2 Except upon request by Global Crossing, BellSouth shall not separate requested network elements that BellSouth currently combines.
- 1.2.2.1 Unless otherwise ordered by an appropriate state or federal regulatory agency, currently combined Network Elements are defined as elements that are already combined within BellSouth's network to a given location.
- 1.3 BellSouth shall, upon request of Global Crossing, and to the extent technically feasible, provide to Global Crossing access to its network elements for the provision of Global Crossing's telecommunications service. If no rate is identified in the contract, the rate for the specific service or function will be as set forth in the applicable BellSouth tariff or as negotiated by the Parties upon request by either Party.
- 1.4 Global Crossing may purchase network elements and other services from BellSouth for the purpose of combining such network elements in any manner Global Crossing chooses to provide telecommunication services to its intended users, including recreating existing BellSouth services. With the exception of the sub-loop elements which are located outside of the central office, BellSouth shall deliver the network elements purchased by Global Crossing for combining to the

designated Global Crossing collocation space. The network elements shall be provided as set forth in this Attachment.

- 1.5 BellSouth shall comply with the requirements as set forth in the technical references within Attachment 2 to the extent that they are consistent with the greater of BellSouth's actual performance or applicable industry standards.
- 1.6 In the event that any effective legislative, regulatory, judicial or other legal action modifies or redefines the "Network Elements" in a manner which materially affects the terms of this Attachment or the Network Elements and/or prices set forth herein, either Party may, on thirty (30) days written notice, require renegotiation of such terms, and the Parties shall renegotiate in good faith such new terms in accordance with such legislative, regulatory, judicial or other legal action. In the event such new terms are not renegotiated within ninety (90) days after the notice for renegotiation, either Party may petition the Commission for resolution of the dispute between the Parties. Each Party reserves the right to seek judicial review of any Commission ruling concerning this Attachment.
- 1.7 Global Crossing will adopt and adhere to the standards contained in the applicable BellSouth Operational Understanding regarding maintenance of service.
- 1.8 Standards for Network Elements
- 1.8.1 BellSouth shall comply with the requirements set forth in the technical references, as well as any performance or other requirements identified in this Agreement, to the extent that they are consistent with the greater of BellSouth's actual performance or applicable industry standards.
- 1.8.2 If one or more of the requirements set forth in this Agreement are in conflict, the Parties shall mutually agree on which requirement shall apply. If the Parties cannot reach agreement, the dispute resolution process set forth in Section 12 of the General Terms and Conditions of this Agreement, incorporated herein by this reference, shall apply.
- 1.9 **Rates**
- The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. If Global Crossing purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.
- 1.10 **Operational Support Systems (OSS)**
- The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.
- 2. Unbundled Loops, Network Interfaces Device, Unbundled Loop Concentration (ULC) System, Sub loops and Dark Fiber**

All of the negotiated rates, terms and conditions set forth in this Section pertain to the provision of unbundled loops.

2.1 **Unbundled Loops**

2.1.1 Definition

2.1.2 The local loop network element (“Loop(s)”) is defined as a transmission facility between a distribution frame (or its equivalent) in BellSouth’s central office and the loop demarcation point at an end-user customer premises, including inside wire owned by BellSouth. The local loop network element includes all features, functions, and capabilities of the transmission facilities, including dark fiber and attached electronics (except those used for the provision of advanced services, such as Digital Subscriber Line Access Multiplexers) and line conditioning.

2.1.3 The provisioning of service to a CLEC’s collocation space will require cross-office cabling and cross-connections within the central office to connect the loop to a local switch or to other transmission equipment. These cross-connects are a separate component, that are not considered a part of the loop, and thus, have a separate charge.

2.1.4 BellSouth Order Coordination referenced in Attachment 2 includes two types: “Order Coordination” (OC) and “Order Coordination - Time Specific” (OC-TS).

2.1.5 “Order Coordination” refers to standard BellSouth service order coordination involving the reuse of facilities for SL2 voice loops and all digital loops, where Global Crossing is requesting that their loop order be provisioned over an existing circuit that is currently providing service to the end user. Order coordination for physical conversions will be scheduled at BellSouth’s discretion during normal working hours on the committed due date and Global Crossing will be advised.

2.1.6 “Order Coordination – Time Specific” refers to service order coordination in which Global Crossing requests a specific time for a service order conversion to take place. Loops on a single service order of 14 or more loops will be provisioned on a project basis. This is a chargeable option for any coordinated order and is billed in addition to the OC charge. Global Crossing may specify a time between 9:00 a.m. and 4:00 p.m. (location time) Monday through Friday (excluding holidays). If Global Crossing specifies a time outside this window, or selects a time or quantity of loops that requires BellSouth technicians to work outside normal work hours, overtime charges will apply in addition to the OC and OC-TS charges. Overtime charges will be applied according to actual costs based on type of force group required to perform the work, overtime hours worked and any special circumstances.

	Order Coordination	Order Coordination – Time Specific	Test Points	DLR	Charge for Dispatch and Testing if No Trouble Found
SL-1	Not available	Not available	Not available	Chargeable Option	Charged for Dispatch inside & outside Central Office
SL-2	Included	Chargeable Option*	Included	Included	Charged for Dispatch outside Central Office
Unbundled Digital Loop	Included	Chargeable Option* (except on Universal Digital Channel)	Included (where appropriate)	Included	Charged for Dispatch outside Central Office
Unbundled Copper Loop	Chargeable Option	Not available	Included	Included	Charged for Dispatch outside Central Office

*Order Coordination-Time Specific charge for orders due on same day at same location will be applied on a per LSR basis.

- 2.1.7 Where facilities are available, BellSouth will install loops in compliance with BellSouth's Interval Guide available at the website at <http://www.interconnection.bellsouth.com>. For orders of 14 or more loops, the installation will be handled on a project basis and the intervals will be set by the BellSouth project manager for that order. Some loops require a Service Inquiry (SI) to determine if facilities are available prior to issuing the order. The interval for the SI process is separate from the installation interval. For expedite requests by Global Crossing, expedite charges will apply for intervals less than 5 days. The charges outlined in BellSouth's FCC No. 1 Tariff, Section 5, will apply. If Global Crossing cancels an order for network elements and other services, any costs incurred by BellSouth in conjunction with the provisioning of that order will be recovered in accordance with FCC No. 1 Tariff, Section 5.
- 2.1.8 If Global Crossing modifies an order after being sent a Firm Order Confirmation (FOC) from BellSouth, any costs incurred by BellSouth to accommodate the modification will be paid by Global Crossing.
- 2.1.9 BellSouth will offer Unbundled Voice Loops (UVL) in two different service levels - Service Level One (SL1) and Service Level Two (SL2).
- 2.1.10 SL1 loops will be non-designed, will not have test points, and will not come with any OC or engineering information/circuit make-up data. Upon issuance of an order in the service order system, SL1 loops will be activated on the due date in

the same manner and time frames that BellSouth normally activates POTS-type loops for its customers. If Global Crossing requests work to be done for SL1s that requires BellSouth technicians to work outside normal work hours, overtime charges will be applied according to actual costs based on type of force group required to perform the work, overtime hours worked and any special circumstances.

- 2.1.11 SL2 loops shall have test points, will be designed with a design layout record provided to Global Crossing, and will be provided with OC. The OC feature will allow Global Crossing to coordinate the installation of the loop with the disconnect of an existing customer's service and/or number portability service. In these cases, BellSouth will perform the order conversion with standard order coordination at its discretion during normal work hours.
- 2.1.12 BellSouth will also offer Unbundled Digital Loops (UDL). UDL will be designed, will be provisioned with test points (where appropriate), and will come standard with OC and a Design Layout Record (DLR).

Due to technical limitations associated with certain Digital Loop Carrier (DLC) systems, some ISDN-capable loops that are provisioned using DLC systems may not support IDSL (Integrated Digital Subscriber Line) service. BellSouth will not reconfigure its ISDN-capable loop to support IDSL service.

Instead, BellSouth agrees to offer the Universal Digital Channel (UDC), which may also be referred to as an IDSL-capable loop as a part of its Unbundled Digital Loop offerings. The UDC loop is intended to be compatible with IDSL service and has the same physical characteristics and transmission specifications as BellSouth's ISDN-capable loop. These specifications are listed in BellSouth's TR73600.

Like the ISDN-capable loop, the UDC loop may be provisioned on copper or through a DLC system. However, when UDC loops are provisioned using a DLC system, BellSouth will ensure that they are only provisioned on time slots that are compatible with data-only services such as IDSL.

- 2.1.13 As a chargeable option on all loops except UVL-SL1, Universal Digital Channel (UDC) and Unbundled Copper Loop (UCL), BellSouth will offer OC-TS. This will allow Global Crossing the ability to specify the time that the coordinated conversion takes place. The OC-TS charge for orders due on the same day at the same location will be applied on a per Local Service Request (LSR) basis.
- 2.1.14 In addition to the UVLs and UDLs, BellSouth shall make available Unbundled Copper Loops (UCLs). The UCL will be a copper twisted pair loop that is

unencumbered by any intervening equipment (e.g., filters, load coils, range extenders, digital loop carrier, or repeaters). The UCL will be offered in two versions - Short and Long. A short UCL (18 kft or less) will be provisioned according to Resistance Design parameters, may have up to 6kft of bridged tap and will have up to 1300 ohms of resistance. The long UCL (beyond 18kft) will be any dry copper pair longer than 18kft and may have up to 12kft of bridged tap and up to 2800 ohms of resistance. Unbundled Loop Modifications (ULM) may be used when a CLEC wants to condition copper loops by removing load coils and other intervening equipment. In almost every case, the UCL long will require ULM to remove load coils. BellSouth will only ensure electrical continuity and balance relative to tip and ring on UCLs.

- 2.1.15 The UCL is a designed circuit, is provisioned with a test point and comes standard with a DLR. OC will be offered as a chargeable option on all UCL loops. OC is required on UCLs where a reuse of existing facilities has been requested by Global Crossing. Order Coordination – Time Specific (OC-TS) will not be offered on UCLs.
- 2.1.16 The UCL is a dry copper loop and is not intended to support any particular telecommunications service. Global Crossing may use the UCL loop for a variety of services, including xDSL (e.g., ADSL and HDSL) services, by attaching appropriate terminal equipment of Global Crossing's choosing. Global Crossing will determine the type of service that will be provided over the loop.
- 2.1.17 Because the UCL loop shall be an unbundled loop offering that is separate and distinct from BellSouth's ADSL and HDSL capable loop offerings, Global Crossing agrees that BellSouth's UCL loop will not be held to the service level and performance expectations that apply to its ADSL and HDSL unbundled loop offerings. BellSouth shall only be obligated to maintain copper continuity and provide balance relative to tip and ring on UCL loops.
- 2.1.18 The UCL loop shall be provided to Global Crossing in accordance with BellSouth's Technical Reference 73600.
- 2.1.19 Global Crossing will be responsible for testing and isolating troubles on the loops. Once Global Crossing has isolated a trouble to the BellSouth provided loop, Global Crossing will issue a trouble to BellSouth on the loop. BellSouth will take the actions necessary to repair the loop if a trouble actually exists. BellSouth will repair these loops in the same time frames that BellSouth repairs similarly situated loops to its customers.
- 2.1.20 If Global Crossing reports a trouble on SL1 loops and no trouble actually exists, BellSouth will charge Global Crossing for any dispatching and testing (both inside and outside the CO) required by BellSouth in order to confirm the loop's working status.

- 2.1.21 If Global Crossing reports a trouble on SL2 loops and no trouble actually exists, BellSouth will charge Global Crossing for any dispatching and testing, (outside the CO) required by BellSouth in order to confirm the loop's working status.
- 2.1.22 Technical Requirements
- 2.1.22.1 To the extent available within BellSouth's Network at a particular location, BellSouth will offer loops capable of supporting telecommunications services such as: POTS, Centrex, basic rate ISDN, analog PBX, voice grade private line, ADSL, HDSL, DS1 and digital data (up to 64 kb/s). If a requested loop type is not available, then the CLEC can use the Special Construction process to request that BellSouth place facilities or otherwise modify facilities in order to meet Global Crossing's request.
- 2.1.22.2 Global Crossing will be responsible for providing BellSouth with a Service Profile Identifier (SPID) associated with a particular ISDN-capable loop and end user. With the SPID, BellSouth will be able to adequately test the circuit and ensure that it properly supports ISDN service.
- 2.1.22.3 The loop will support the transmission, signaling, performance and interface requirements of the services described in 2.1.2 above. It is recognized that the requirements of different services are different, and that a number of types or grades of loops are required to support these services. Services provided over the loop by Global Crossing will be consistent with industry standards and BellSouth's TR73600.
- 2.1.22.4 Global Crossing may utilize the unbundled loops to provide any telecommunication service it wishes. However, BellSouth will only provision, maintain and repair the loops to the standards that are consistent with the type of loop ordered. For example, if Global Crossing orders an ISDN-capable loop but wants to use the loop for a service other than ISDN, BellSouth will only support that the loop is capable of providing ISDN service. For non-service specific loops (e.g. UCL, loops modified by Global Crossing using the Special Construction process), BellSouth will only support that the loop has copper continuity and balanced tip-and-ring.
- 2.1.22.5 In some instances, Global Crossing will require access to a copper twisted pair loop unfettered by any intervening equipment (e.g., filters, load coils, range extenders, etc.), so that Global Crossing can use the loop for a variety of services by attaching appropriate terminal equipment at the ends. Global Crossing will determine the type of service that will be provided over the loop. In some cases, Global Crossing may be required to pay additional charges for the removal of certain types of equipment. BellSouth's Unbundled Loop Modifications (ULM) process will be used to determine the costs and feasibility of these activities.

2.1.22.6 In those cases where Global Crossing has requested that BellSouth modify a loop so that it no longer meets the technical parameters of the original loop type (e.g., voice grade, ISDN, ADSL, etc.) the resulting modified loop will be ordered and maintained as a UCL.

2.1.22.7 The loop shall be provided to Global Crossing in accordance with BellSouth's TR73600 Unbundled Local Loop Technical Specification and applicable industry standard technical references.

2.2 **Unbundled Loop Modifications (Line Conditioning)**

2.2.1 Subject to applicable and effective FCC rules and orders, BellSouth shall condition loops, as requested by Global Crossing, whether or not BellSouth offers advanced services to the End User on that loop.

2.2.2 Loop conditioning is defined as the removal from the loop of any devices that may diminish the capability of the loop to deliver high-speed switched wireline telecommunications capability, including xDSL service. Such devices include, but are not limited to, load coils, bridge taps, low pass filters, and range extenders.

2.2.3 The Unbundled Loop Modifications (ULM) offering provides the following elements: 1) removal of equipment on loops equal to or less than 18kft; 2) removal of equipment of loops longer than 18kft; and 3) removal of bridged-taps on loops of any length.

2.2.4 BellSouth shall recover the cost of line conditioning requested by Global Crossing through a recurring charge and/or nonrecurring charge(s) in accordance with the FCC's forward-looking pricing principles promulgated pursuant to Section 252 (d) (1) of the Act and in compliance with FCC Rule 52.507 (e).

2.3 **Integrated Digital Loop Carriers**

2.3.1 Where BellSouth uses Integrated Digital Loop Carrier (IDLC) systems to provide the local loop and BellSouth has a suitable alternate facility available, BellSouth will make arrangements to permit Global Crossing to order a contiguous local loop. To the extent it is technically feasible, these arrangements will provide Global Crossing with the capability to serve end users at a level that is at parity with the level of service BellSouth provides its customers. If no alternate facility is available, BellSouth will utilize its Special Construction (SC) process to determine the additional costs required to provision the loop facilities. Global Crossing will then have the option of paying the SC rates to place the loop facilities or Global Crossing may choose some other method of providing service to the end-user (e.g., Resale, private facilities, etc.).

2.4 **Network Interface Device**

2.4.1 Definition

The NID is defined as any means of interconnection of end-user customer inside wire to BellSouth's distribution plant, such as a cross-connect device used for that purpose. The NID is a single-line termination device or that portion of a multiple-line termination device required to terminate a single line or circuit at the premises. The NID features two independent chambers or divisions that separate the service provider's network from the End User's on-premises wiring. Each chamber or division contains the appropriate connection points or posts to which the service provider and the end user each make their connections. The NID provides a protective ground connection and is capable of terminating cables such as twisted pair cable.

2.4.2 BellSouth shall permit Global Crossing to connect Global Crossing's loop facilities the end-user's inside wire through the BellSouth NID or at any other technically feasible point.

2.4.3 Access to Network Interface Device (NID)

2.4.3.1 Due to the wide variety of NIDs utilized by BellSouth (based on subscriber size and environmental considerations), Global Crossing may access the end user's wire by any of the following means: BellSouth shall allow Global Crossing to connect its loops directly to BellSouth's multi-line residential NID enclosures that have additional space and are not used by BellSouth or any other telecommunications carriers to provide service to the premise. It is the responsibility of Global Crossing to leave undisturbed the existing form of electrical protection and to maintain the physical integrity of the NID.

2.4.3.2 Where an adequate length of the end user's inside wire is present and environmental conditions permit, either Party may remove the inside wire from the other Party's NID and connect that wire to that Party's own NID; or

2.4.3.3 Enter the subscriber access chamber or "side" of "dual chamber" NID enclosures for the purpose of extending a connecterized or spliced jumper wire from the inside wiring through a suitable "punch-out" hole of such NID enclosures; or

2.4.3.4 Request BellSouth to make other rearrangements to the inside wiring terminations or terminal enclosure on a time and materials cost basis to be charged to the requesting Party (i.e., Global Crossing, its agent, the building owner or the subscriber). Such charges will be billed to the requesting Party.

2.4.3.5 In no case shall either Party remove or disconnect the other Party's loop facilities from either Party's NIDs, enclosures, or protectors unless the applicable Commission has expressly permitted the same and the disconnecting Party provides prior notice to the other Party. In such cases, it shall be the responsibility of the Party disconnecting loop facilities to leave undisturbed the existing form of

electrical protection and to maintain the physical integrity of the NID. It will be the CLEC's responsibility to ensure there is no safety hazard and will hold BellSouth harmless for any liability associated with the removal of the BellSouth loop from the BellSouth NID. Furthermore, it shall be the responsibility of the disconnecting Party, once the other Party's loop has been disconnected from the NID, to reconnect the disconnected loop to a nationally- recognized-testing-laboratory-listed station protector, which has been grounded as per Article 800 of the National Electrical Code. If no spare station protector exists in the NID, the disconnected loop must be appropriately cleared, capped and stored. If CLEC does not wish to accept these responsibilities, other options exist in which BellSouth installs a NID for the CLEC as a chargeable option.

2.4.3.6 In no case shall either Party remove or disconnect ground wires from BellSouth's NIDs, enclosures, or protectors.

2.4.3.7 In no case shall either Party remove or disconnect NID modules, protectors, or terminals from BellSouth's NID enclosures.

2.4.3.8 Due to the wide variety of NID enclosures and outside plant environments BellSouth will work with Global Crossing to develop specific procedures to establish the most effective means of implementing this Section, 2.4.3.

2.4.4 Technical Requirements

2.4.4.1 The NID shall provide an accessible point of interconnection and shall maintain a connection to ground.

2.4.4.2 The NID shall be capable of transferring electrical analog or digital signals between the subscriber's inside wiring and the Distribution Media and/or cross connect to Global Crossing's NID, consistent with the NID's function at the Effective Date of this Agreement.

2.4.4.3 Where a BellSouth NID exists, it is provided in its "as is" condition. Global Crossing may request BellSouth do additional work to the NID in accordance with Section 2.4.3.8. When Global Crossing deploys its own local loops with respect to multiple-line termination devices, Global Crossing shall specify the quantity of NIDs connections that it requires within such device.

2.4.5 Interface Requirements

2.4.5.1 The NID shall be equal to or better than all of the requirements for NIDs set forth in the applicable industry standard technical references.

2.5 **Unbundled Loop Concentration (ULC) System**

2.5.1 BellSouth will provide to Global Crossing Unbundled Loop Concentration (ULC). Loop concentration systems in the central office concentrate the signals

transmitted over local loops onto a digital loop carrier system. The concentration device is placed inside a BellSouth central office. BellSouth will offer ULC with a TR008 interface or a TR303 interface.

- 2.5.2 ULC will be offered in two sizes. System A will allow up to 96 BellSouth loops to be concentrated onto multiple DS1s. The high-speed connection from the concentrator will be at the electrical DS1 level and may connect to Global Crossing at Global Crossing's collocation site. System B will allow up to 192 BellSouth loops to be concentrated onto multiple DS1s. System A may be upgraded to a System B. A minimum of two DS1s is required for each system (i.e., System A requires two DS1s and System B would require an additional two DS1s or four in total). All DS1 interfaces will terminate to the CLEC's collocation space. ULC service is offered with or without concentration and with or without protection. A Line Interface element will be required for each loop that is terminated onto the ULC system. Rates for ULC are as set forth in this Attachment.

2.6 **Sub-loop Elements**

- 2.6.1 Where facilities permit and subject to applicable and effective FCC rules and orders, BellSouth shall offer access to its Unbundled Sub Loop (USL) and Unbundled Sub-loop Concentration (USLC) System. BellSouth shall provide non-discriminatory access, in accordance with FCC Rule 51.311 and Section 251(c) (3) of the Act, to the sub-loop on an unbundled basis and pursuant to the following terms and conditions and the rates approved by the Commission and set forth in this Attachment.

- 2.6.2 Sub-loop components include but are not limited to the following:

- 2.6.2.1 Unbundled Sub-Loop Distribution;
- 2.6.2.2 Unbundled Sub-Loop Concentration/Multiplexing Functionality; and
- 2.6.2.3 Unbundled Sub-Loop Feeder.

2.7 **Unbundled Sub-Loop (distribution facilities)**

2.7.1 Definition

- 2.7.1.1 Subject to applicable and effective FCC rules and orders, the unbundled sub-loop distribution facility is dedicated transmission facility that BellSouth provides from a customer's point of demarcation to a BellSouth cross-connect device. The BellSouth cross-connect device may be located within a remote terminal (RT) or a stand-alone cross-box in the field or in the equipment room of a building. The unbundled sub-loop distribution media is a copper twisted pair that can be provisioned as a 2 Wire or 4 Wire facility. Following are the current sub-loop distribution offerings:

- 2.7.1.1.1 Voice grade Unbundled Sub-Loop Distribution (USL-D) is a sub-loop facility from the cross-box in the field up to and including the point of demarcation, at the end user's premises.
- 2.7.1.1.2 Unbundled Sub-Loop distribution facilities were originally built as part of the entire voice grade loop from the BellSouth central office to the customer network interface. Therefore, the voice grade Unbundled Sub-Loop may have load coils, which are necessary for transmission of voice grade services.
- 2.7.1.1.3 Unbundled Copper Sub-Loop (UCSL) is a non-loaded copper facility of any length provided from the cross-box in the field up to and including the end-user's point of demarcation.
- 2.7.1.1.3.1 If available, this facility will not have any intervening equipment such as load coils between the end-user and the cross-box.
- 2.7.2 If Global Crossing requests a UCSL and a non-loaded pair is not available, Global Crossing may order Unbundled Sub-Loop Modification to remove load coils and/or bridge tap from an existing sub-loop facility. If load coils are removed from an existing sub-loop, that sub-loop will be classified as a UCSL. Global Crossing may order Loop Make-up to determine what loop modifications will be required.
- 2.7.3 Unbundled Sub-Loop distribution facilities shall support functions associated with provisioning, maintenance and testing of the Unbundled Sub-Loop. For access to Voice Grade USL-D and UCSL, Global Crossing would be required to deliver a cable to the BellSouth remote terminal or cross-box in the field to provide continuity to Global Crossing's feeder facilities. This cable would be connected, by a BellSouth technician, within the BellSouth RT/cross-box during the set-up process. Global Crossing's cable pairs can then be connected to BellSouth's USL within the BellSouth cross-box by the BellSouth technician.
- 2.7.4 Unbundled Sub-Loop – Intrabuilding Network Cable (USL-INC) (a.k.a. riser cable) is the distribution facility inside a subscriber's building or between buildings on one customer's same premises (continuous property not separated by a public street or road). USL-INC includes the facility from the cross-connect device in the building equipment room up to and including the point of demarcation, at the end user's premises.
- 2.7.4.1 In a scenario that requires connection in a building equipment room, BellSouth will install a cross connect panel for the purpose of accessing USL-INC pairs. The cross-connect panel will function as a single point of interconnection (SPOI) for USL-INC and will be accessible by multiple carriers as space permits. BellSouth will place cross-connect blocks in 25-pair increments for Global Crossing's use on this cross-connect panel. Global Crossing will be responsible for connecting its facilities to the 25-pair cross-connect block(s).

- 2.7.5 BellSouth will provide Unbundled Sub-Loops where possible. Through the firm order Service Inquiry (SI) process, BellSouth will determine if it is feasible to place the required facilities where Global Crossing has requested access to Unbundled Sub-Loops. If existing capacity is sufficient to meet the CLEC demand, then BellSouth will perform the set-up work as described in Section 2.7.6. If any work must be done to modify existing BellSouth facilities or add new facilities (other than adding the cross-connect panel in a building equipment room as noted in Section 2.7) to accommodate Global Crossing's request for Unbundled Sub-Loops, Global Crossing may request BellSouth's Special Construction (SC) process to determine additional costs required to provision the Unbundled Sub-Loops. Global Crossing will have the option of paying the SC charges to modify the BellSouth facilities.
- 2.7.6 Set-up work must be completed before Global Crossing can order sub-loop pairs. During the set-up in a BellSouth cross-connect box in the field, the BellSouth technician will perform the necessary work to splice the CLEC's cable into the cross-connect box. For the set-up inside a building equipment room, BellSouth will perform the necessary work to install the cross-connect panel and the connecting block(s) that will be used to provide access to the requested USLs.
- 2.7.6.1 Once the set-up is complete, the CLEC will request sub-loop pairs through submission of a Local Service Request (LSR) form to the Local Carrier Service Center (LCSC). Order Coordination is required with USL pair provisioning when Global Crossing requests reuse of an existing facility and is in addition to the USL pair rate. For expedite requests by Global Crossing for sub-loop pairs, expedite charges will apply for intervals less than 5 days.
- 2.7.6.2 Unbundled Sub-Loop shall be equal to or better than each of the applicable requirements set forth in the applicable industry standard technical references.
- 2.7.6.3 Unbundled Sub-Loops will be provided in accordance with technical reference TR73600.
- 2.8 **Unbundled Network Terminating Wire (UNTW)**
- 2.8.1 BellSouth agrees to offer its Unbundled Network Terminating Wire (UNTW) to Global Crossing pursuant to the following terms and conditions at rates as set forth in this Attachment.
- 2.8.2 Definition
- 2.8.2.1 Subject to applicable and effective FCC rules and orders, UNTW is a dedicated transmission facility that BellSouth provides from the Wiring Closet /Garden Terminal (or other type of cross-connect point) at the point of termination of BellSouth's loop distribution facilities to the end user's point of demarcation. UNTW is the final portion of the loop owned by BellSouth.

2.8.3 Requirements

- 2.8.3.1 On a multi-unit premises where Provisioning Party owns the network terminating wire, and by request of Requesting Party, Provisioning Party will provide access to UNTW pairs on an Access Terminal that is suitable for use by multiple carriers at each Garden Terminal or Wiring Closet.
- 2.8.3.2 In new construction where possible, both Parties may at their option and with the property owner's agreement install their own Network Terminating Wire (NTW). In existing construction, the Provisioning Party shall not be required to install new or additional NTW beyond existing NTW to provision the services of the Requesting Party.
- 2.8.3.3 Upon notice from the Requesting Party to the Provisioning Party that the Requesting Party desires access to the Provisioning Party's UNTW pairs in a multi-unit premises, representatives of both Parties will participate in a meeting at the site of the requested access. The purpose of the site visit will include discussion of the procedures for Access Terminal installation, location and addresses of the Access Terminals and to discuss an estimated completion date. Upon completion of site visit, the Requesting Party will submit a Service Inquiry (SI) to the person or organization designated by the Provisioning Party to receive the SI. The SI will initiate the work for the Provisioning Party to begin the Access Terminal installation. In multi-tenant unit (MTU) scenarios, Provisioning Party will provide access to UNTW pairs on an Access Terminal(s). By request of the Requesting Party, an Access Terminal will be installed either adjacent to each Provisioning Party's Garden Terminal or inside each Wiring Closet on the requested MTU. All the UNTW pairs served by a Garden Terminal/Wiring Closet will be made available on the Access Terminals. Requesting Party will deliver and connect its central office facilities to the UNTW pairs within the Access Terminal. Requesting Party may access any available pair on an Access Terminal unless the Provisioning Party or another service provider is using the pair to concurrently provide service. Prior to connecting Requesting Party's service on a pair previously used by Provisioning Party, Requesting Party is responsible for ensuring the end-user is no longer using Provisioning Party's service or another CLEC's service before accessing UNTW pairs.
- 2.8.3.4 Provisioning Party will use best efforts to complete installation of the Access Terminals within 30 business days of the receipt by the Provisioning Party of the Service Inquiry from the Requesting Party.
- 2.8.3.5 Requesting Party is responsible for obtaining the property owner's permission for Provisioning Party to install an Access Terminal(s) on behalf of the Requesting Party. The submission of the SI by the Requesting Party will serve as certification by the Requesting Party that such permission has been obtained.

- 2.8.3.6 Requesting Party will be billed for non-recurring and recurring charges for accessing UNTW pairs at the time the Requesting Party activates the pair(s). Global Crossing will report use of the UNTW pairs on a Local Service Request (LSR) form submitted to BellSouth's Local Carrier Service Center (LCSC).
- 2.8.3.7 Requesting Party will isolate and report repair problems to the UNE center. Requesting Party must tag the UNTW pair that requires repair. If Provisioning Party dispatches a technician on a reported trouble call and no UNTW trouble is found, Provisioning Party will charge Requesting Party for time spent on the dispatch and testing the UNTW pair(s).
- 2.8.3.8 If Requesting Party initiates the Access Terminal installation and the Requesting Party has not activated at least one pair on the Access Terminal installed pursuant to Requesting Party's request for an Access Terminal within 6 months of installation of the Access Terminal, Provisioning Party will bill Requesting Party a non-recurring charge equal to the actual cost of provisioning the Access Terminal.
- 2.8.3.9 If Provisioning Party determines that Requesting Party is using the UNTW pairs without reporting such usage to BellSouth, the following charges shall apply in addition to any fines which may be established by state commissions and any other remedies at law or in equity available to the Provisioning Party:
- 2.8.3.10 If Requesting Party issued a LSR to disconnect an end-user from BellSouth in order to use a UNTW pair, Requesting Party will be billed for the use of the pair back to the disconnect order date.
- 2.8.3.11 If Requesting Party activated a UNTW pair on which Provisioning Party was not previously providing service, Requesting Party will be billed for the use of that pair back to the date the end-user began receiving service using that pair. Upon request, Requesting Party will provide copies of its billing record to substantiate such date. If Requesting Party fails to provide such records, then Provisioning Party will bill the Requesting Party back to the date of the Access Terminal installation.
- 2.9 **Unbundled Sub-Loop Concentration System (USLC)**
- 2.9.1 Where facilities permit and where necessary to comply with an effective Commission order, BellSouth will provide Global Crossing with the ability to concentrate its sub-loops onto multiple DS1s back to the BellSouth Central Office. The DS1s will then be terminated into Global Crossing's collocation space. TR-008 and TR303 interface standards are available.
- 2.9.2 USLC, using the Lucent Series 5 equipment, will be offered in two different systems. System A will allow up to 96 of Global Crossing's sub-loops to be concentrated onto multiple DS1s. System B will allow an additional 96 of Global

Crossing's sub-loops to be concentrated onto multiple DS1s. One System A may be supplemented with one System B and they both must be physically located in a single Series 5 dual channel bank. A minimum of two DS1s is required for each system (i.e., System A requires two DS1s and System B would require an additional two DS1s or four in total). The DS1 level facility that connects the RT site with the serving wire center is known as a Feeder Interface. All DS1 Feeder Interfaces will terminate to the CLEC's collocation space within the SWC that serves the RT where the CLEC's sub-loops are connected. USLC service is offered with or without concentration and with or without a protection DS1.

2.9.3 In these scenarios Global Crossing would be required to place a cross-box, remote terminal (RT), or other similar device and deliver a cable to the BellSouth RT. This cable would be connected, by a BellSouth technician, to a cross-connect panel within the BellSouth RT/cross-box and would allow Global Crossing's sub-loops to then be placed on the ULSC and transported to their collocation space at a DS1 level.

2.10 **Unbundled Sub-Loop Feeder**

2.10.1 Definition

2.10.1.1 Unbundled Sub-Loop Feeder (USLF) provides connectivity between BellSouth's central office and its cross-box (or other access point) that serves an end user location.

2.10.2 USLF is intended to be utilized for voice traffic and can be configured as 2-wire voice (USLF-2W/V) or 4-wire voice (USLF-4W/V).

2.10.3 USLF can also be utilized for digital traffic and can be configured as 2-wire ISDN (USLF-2W/I); 2-wire Copper (USLF-2W/C); 4-wire Copper (USLF-4W/C) facilities: 4-wire DS0 level loop (USLF-4W/D0); or 4-wire DS1 and ISDN (USLF-4W/DI).

2.10.4 USLF will provide the facilities needed to provision a 2W or 4W communications pathway from the BellSouth central office to the BellSouth cross-box. This element will allow for the connection of Global Crossing's loop distribution elements onto BellSouth's feeder system.

2.10.5 Requirements

2.10.5.1 Global Crossing will extend its compatible cable to BellSouth's cross-box. The cable will then be connected to a panel inside the BellSouth cross-box to the requested level of feeder element. In those cases when there is no room in the BellSouth cross-box to accommodate the additional cross-connect panels mentioned above, BellSouth will utilize its Special Construction process to determine the costs to provide the sub-loop feeder element to Global Crossing.

Global Crossing will then have the option of paying the special construction charges or canceling the order.

- 2.10.5.2 USLF will be a designed circuit and BellSouth will provide a Design Layout Record (DLR) for this element.
- 2.10.5.3 BellSouth will provide USLF elements in accordance with applicable industry standards for these types of facilities. Where industry standards do not exist, BellSouth's TR73600 will be used to determine performance parameters.
- 2.11 **Dark Fiber**
 - 2.11.1 Definition
 - 2.11.1.1 Dark Fiber is optical transmission facilities without attached signal regeneration, multiplexing, aggregation or other electronics that connects two points within BellSouth's network. Dark Fiber is unused strands of optical fiber. It may be strands of optical fiber existing in aerial or underground structure. No line terminating elements terminated to such strands to operationalize its transmission capabilities will be available.
 - 2.11.2 Requirements
 - 2.11.2.1 BellSouth shall make available Dark Fiber where it exists in BellSouth's network and where, as a result of future building or deployment, it becomes available. If BellSouth has plans to use the fiber within a two –year planning period, there is no requirement to provide said fiber to Global Crossing.
 - 2.11.2.2 If the requested dark fiber has any lightwave repeater equipment interspliced to it, BellSouth will remove such equipment at Global Crossing's request subject to time and materials charges.
 - 2.11.2.3 Global Crossing may test the quality of the Dark Fiber to confirm its usability and performance specifications.
 - 2.11.2.4 BellSouth shall use its best efforts to provide to Global Crossing information regarding the location, availability and performance of Dark Fiber within ten (10) business days for a records-based answer and twenty (20) business days for a field-based answer, after receiving a request from Global Crossing ("Request"). Within such time period, BellSouth shall send written confirmation of availability of the Dark Fiber ("Confirmation"). From the time of the Request to one hundred and twenty (120) days after Confirmation, BellSouth shall hold such requested Dark Fiber for Global Crossing's use and may not allow any other Party to use such media, including BellSouth. If a Dark Fiber firm order is not received within the one hundred and twenty day period, the fiber will revert to BellSouth's Dark Fiber inventory.

2.11.2.5 BellSouth shall use its best efforts to make Dark Fiber available to Global Crossing within thirty (30) business days after it receives written confirmation from Global Crossing that the Dark Fiber previously deemed available by BellSouth is wanted for use by Global Crossing. This includes identification of appropriate connection points (e.g., Light Guide Interconnection (LGX) or splice points) to enable Global Crossing to connect or splice Global Crossing provided transmission media (e.g., optical fiber) or equipment to the Dark Fiber.

2.11.2.6 Dark Fiber shall meet the manufacturer's design specifications.

2.11.2.7 Global Crossing may splice and test Dark Fiber obtained from BellSouth using Global Crossing or Global Crossing designated personnel. BellSouth shall provide appropriate interfaces to allow splicing and testing of Dark Fiber. BellSouth shall provide an excess cable length of 25 feet minimum (for fiber in underground conduit) to allow the uncoiled fiber to reach from the manhole to a splicing van.

2.12 **Rates**

The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment.

2.13 **Operational Support Systems (OSS)**

2.13.1 BellSouth has developed and made available the following electronic interfaces by which Global Crossing may submit LSRs electronically.

LENS	Local Exchange Navigation System
EDI	Electronic Data Interchange
TAG	Telecommunications Access Gateway

2.13.2 LSRs submitted by means of one of these electronic interfaces will incur an OSS electronic ordering charge as specified in the table below. An individual LSR will be identified for billing purposes by its Purchase Order Number (PON). LSRs submitted by means other than one of these interactive interfaces (mail, fax, courier, etc.) will incur a manual order charge as specified in the table below:

OPERATIONAL SUPPORT SYSTEMS	AL, GA, LA, MS, NC, SC	FL, KY, TN
OSS LSR charge, per LSR received from the CLEC by one of the OSS interactive interfaces	\$3.50 SOME C	\$3.50 SOME C

Incremental charge per LSR received from the CLEC by means other than one of the OSS interactive interfaces	See applicable rate element	\$19.99 SOMAN
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2.13.3 Denial/Restoral OSS Charge

2.13.3.1 In the event Global Crossing provides a list of customers to be denied and restored, rather than an LSR, each location on the list will require a separate PON and, therefore will be billed as one LSR per location.

2.13.4 Cancellation OSS Charge

2.13.4.1 Global Crossing will incur an OSS charge for an accepted LSR that is later canceled by Global Crossing.

Note: Supplements or clarifications to a previously billed LSR will not incur another OSS charge.

2.13.5 Network Elements and Other Services Manual Additive

2.13.5.1 The Commissions in some states have ordered per-element manual additive non-recurring charges (NRC) for Network Elements and Other Services ordered by means other than one of the interactive interfaces. These ordered Network Elements and Other Services manual additive NRCs will apply in these states, rather than the charge per LSR. The per-element charges are listed on the Rate Tables in Exhibit D.

2.14 **Preordering Loop Makeup (LMU)**

2.14.1 Description of Service

2.14.1.1 BellSouth shall make available to Global Crossing loop makeup (LMU) data for BellSouth's network facilities. This section addresses LMU as a *preordering* transaction, distinct from Global Crossing ordering any other service(s). Loop Makeup *Service Inquiries (LMUSI)* for *preordering loop makeup* are likewise unique from other preordering functions with associated service inquiries (SI) as described in this Agreement.

2.14.1.2 BellSouth will provide Global Crossing with loop makeup information consisting of the composition of the loop material (copper/fiber); the existence, location and type of equipment on the loop, including but not limited to digital loop carrier or other remote concentration devices, feeder/distribution interfaces, bridge taps, load coils, pair-gain devices; the loop length; and the wire gauge. The LMUSI may be utilized by Global Crossing for the purpose of determining whether the loop requested is capable of supporting DSL service or other advanced data

services. The determination shall be made solely by Global Crossing and BellSouth shall not be liable in any way for the performance of the advanced data services provisioned over said loop.

2.14.1.3 BellSouth's LMU information is provided to Global Crossing as it exists either in BellSouth's databases or in its hard copy facility records. BellSouth does not guarantee accuracy or reliability of the LMU information provided.

2.14.1.4 BellSouth offers LMU information for the sole purpose of allowing Global Crossing to determine whether, in Global Crossing's judgment, BellSouth's loops will support the specific services that Global Crossing wishes to provide over those loops. Global Crossing may choose to use equipment that it deems will enable it to provide a certain type and level of service over a particular BellSouth loop; however, such configurations may not match BellSouth's or the industry's standards and specifications for the intended type and level of service. Accordingly, Global Crossing shall be responsible for insuring that the specific loop type (ADSL, HDSL, or otherwise) ordered on the LSR matches the LMU of the facility requested. Global Crossing bears full responsibility for being knowledgeable of BellSouth's technical standards and the specifications of BellSouth's loops. Global Crossing bears full responsibility for making the appropriate ordering decisions of matching BellSouth loops with Global Crossing's equipment for accomplishing Global Crossing's end goal for the intended service it wishes to provide its end-user(s). Global Crossing is fully responsible for any of its service configurations that may differ from BellSouth's technical standard for the loop type ordered.

2.14.2 Submitting Loop Makeup Service Inquiries

2.14.2.1 Global Crossing will be able to obtain LMU information by submitting a LMUSI mechanically or manually. **Mechanized** LMUSIs should be submitted through BellSouth's Operational Support Systems interfaces. After obtaining the resulting loop data from the mechanized LMUSI process, if Global Crossing determines that it needs further loop data information in order to make a determination of loop service capability, Global Crossing may initiate a separate manual SI for a separate nonrecurring charge as set forth in Section 2.14.3. Mechanized LMU has been made available for limited deployment to those CLECs that have effective X-Digital Subscriber Line (xDSL) Beta Test Agreements in place with BellSouth. CLECs will be notified once a successful Beta Test has been completed, and mechanized LMU shall then be available to Global Crossing.

2.14.2.2 **Manual** LMUSIs shall be submitted on the preordering manual LMUSI form by means of fax or electronic-mail to BellSouth's Complex Resale Support Group (CRSG)/Account Team utilizing the Preordering Loop Makeup Service Inquiry form. The standard service interval for the return of a Loop Makeup Manual Service Inquiry is seven business days. This service interval is distinct from the

interval applied to the subsequent service order. Manual LMUSIs are not subject to expedite requests.

2.14.3 LMUSI Types and Associated Charges

Global Crossing may request LMU information by submitting LMUSIs in accordance with the rate elements in Exhibit D.

2.14.3.1 Global Crossing will be assessed a nonrecurring charge for each facility queried as specified in the table above. Rates for all states are interim and subject to true-up pending approval of final rates by the respective State Commissions. True-ups will be retroactive to the effective date of this Agreement.

2.14.3.2 Global Crossing may reserve facilities for up to four (4) days in connection with a LMUSI. Reserved facilities for which Global Crossing does not plan to place a UNE local service request (LSR) should be cancelled by Global Crossing. Should Global Crossing wish to cancel a reservation on a spare facility, the cancellation will require a facility reservation number (RESID/FRN).

2.14.3.3 The reservation holding timeframe is a maximum of four days from the time that BellSouth's LMU data is returned to Global Crossing for the facility queried. During this holding time and prior to Global Crossing's placing an LSR, the reserved facilities are rendered unavailable to other customers, whether for CLEC(s) or for BellSouth. Notwithstanding the foregoing, BellSouth does not guarantee that a reservation will assure Global Crossing's ability to order the exact facility reserved.

2.14.3.4 If Global Crossing does not submit an LSR for a UNE service on a reserved facility within the four-day reservation timeframe, the reservation of that spare facility will become invalid and the facility will be released.

2.14.3.5 Charges for preordering LMUSI are separate from any charges associated with ordering other services from BellSouth.

2.14.4 Ordering of Other UNE Services

2.14.4.1 Whenever Global Crossing has reserved a facility through BellSouth's preordering LMU service, should Global Crossing seek to place a subsequent UNE LSR on a reserved facility, Global Crossing shall provide BellSouth the RESID/FRN of the single spare facility on the appropriate UNE LSR., Global Crossing will be billed the appropriate rate element for the specific type UNE loop ordered by Global Crossing as set forth in this Attachment. Global Crossing will not be billed any additional Loop Makeup charges for the loop so ordered. Should Global Crossing choose to place a UNE LSR having previously submitted a request for *preordering LMU without a reservation*, Global Crossing will be billed the appropriate rate element for the specific UNE loop ordered as well as additional

Loop Makeup charges as set forth in this Attachment. Rates are provided in Exhibit D in this Attachment.

- 2.14.4.2 Where Global Crossing submits an LSR to order facilities reserved during the LMUSI process, BellSouth will use its best efforts to assign to Global Crossing the facility reserved as indicated on the return of the LMU. Multi-facility reservations per single RESID/FRN as provided with the mechanized LMUSI process are less likely to result in the specific assignment requested by Global Crossing. For those occasions when BellSouth cannot assign the specific facility reserved by Global Crossing during the LMU pre-ordering transaction, due to incomplete or incorrect information provided by Global Crossing during the ordering process, BellSouth will assign to Global Crossing, subject to availability, a facility that meets the BellSouth technical standards of the BellSouth type loop as ordered by Global Crossing. If the ordered loop type is not available, Global Crossing may utilize the Unbundled Loop Modification process or the Special Construction process, as applicable, to obtain the loop type ordered.

2.15 **Rates**

The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. If Global Crossing purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.

2.16 **Operational Support Systems (OSS)**

The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.

3. High Frequency Spectrum Network Element

3.1 General

- 3.1.1 BellSouth shall provide Global Crossing access to the high frequency portion of the local loop as an unbundled network element only where BellSouth is the voice service provider to the end user (“High Frequency Spectrum”) at the rates set forth in Exhibit D. BellSouth shall provide Global Crossing with the High Frequency Spectrum irrespective of whether BellSouth chooses to offer xDSL services on the loop.

- 3.1.2 The High Frequency Spectrum is defined as the frequency range above the voiceband on a copper loop facility carrying analog circuit-switched voiceband transmissions. Access to the High Frequency Spectrum is intended to allow Global Crossing the ability to provide Digital Subscriber Line (“xDSL”) data

services to the end user for which BellSouth provides voice services. The High Frequency Spectrum shall be available for any version of xDSL presumed acceptable for deployment pursuant to 47 CFR Section 51.230, including, but not limited to, ADSL, HDSL, and any other xDSL technology that is presumed to be acceptable for deployment pursuant to FCC rules. BellSouth will continue to have access to the low frequency portion of the loop spectrum (from 300 Hertz to at least 3000 Hertz, and potentially up to 3400 Hertz, depending on equipment and facilities) for the purposes of providing voice service. Global Crossing shall only use xDSL technology that is within the PSD mask parameters set forth in T1.413 or other applicable industry standards. Global Crossing shall provision xDSL service on the High Frequency Spectrum in accordance with the applicable Technical Specifications and Standards.

- 3.1.3 The following loop requirements are necessary for Global Crossing to be able to access the High Frequency Spectrum: an unconditioned, 2-wire copper loop. An unconditioned loop is a copper loop with no load coils, low-pass filters, range extenders, DAMLs, or similar devices and minimal bridged taps consistent with ANSI T1.413 and T1.601. BellSouth will provide Global Crossing access to the Unbundled Loop Modification (Line Conditioning), in accordance with Section 2.2 of this Agreement. BellSouth is not required to condition a loop for access to the high frequency spectrum if conditioning of that loop significantly degrades BellSouth's voice service. If Global Crossing requests that BellSouth condition a loop longer than 18,000 ft. and such conditioning significantly degrades the voice services on the loop, Global Crossing shall pay for the loop to be restored to its original state.
- 3.1.4 Global Crossing's termination point is the point of termination for Global Crossing on the toll main distributing frame in the central office ("Termination Point"). BellSouth will use jumpers to connect Global Crossing's connecting block to the splitter. The splitter will route the High Frequency Spectrum on the circuit to Global Crossing's xDSL equipment in Global Crossing's collocation space.
- 3.1.5 Global Crossing shall have access to the splitter for test purposes, irrespective of where the splitter is placed in the BellSouth premises.
- 3.2 Provisioning of High Frequency Spectrum and Splitter Space
- 3.2.1 BellSouth will provide Global Crossing with access to the High Frequency Spectrum as follows:
- 3.2.1.1 BellSouth will install splitters within forty-two (42) calendar days of Global Crossing's submission of such order to the BellSouth Complex Resale Support Group; provided, however, that in the event BellSouth did not have reasonable notice that a particular central office was to have a splitter installed therein, the

forty-two (42) day interval shall not apply. Collocation itself or an application for collocation will serve as reasonable notice.

- 3.2.1.2 Once a splitter is installed on behalf of Global Crossing in a central office, Global Crossing shall be entitled to order the High Frequency Spectrum on lines served out of that central office.
- 3.2.1.2.1 BellSouth will bill and Global Crossing shall pay the SOMAN and SOMEK charges as described in Section 2.13 of this Agreement when Global Crossing orders High Frequency Spectrum for end-user service.
- 3.2.1.3 BellSouth will select, purchase, install, and maintain a central office POTS splitter and provide Global Crossing access to data ports on the splitter. At least 30 days before making a change in splitter suppliers, BellSouth will provide Global Crossing with a carrier notification letter, informing Global Crossing of change. Global Crossing shall purchase ports on the splitter as set forth more fully below.
- 3.2.1.4 BellSouth will install the splitter in (i) a common area close to the Global Crossing collocation area, if possible; or (ii) in a BellSouth relay rack as close to the Global Crossing DS0 termination point as possible. For purposes of this section, a common area is defined as an area in the central office in which both Parties have access to a common test access point. BellSouth will cross-connect the splitter data ports to a specified Global Crossing DS0 at such time that a Global Crossing end user's service is established.
- 3.2.1.5 The High Frequency Spectrum shall only be available on loops on which BellSouth is also providing, and continues to provide, analog voice service directly to the end user. In the event the end-user terminates its BellSouth provided voice service for any reason, and Global Crossing desires to continue providing xDSL service on such loop, Global Crossing shall be required to purchase a full stand-alone loop unbundled network element. In the event BellSouth disconnects the end-user's voice service pursuant to its tariffs or applicable law, and Global Crossing desires to continue providing xDSL service on such loop, Global Crossing shall be permitted to continue using the line by purchasing the full stand-alone loop unbundled network element. To the extent commercially practicable, BellSouth shall give Global Crossing notice in a reasonable time prior to disconnect, which notice shall give Global Crossing an adequate opportunity to notify BellSouth of its intent to purchase such loop. In those cases in which BellSouth no longer provides voice service to the end user and Global Crossing purchases the full stand-alone loop, Global Crossing may elect the type of loop it will purchase. Global Crossing will pay the appropriate recurring and non-recurring rates for such loop as set forth in Exhibit D to this Attachment. In the event Global Crossing purchases a voice grade loop, Global Crossing acknowledges that such loop may not remain xDSL compatible.

- 3.2.1.6 Only one competitive local exchange carrier shall be permitted access to the High Frequency Spectrum of any particular loop.
- 3.3.1 To order High Frequency Spectrum on a particular loop, Global Crossing must have a DSLAM collocated in the central office that serves the end-user of such loop. Global Crossing may order splitters in a central office once it has installed its Digital Subscriber Line Access Multiplexer (“DSLAM”) in that central office. BellSouth will install these splitters within the interval provided in paragraph 3.2.1.1.
- 3.3.2 BellSouth will devise a splitter order form that allows Global Crossing to order splitter ports in increments of 24 ports.
- 3.3.2.1 BellSouth will provide Global Crossing the Local Service Request (“LSR”) format to be used when ordering the High Frequency Spectrum.
- 3.3.3 BellSouth will provide access to the High Frequency Spectrum within the following target intervals: BellSouth will return a manual Firm Order Confirmation (“FOC”) in no more than two (2) business days after receipt of a valid, error free manual LSR. When Global Crossing submits an electronic LSR for High Frequency Spectrum, BellSouth will return a FOC in four (4) hours ninety-five percent (95%) of the time, or, for orders that do not flow-through, in two (2) business days. BellSouth will provide Global Crossing with access to the High Frequency Spectrum at the following target intervals:
 - 3.3.3.1 For 1-5 lines at the same address within three (3) business days from BellSouth’s issuance of a FOC; 6-10 lines at same address within 5 business days from BellSouth’s issuance of a FOC; and more than 10 lines at the same address is to be negotiated.
- 3.3.4 BellSouth will provide to Global Crossing BellSouth’s Loop Qualification System that BellSouth uses to qualify loops for its own ADSL offering as described below.
- 3.3.5 BellSouth will provide Global Crossing access to the Preordering Loop Makeup (LMU), in accordance with Section 2.14 of this Agreement. BellSouth shall bill and Global Crossing shall pay the rates for such services, as described in Exhibit D.
- 3.4 Maintenance and Repair
 - 3.4.1 Global Crossing shall have access, for test, repair, and maintenance purposes, to any loop as to which it has access to the High Frequency Spectrum. Global Crossing may access the loop at the point where the combined voice and data signal exits the central office splitter.

- 3.4.2 BellSouth will be responsible for repairing voice services and the physical line between the network interface device at the customer's premises and the Termination Point of demarcation in the central office. Global Crossing will be responsible for repairing data services. Each Party will be responsible for maintaining its own equipment.
- 3.4.3 Global Crossing shall inform its end users to direct data problems to Global Crossing, unless both voice and data services are impaired, in which event the end users should call BellSouth.
- 3.4.4
- 3.4.5 Once a Party has isolated a trouble to the other Party's portion of the loop, the Party isolating the trouble shall notify the end user that the trouble is on the other Party's portion of the loop.
- 3.4.6
- 3.4.7 In the event Global Crossing's deployment of xDSL on the High Frequency Spectrum significantly degrades the performance of other advanced services or of BellSouth's voice service on the same loop, BellSouth shall notify Global Crossing and allow twenty-four (24) hours to cure the trouble. If Global Crossing fails to resolve the trouble, BellSouth may discontinue Global Crossing's access to the High Frequency Spectrum on such loop.

3.5 **Rates**

The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. If Global Crossing purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.

3.6 **Operational Support Systems (OSS)**

The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.

4. **Switching**

All of the negotiated rates, terms and conditions set forth in this Section pertain to the provision of local and tandem switching.

4.1 **Local Switching**

- 4.1.1 BellSouth shall provide non-discriminatory access to local circuit switching capability, and local tandem switching capability, on an unbundled basis, except

as set forth below in Section 4.1.3.3 to Global Crossing for the provision of a telecommunications service. BellSouth shall provide non-discriminatory access to packet switching capability on an unbundled basis to Global Crossing for the provision of a telecommunications service only in the limited circumstance described below in Section 4.4.6.

4.1.2 Except as otherwise provided herein, BellSouth shall not impose any restrictions on Global Crossing regarding the use of Switching Capabilities purchased from BellSouth provided such use does not result in demonstrable harm to either the BellSouth network or personnel or the use of the BellSouth network by BellSouth or any other telecommunication carrier.

4.1.3 **Local Circuit Switching Capability, including Tandem Switching Capability**

4.1.3.1 Definition

Local Circuit Switching Capability is defined as: (A) line-side facilities, which include, but are not limited to, the connection between a loop termination at a main distribution frame and a switch line card; (B) trunk-side facilities, which include, but are not limited to, the connection between trunk termination at a trunk-side cross-connect panel and a switch trunk card; and (C) all features, functions, and capabilities of the switch, which include, but are not limited to: (1) the basic switching function of connecting lines to lines, line to trunks, trunks to lines, and trunks to trunks, as well as the same basic capabilities made available to BellSouth's customers, such as a telephone number, white page listings, and dial tone; and (2) all other features that the switch is capable of providing, including but not limited to customer calling, customer local area signaling service features, and Centrex, as well as any technically feasible customized routing functions provided by the switch; (D) switching provided by remote switching modules.

4.1.3.2 Notwithstanding BellSouth's general duty to unbundle local circuit switching, BellSouth shall not be required to unbundle local circuit switching for Global Crossing when Global Crossing serves end-users with four (4) or more voice-grade (DS-0) equivalents or lines in locations served by BellSouth's local circuit switches, which are in the following MSAs: Atlanta, GA; Miami, FL; Orlando, FL; Ft. Lauderdale, FL; Charlotte-Gastonia-Rock Hill, NC; Greensboro-Winston Salem-High Point, NC; Nashville, TN; and New Orleans, LA, and BellSouth has provided non-discriminatory cost based access to the Enhanced Extended Link (EEL) throughout Density Zone 1 as determined by NECA Tariff No. 4 as in effect on January 1, 1999.

4.1.3.3 In the event that Global Crossing orders local circuit switching for a single end user account name at a single physical end user location with four (4) or more 2-wire voice-grade loops from a BellSouth central office in an MSA listed above, BellSouth shall charge Global Crossing the market based rate in Exhibit D for use of the local circuit switching functionality for the affected facilities.

- 4.1.3.4 A featureless port is one that has a line port, switching facilities, and an interoffice port. A featured port is a port that includes all features then capable or a number of then capable features specifically requested by Global Crossing. Any features that are not currently then capable but are technically feasible through the switch can be requested through the NBR/BFR process.
- 4.1.3.5 BellSouth will provide to Global Crossing customized routing of calls: (i) to a requested directory assistance services platform; (ii) to an operator services platform pursuant to Section 10 of Attachment 2; (iii) for Global Crossing's PIC'ed toll traffic in a two (2) PIC environment to an alternative OS/DA platform designated by Global Crossing. Global Crossing customers may use the same dialing arrangements as BellSouth customers.
- 4.1.3.6 Remote Switching Module functionality is included in Switching Capability. The switching capabilities used will be based on the line side features they support.
- 4.1.3.7 Switching Capability will also be capable of routing local, intraLATA, interLATA, and calls to international customer's preferred carrier; call features (e.g. call forwarding) and Centrex capabilities.
- 4.1.3.8 Where required to do so in order to comply with an effective Commission order, BellSouth will provide to Global Crossing purchasing local BellSouth switching and reselling BellSouth local exchange service under Attachment 1, selective routing of calls to a requested directory assistance services platform or operator services platform. Global Crossing customers may use the same dialing arrangements as BellSouth customers, but obtain a Global Crossing branded service.
- 4.1.4 Technical Requirements
- 4.1.4.1 The requirements set forth in this Section apply to Local Switching, but not to the Data Switching function of Local Switching.
- 4.1.4.2 Local Switching shall be equal to or better than the requirements for Local Switching set forth in the applicable industry standard technical references.
- 4.1.4.3 When applicable, BellSouth shall route calls to the appropriate trunk or lines for call origination or termination.
- 4.1.4.4 Subject to this section, BellSouth shall route calls on a per line or per screening class basis to (1) BellSouth platforms providing Network Elements or additional requirements (2) Operator Services platforms, (3) Directory Assistance platforms, and (4) Repair Centers. Any other routing requests by Global Crossing will be made pursuant to the BFR/NBR Process as set forth in General Terms and Conditions.

- 4.1.4.5 BellSouth shall provide unbranded recorded announcements and call progress tones to alert callers of call progress and disposition.
- 4.1.4.6 BellSouth shall activate service for Global Crossing customer or network interconnection on any of the Local Switching interfaces. This includes provisioning changes to change a customer from BellSouth's services to Global Crossing's services without loss of switch feature functionality as defined in this Agreement.
- 4.1.4.7 BellSouth shall perform routine testing (e.g., Mechanized Loop Tests (MLT) and test calls such as 105, 107 and 108 type calls) and fault isolation on a mutually agreed upon schedule.
- 4.1.4.8 BellSouth shall repair and restore any equipment or any other maintainable component that may adversely impact Local Switching.
- 4.1.4.9 BellSouth shall control congestion points such as those caused by radio station call-ins, and network routing abnormalities. All traffic shall be restricted in a non-discriminatory manner.
- 4.1.4.10 BellSouth shall perform manual call trace and permit customer originated call trace.
- 4.1.4.11 Special Services provided by BellSouth will include the following:
 - 4.1.4.11.1 Telephone Service Prioritization;
 - 4.1.4.11.2 Related services for handicapped;
 - 4.1.4.11.3 Soft dial tone where required by law; and
 - 4.1.4.11.4 Any other service required by law.
- 4.1.4.12 BellSouth shall provide Switching Service Point (SSP) capabilities and signaling software to interconnect the signaling links destined to the Signaling Transfer Point Switch (STPS). These capabilities shall adhere to the technical specifications set forth in the applicable industry standard technical references.
- 4.1.4.13 BellSouth shall provide interfaces to adjuncts through Telcordia (formerly BellCore) standard interfaces. These adjuncts can include, but are not limited to, the Service Circuit Node and Automatic Call Distributors.
- 4.1.4.14 BellSouth shall provide performance data regarding a customer line, traffic characteristics or other measurable elements to Global Crossing, upon a reasonable request from Global Crossing. Global Crossing will pay BellSouth for all costs incurred to provide such performance data through the Business Opportunity Request process.

- 4.1.4.15 BellSouth shall offer Local Switching that provides feature offerings at parity to those provided by BellSouth to itself or any other Party.
- 4.1.4.16 BellSouth shall offer to Global Crossing all AIN triggers in connection with its SMS/SCE offering which are supported by BellSouth for offering AIN-based services
- 4.1.4.17 Where capacity exists, BellSouth shall assign each Global Crossing customer line the class of service designated by Global Crossing (e.g., using line class codes or other switch specific provisioning methods), and shall route directory assistance calls from Global Crossing customers to Global Crossing directory assistance operators at Global Crossing's option.
- 4.1.4.18 Where capacity exists, BellSouth shall assign each Global Crossing customer line the class of services designated by Global Crossing (e.g., using line class codes or other switch specific provisioning methods) and shall route operator calls from Global Crossing customers to Global Crossing operators at Global Crossing's option. For example, BellSouth may translate 0- and 0+ intraLATA traffic, and route the call through appropriate trunks to Global Crossing Operator Services Position System (OSPS). Calls from Local Switching must pass the ANI-II digits unchanged.
- 4.1.4.19 Local Switching shall be offered in accordance with the technical specifications set forth in the applicable industry standard references.
- 4.1.5 Interface Requirements. BellSouth shall provide the following interfaces to loops:
- 4.1.5.1 Standard Tip/Ring interface including loopstart or groundstart, on-hook signaling (e.g., for calling number, calling name and message waiting lamp);
- 4.1.5.2 Coin phone signaling;
- 4.1.5.3 Basic Rate Interface ISDN adhering to appropriate Telcordia (formerly BellCore) Technical Requirements;
- 4.1.5.4 Two-wire analog interface to PBX;
- 4.1.5.5 Four-wire analog interface to PBX;
- 4.1.5.6 Four-wire DS1 interface to PBX or customer provided equipment (e.g. computers and voice response systems);
- 4.1.5.7 Primary Rate ISDN to PBX adhering to ANSI standards Q.931, Q.932 and appropriate Telcordia (formerly BellCore) Technical Requirements;
- 4.1.5.8 Switched Fractional DS1 with capabilities to configure Nx64 channels (where N = 1 to 24); and

4.1.5.9 Loops adhering to Telcordia (formerly BellCore) TR-NWT-08 and TR-NWT-303 specifications to interconnect Digital Loop Carriers.

4.1.6 BellSouth shall provide access to the following but not limited to:

4.1.6.1 SS7 Signaling Network or Multi-Frequency trunking if requested by Global Crossing;

4.1.6.2 Interface to Global Crossing operator services systems or Operator Services through appropriate trunk interconnections for the system; and

4.1.6.3 Interface to Global Crossing Directory Assistance Services through the Global Crossing switched network or to Directory Assistance Services through the appropriate trunk interconnections for the system; and 950 access or other Global Crossing required access to interexchange carriers as requested through appropriate trunk interfaces.

4.2 **Tandem Switching**

4.2.1 Definition

Tandem Switching is the function that establishes a communications path between two switching offices through a third switching office (the Tandem switch).

4.2.2 Technical Requirements

Tandem Switching shall have the same capabilities or equivalent capabilities as those described in Bell Communications Research TR-TSY-000540 Issue 2R2, Tandem Supplement, 6/1/90. The requirements for Tandem Switching include, but are not limited to the following:

4.2.2.1 Tandem Switching shall provide signaling to establish a tandem connection;

4.2.2.2 Tandem Switching will provide screening as jointly agreed to by Global Crossing and BellSouth;

4.2.2.3 Tandem Switching shall provide Advanced Intelligent Network triggers supporting AIN features where such routing is not available from the originating end office switch, to the extent such Tandem switch has such capability;

4.2.2.4 Tandem Switching shall provide access to Toll Free number portability database as designated by Global Crossing;

4.2.2.5 Tandem Switching shall provide all trunk interconnections discussed under the "Network Interconnection" section (e.g., SS7, MF, DTMF, DialPulse, PRI-ISDN, DID, and CAMA-ANI (if appropriate for 911));

- 4.2.2.6 Tandem Switching shall provide connectivity to PSAPs where 911 solutions are deployed and the tandem is used for 911; and
- 4.2.2.7 Where appropriate, Tandem Switching shall provide connectivity to transit traffic to and from other carriers.
- 4.2.3 Tandem Switching shall accept connections (including the necessary signaling and trunking interconnections) between end offices, other tandems, IXCs, ICOs, CAPs and CLEC switches.
- 4.2.4 Tandem Switching shall provide local tandeming functionality between two end offices including two offices belonging to different CLECs (e.g., between a CLEC end office and the end office of another CLEC).
- 4.2.5 Tandem Switching shall preserve CLASS/LASS features and Caller ID as traffic is processed.
- 4.2.6 Tandem Switching shall record billable events and send them to the area billing centers designated by Global Crossing. Tandem Switching will provide recording of all billable events as jointly agreed to by Global Crossing and BellSouth.
- 4.2.7 Upon a reasonable request from Global Crossing, BellSouth shall perform routine testing and fault isolation on the underlying switch that is providing Tandem Switching and all its interconnections. The results and reports of the testing shall be made immediately available to Global Crossing.
- 4.2.8 BellSouth shall maintain Global Crossing's trunks and interconnections associated with Tandem Switching at least at parity to its own trunks and interconnections.
- 4.2.9 BellSouth shall control congestion points and network abnormalities. All traffic will be restricted in a non-discriminatory manner.
- 4.2.10 Selective Call Routing through the use of line class codes is not available through the use of tandem switching. Selective Call Routing through the use of line class codes is an end office capability only. Detailed primary and overflow routing plans for all interfaces available within BellSouth's switching network shall be mutually agreed to by Global Crossing and BellSouth.
- 4.2.11 Tandem Switching shall process originating toll-free traffic received from Global Crossing's local switch.
- 4.2.12 In support of AIN triggers and features, Tandem Switching shall provide SSP capabilities when these capabilities are not available from the Local Switching Network Element, to the extent such Tandem Switch has such capability.
- 4.2.13 Interface Requirements

- 4.2.13.1 Tandem Switching shall provide interconnection to the E911 PSAP where the underlying Tandem is acting as the E911 Tandem.
- 4.2.13.2 Tandem Switching shall interconnect, with direct trunks, to all carriers with which BellSouth interconnects.
- 4.2.13.3 BellSouth shall provide all signaling necessary to provide Tandem Switching with no loss of feature functionality.
- 4.2.13.4 Tandem Switching shall interconnect with Global Crossing's switch, using two-way trunks, for traffic that is transiting via BellSouth's network to interLATA or intraLATA carriers. At Global Crossing's request, Tandem Switching shall record and keep records of traffic for billing.
- 4.2.13.5 Tandem Switching shall provide an alternate final routing pattern for Global Crossing's traffic overflowing from direct end office high usage trunk groups.
- 4.2.13.6 Tandem Switching shall be equal to or better than the requirements for Tandem Switching set forth in the applicable technical references.
- 4.3 **AIN Selective Carrier Routing for Operator Services, Directory Assistance and Repair Centers**
 - 4.3.1 BellSouth will provide AIN Selective Carrier Routing at the request of Global Crossing. AIN Selective Carrier Routing will provide Global Crossing with the capability of routing operator calls, 0+ and 0- and 0+ NPA (LNPA) 555-1212 directory assistance, 1+411 directory assistance and 611 repair center calls to pre-selected destinations.
 - 4.3.2 Global Crossing shall order AIN Selective Carrier Routing through its Account Team. AIN Selective Carrier Routing must first be established regionally and then on a per central office, per state basis.
 - 4.3.3 AIN Selective Carrier Routing is not available in DMS 10 switches.
 - 4.3.4 Where AIN Selective Carrier Routing is utilized by Global Crossing, the routing of Global Crossing's end user calls shall be pursuant to information provided by Global Crossing and stored in BellSouth's AIN Selective Carrier Routing Service Control Point database. AIN Selective Carrier Routing shall utilize a set of Line Class Codes (LCCs) unique to a basic class of service assigned on an 'as needed' basis. The same LCCs will be assigned in each central office where AIN Selective Carrier Routing is established.
 - 4.3.5 Upon ordering of AIN Selective Carrier Routing Regional Service, Global Crossing shall remit to BellSouth the Regional Service Order non-recurring charges set forth in Exhibit D of this Attachment. There shall be a non-recurring End Office Establishment Charge per office due at the addition of each central

office where AIN Selective Carrier Routing will be utilized. Said non-recurring charge shall be as set forth in Exhibit D of this Attachment. For each Global Crossing end user activated, there shall be a non-recurring End User Establishment charge as set forth in Exhibit D of this Attachment, payable to BellSouth pursuant to the terms of the General Terms and Conditions, incorporated herein by this reference. Global Crossing shall pay the AIN Selective Carrier Routing Per Query Charge set forth in Exhibit D of this Attachment.

- 4.3.6 This Regional Service Order non-recurring charge will be non-refundable and will be paid with 1/2 due up-front with the submission of all fully completed required forms, including: Regional Selective Carrier Routing (SCR) Order Request-Form A, Central Office AIN Selective Carrier Routing (SCR) Order Request - Form B, AIN_SCR Central Office Identification Form - Form C, AIN_SCR Routing Options Selection Form - Form D, and Routing Combinations Table - Form E. BellSouth has 30 days to respond to the client's fully completed firm order as a Regional Service Order. With the delivery of this firm order response to the client, BellSouth considers that the delivery schedule of this service commences. The remaining 1/2 of the Regional Service Order payment must be paid when at least 90% of the Central Offices listed on the original order have been turned up for the service.
- 4.3.7 The non-recurring End Office Establishment Charge will be billed to the client following BellSouth's normal monthly billing cycle for this type of order.
- 4.3.8 End-User Establishment Orders will not be turned-up until the second payment is received for the Regional Service Order. The non-recurring End-User Establishment Charges will be billed to the client following BellSouth's normal monthly billing cycle for this type of order.
- 4.3.9 Additionally, the AIN Selective Carrier Routing Per Query Charge will be billed to the client following the normal billing cycle for per query charges.
- 4.3.10 All other network components needed, for example, unbundled switching and unbundled local transport, etc, will be billed per contracted rates.

4.4 **Packet Switching Capability**

4.4.1 Definition

The packet switching capability network element is defined as the function of routing or forwarding packets, frames, cells or other data units based on address or other routing information contained in the packets, frames, cells or other data units.

- 4.4.2 BellSouth shall be required to provide non-discriminatory access to unbundled packet switching capability only where each of the following conditions are satisfied:
- 4.4.2.1 BellSouth has deployed digital loop carrier systems, including but not limited to, integrated digital loop carrier or universal digital loop carrier systems; or has deployed any other system in which fiber optic facilities replace copper facilities in the distribution section (e.g., end office to remote terminal, pedestal or environmentally controlled vault);
- 4.4.2.2 There are no spare copper loops capable of supporting the xDSL services Global Crossing seeks to offer;
- 4.4.2.3 BellSouth has not permitted Global Crossing to deploy a DSLAM at the remote terminal, pedestal or environmentally controlled vault or other interconnection point, nor has Global Crossing obtained a virtual collocation arrangement at these sub-loop interconnection points as defined by 47 CFR § 51.319 (b); and
- 4.4.2.4 BellSouth has deployed packet switching capability for its own use.
- 4.4.3 If there is a dispute as to whether BellSouth must provide Packet Switching, such dispute will be resolved according to the dispute resolution process set forth in Section 12 of the General Terms and Conditions of this Agreement, incorporated herein by this reference.

4.4 **Interoffice Transmission Facilities**

BellSouth shall provide nondiscriminatory access, in accordance with FCC Rule 51.311 and Section 251(c)(3) of the Act, to interoffice transmission facilities on an unbundled basis to Global Crossing for the provision of a telecommunications service.

4.5 **Rates**

The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. If Global Crossing purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.

4.6 **Operational Support Systems (OSS)**

The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.

5. **Unbundled Network Element Combinations**

5.1. Unbundled Network Element Combinations shall include: 1) Enhanced Extended Links (EELs); 2) UNE Loops/Special Access Combinations; 3) Loop/Port Combinations; and 4) Transport Combinations.

5.2. For purposes of this Section, references to “Currently Combined” network elements shall mean that such network elements are in fact already combined by BellSouth in the BellSouth network to provide service to a particular end user at a particular location.

5.3. Enhanced Extended Links (EELs)

5.3.1 Where facilities permit and where necessary to comply with an effective FCC and/or State Commission order, or as otherwise mutually agreed by the Parties, BellSouth shall offer access to loop and transport combinations, also known as the Enhanced Extended Link (“EEL”) as defined in Section 5.3.2 below.

5.3.2 Subject to Section 5.3.3 below, BellSouth will provide access to the EEL in the combinations set forth in Section 5.3.4 following. This offering is intended to provide connectivity from an end user’s location through that end user’s SWC to Global Crossing’s POP serving wire center. The circuit must be connected to Global Crossing’s switch for the purpose of provisioning telephone exchange service to Global Crossing’s end-user customers. The EEL will be connected to Global Crossing’s facilities in Global Crossing’s collocation space at the POP SWC, or Global Crossing may purchase BellSouth’s access facilities between Global Crossing’s POP and Global Crossing’s collocation space at the POP SWC.

5.3.3 BellSouth shall provide EEL combinations to Global Crossing in Georgia regardless of whether or not such EELs are Currently Combined. In all other states, BellSouth shall make available to Global Crossing those EEL combinations described in Section 5.3.4 below only to the extent such combinations are Currently Combined. Furthermore, BellSouth will make available EEL combinations to Global Crossing in density Zone 1, as defined in 47 CFR 69.123 as of January 1, 1999, in the Atlanta, GA; Miami, FL; Orlando, FL; Ft. Lauderdale, FL; Charlotte-Gastonia-Rock Hill, NC; Greensboro-Winston Salem-High Point, NC; Nashville, TN; and New Orleans, LA, MSAs regardless of whether or not such EELs are Currently Combined. Except as stated above, EELs will be provided to Global Crossing only to the extent such network elements are Currently Combined.

5.3.4 EEL Combinations

5.3.4.1 DS1 Interoffice Channel + DS1 Channelization + 2-wire VG Local Loop

5.3.4.2 DS1 Interoffice Channel + DS1 Channelization + 4-wire VG Local Loop

5.3.4.3 DS1 Interoffice Channel + DS1 Channelization + 2-wire ISDN Local Loop

- 5.3.4.4 DS1 Interoffice Channel + DS1 Channelization + 4-wire 56 kbps Local Loop
- 5.3.4.5 DS1 Interoffice Channel + DS1 Channelization + 4-wire 64 kbps Local Loop
- 5.3.4.6 DS1 Interoffice Channel + DS1 Local Loop
- 5.3.4.7 DS3 Interoffice Channel + DS3 Local Loop
- 5.3.4.8 STS-1 Interoffice Channel + STS-1 Local Loop
- 5.3.4.9 DS3 Interoffice Channel + DS3 Channelization + DS1 Local Loop
- 5.3.4.10 STS-1 Interoffice Channel + DS3 Channelization + DS1 Local Loop
- 5.3.4.11 2-wire VG Interoffice Channel + 2-wire VG Local Loop
- 5.3.4.12 4wire VG Interoffice Channel + 4-wire VG Local Loop
- 5.3.4.13 4-wire 56 kbps Interoffice Channel + 4-wire 56 kbps Local Loop
- 5.3.4.14 4-wire 64 kbps Interoffice Channel + 4-wire 64 kbps Local Loop
- 5.3.5 EEL combinations for DS1 level and above will be available only when Global Crossing provides and handles at least one third of the end user's local traffic over the facility provided. In addition, on the DS1 loop portion of the combination, at least fifty (50) percent of the activated channels must have at least five (5) percent local voice traffic individually and, for the entire DS1 facility, at least ten (10) percent of the traffic must be local voice traffic.
- 5.3.6 When combinations of loop and transport network elements include multiplexing, each of the individual DS1 circuits must meet the above criteria.
- 5.3.7 Special Access Service Conversions
 - 5.3.7.1 Global Crossing may not convert special access services to combinations of loop and transport network elements, whether or not Global Crossing self-provides its entrance facilities (or obtains entrance facilities from a third party), unless Global Crossing uses the combination to provide a significant amount of local exchange service, in addition to exchange access service, to a particular customer. To the extent Global Crossing requests to convert any special access services to combinations of loop and transport network elements at UNE prices, Global Crossing shall provide to BellSouth a letter certifying that Global Crossing is providing a significant amount of local exchange service (as described in this Section) over such combinations. The certification letter shall also indicate under what local usage option Global Crossing seeks to qualify for conversion of special access circuits. Global Crossing shall be deemed to be providing a significant amount of local exchange service over such combinations if one of the following

options is met:

- 5.3.7.1.1 Global Crossing certifies that it is the exclusive provider of an end user's local exchange service. The loop-transport combinations must terminate at Global Crossing's collocation arrangement in at least one BellSouth central office. This option does not allow loop-transport combinations to be connected to BellSouth's tariffed services. Under this option, Global Crossing is the end user's only local service provider, and thus, is providing more than a significant amount of local exchange service. Global Crossing can then use the loop-transport combinations that serve the end user to carry any type of traffic, including using them to carry 100 percent interstate access traffic; or
- 5.3.7.1.2 Global Crossing certifies that it provides local exchange and exchange access service to the end user customer's premises and handles at least one third of the end user customer's local traffic measured as a percent of total end user customer local dialtone lines; and for DS1 circuits and above, at least 50 percent of the activated channels on the loop portion of the loop-transport combination have at least 5 percent local voice traffic individually, and the entire loop facility has at least 10 percent local voice traffic. When a loop-transport combination includes multiplexing, each of the individual DS1 circuits must meet this criteria. The loop-transport combination must terminate at Global Crossing's collocation arrangement in at least one BellSouth central office. This option does not allow loop-transport combinations to be connected to BellSouth tariffed services; or
- 5.3.7.1.3 Global Crossing certifies that at least 50 percent of the activated channels on a circuit are used to provide originating and terminating local dialtone service and at least 50 percent of the traffic on each of these local dialtone channels is local voice traffic, and that the entire loop facility has at least 33 percent local voice traffic. When a loop-transport combination includes multiplexing, each of the individual DS1 circuits must meet this criteria. This option does not allow loop-transport combinations to be connected to BellSouth's tariffed services. Under this option, collocation is not required. Global Crossing does not need to provide a defined portion of the end user's local service, but the active channels on any loop-transport combination, and the entire facility, must carry the amount of local exchange traffic specified in this option.
- 5.3.7.2 In addition, there may be extraordinary circumstances where Global Crossing is providing a significant amount of local exchange service, but does not qualify under any of the three options set forth in Section 5.3.7.1. In such case, Global Crossing may petition the FCC for a waiver of the local usage options set forth in the June 2, 2000 Order. If a waiver is granted, then upon Global Crossing's request the Parties shall amend this Agreement to the extent necessary to incorporate the terms of such waiver for such extraordinary circumstance.
- 5.3.7.3 BellSouth may at its sole discretion audit Global Crossing records in order to verify the type of traffic being transmitted over combinations of loop and transport

network elements. The audit shall be conducted by a third party independent auditor, and Global Crossing shall be given thirty days written notice of scheduled audit. Such audit shall occur no more than one time in a calendar year, unless results of an audit find noncompliance with the significant amount of local exchange service requirement. In the event of noncompliance, Global Crossing shall reimburse BellSouth for the cost of the audit. If, based on its audits, BellSouth concludes that Global Crossing is not providing a significant amount of local exchange traffic over the combinations of loop and transport network elements, BellSouth may file a complaint with the appropriate Commission, pursuant to the dispute resolution process as set forth in the Interconnection Agreement. In the event that BellSouth prevails, BellSouth may convert such combinations of loop and transport network elements to special access services and may seek appropriate retroactive reimbursement from Global Crossing.

- 5.3.7.4 Global Crossing may convert special access circuits to combinations of loop and transport UNEs pursuant to the terms of this Section and subject to the termination provisions in the applicable special access tariffs, if any.
- 5.3.8 Rates
 - 5.3.8.1 Georgia
 - 5.3.8.2 The non-recurring and recurring rates for the EEL Combinations of network elements set forth in 5.3.4, whether Currently Combined or new, are as set forth in Exhibit D of this Attachment.
 - 5.3.8.3 On an interim basis, for combinations of loop and transport network elements not set forth in Section 5.3.4, where the elements are not Currently Combined but are ordinarily combined in BellSouth's network, the non-recurring and recurring charges for such UNE combinations shall be the sum of the stand-alone non-recurring and recurring charges of the network elements which make up the combination. These interim rates shall be subject to true-up based on the Commission's review of BellSouth's cost studies.
 - 5.3.8.4 To the extent that Global Crossing seeks to obtain other combinations of network elements that BellSouth ordinarily combines in its network which have not been specifically priced by the Commission when purchased in combined form, Global Crossing, at its option, can request that such rates be determined pursuant to the BFR/NBR process set forth in this Agreement.
 - 5.3.8.5 All Other States
 - 5.3.8.5.1 Subject to Section 5.3.2 and 5.3.3 preceding, for all other states, the non-recurring and recurring rates for the Currently Combined EEL combinations set forth in Section 5.3.4 and other Currently Combined network elements will be the sum of

the recurring rates for the individual network elements plus a non recurring charge set forth in Exhibit D of this Attachment.

5.3.8.6 Multiplexing

5.3.8.6.1 Where multiplexing functionality is required in connection with loop and transport combinations, such multiplexing will be provided at the rates and on the terms set forth in this Agreement.

5.4 **Other Network Element Combinations**

5.4.1.1 In the state of Georgia, BellSouth shall make available to Global Crossing, in accordance with Section 5.4.2.1 below: (1) combinations of network elements other than EELs that are Currently Combined; and (2) combinations of network elements other than EELs that are not Currently Combined but that BellSouth ordinarily combines in its network. In all other states, BellSouth shall make available to Global Crossing, in accordance with Section 5.4.2.2 below, combinations of network elements other than EELs only to the extent such combinations are Currently Combined.

5.4.2 Rates

5.4.2.1 Georgia

5.4.2.1.1 The non-recurring and recurring rates for Other Network Element combinations, whether Currently Combined or new, are as set forth in Exhibit D of this Attachment.

5.4.2.1.2 On an interim basis, for Other Network Element combinations where the elements are not Currently Combined but are ordinarily combined in BellSouth's network, the non-recurring and recurring charges for such UNE combinations shall be the sum of the stand-alone non-recurring and recurring charges of the network elements which make up the combination. These interim rates shall be subject to true-up based on the Commission's review of BellSouth's cost studies.

5.4.2.1.3 To the extent that Global Crossing seeks to obtain other combinations of network elements that BellSouth ordinarily combines in its network which have not been specifically priced by the Commission when purchased in combined form, Global Crossing, at its option, can request that such rates be determined pursuant to the BFR/NBR process set forth in this Agreement.

5.4.2.2 All Other States

5.4.2.2.1 For all other states, the non-recurring and recurring rates for the Other Network Element Combinations that are Currently Combined will be the sum of the recurring rates for the individual network elements plus a non recurring charge set forth in Exhibit D of this Attachment.

5.5 **UNE/Special Access Combinations**

5.5.1 Additionally, BellSouth shall make available to Global Crossing a combination of an unbundled loop and tariffed special access interoffice facilities. To the extent Global Crossing will require multiplexing functionality in connection with such combination, BellSouth will provide access to multiplexing within the central office pursuant to the terms, conditions and rates set forth in its Access Services Tariffs. The tariffed special access interoffice facilities and any associated tariffed services, including but not limited to multiplexing, shall not be eligible for conversion to UNEs as described in Section 5.3.7.

5.5.2 Rates

5.5.2.1 The non-recurring and recurring rates for UNE/Special Access Combinations will be the sum of the unbundled loop rates as set forth in Exhibit D and the interoffice transport rates and multiplexing rates as set forth in the Access Services Tariff.

5.6 **Port/Loop Combinations**

5.6.1 At Global Crossing's request, BellSouth shall provide access to combinations of port and loop network elements, as set forth in Section 5.6.3 below, that are Currently Combined in BellSouth's network except as specified in Sections 5.6.1.1 and 5.6.1.2 below.

5.6.1.1 BellSouth shall not provide combinations of port and loop network elements on an unbundled basis in locations where, pursuant to FCC rules, BellSouth is not required to provide circuit switching as an unbundled network element.

5.6.1.2 In accordance with effective and applicable FCC rules, BellSouth shall not be required to provide circuit switching as an unbundled network element in density Zone 1, as defined in 47 CFR 69.123 as of January 1, 1999 of the Atlanta, GA; Miami, FL; Orlando, FL; Ft. Lauderdale, FL; Charlotte-Gastonia-Rock Hill, NC; Greensboro-Winston Salem-High Point, NC; Nashville, TN; and New Orleans, LA, MSAs to Global Crossing if Global Crossing's customer has 4 or more DS0 equivalent lines.

5.6.2 Combinations of port and loop network elements provide local exchange service for the origination or termination of calls. BellSouth shall make available the following loop and port combinations at the terms and at the rates set forth below:

5.6.2.1 In Georgia, BellSouth shall provide to Global Crossing combinations of port and loop network elements to Global Crossing on an unbundled basis regardless of whether or not such combinations are Currently Combined except in those locations where BellSouth is not required to provide circuit switching, as set forth in Section 5.6.1.2 above. The rates for such combinations shall be the cost based rates set forth in Exhibit D of this Attachment.

- 5.6.2.2 In all other states, BellSouth shall provide to Global Crossing combinations of port and loop network elements on an unbundled basis if such combinations are Currently Combined, except in those locations where BellSouth is not required to provide unbundled circuit switching, as set forth in Sections 5.6.1.1 and 5.6.1.2 above. The rates for such combinations shall be the cost based rates set forth in Exhibit D of this Attachment.
- 5.6.2.3 In all states other than Georgia, except in those locations where BellSouth is not required to provide unbundled circuit switching, as set forth in Sections 5.6.1.1 and 5.6.1.2, BellSouth shall provide to Global Crossing combinations of port and loop network elements that are not Currently Combined. The rates for such combinations shall be negotiated by the Parties.
- 5.6.2.4 In those locations where BellSouth is not required to provide unbundled circuit switching, as set forth in Sections 5.6.1.1 and 5.6.1.2, BellSouth shall provide to Global Crossing combinations of port and loop network elements whether or not such combinations are Currently Combined. The rates for Currently Combined combinations are the market based rates as set forth in Exhibit D. The rates for not Currently Combined combinations shall be negotiated by the Parties.
- 5.6.3 Combination Offerings
- 5.6.3.1 2-wire voice grade port, voice grade loop, unbundled end office switching, unbundled end office trunk port, common transport per mile per MOU, common transport facilities termination, tandem switching, and tandem trunk port.
- 5.6.3.2 2-wire voice grade DID port, voice grade loop, unbundled end office switching, unbundled end office trunk port, common transport per mile per MOU, common transport facilities termination, tandem switching, and tandem trunk port.
- 5.6.3.3 2-wire CENTREX port, voice grade loop, unbundled end office switching, unbundled end office trunk port, common transport per mile per MOU, common transport facilities termination, tandem switching, and tandem trunk port.
- 5.6.3.4 2-wire ISDN Basic Rate Interface, voice grade loop, unbundled end office switching, unbundled end office trunk port, common transport per mile per MOU, common transport facilities termination, tandem switching, and tandem trunk port.
- 5.6.3.5 2-wire ISDN Primary Rate Interface, DS1 loop, unbundled end office switching, unbundled end office trunk port, common transport per mile per MOU, common transport facilities termination, tandem switching, and tandem trunk port.
- 5.6.3.6 4-wire DS1 Trunk port, DS1 Loop, unbundled end office switching, unbundled end office trunk port, common transport per mile per MOU, common transport facilities termination, tandem switching, and tandem trunk port.

5.7 **Rates**

The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. If Global Crossing purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.

5.8 **Operational Support Systems (OSS)**

The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.

6. Transport, Channelization and Dark Fiber

All of the negotiated rates, terms and conditions set forth in this Section pertain to the provision of unbundled transport and dark fiber.

6.1 **Transport**

6.1.1 Interoffice transmission facility network elements include:

6.1.1.1 Dedicated transport, defined as BellSouth's transmission facilities, is dedicated to a particular customer or carrier that provides telecommunications between wire centers or switches owned by BellSouth, or between wire centers and switches owned by BellSouth and Global Crossing.

6.1.1.2 Dark Fiber transport, defined as BellSouth's optical transmission facilities without attached signal regeneration, multiplexing, aggregation or other electronics;

6.1.1.3 Common (Shared) transport, defined as transmission facilities shared by more than one carrier, including BellSouth, between end office switches, between end office switches and tandem switches, and between tandem switches, in BellSouth's network.

6.2 BellSouth shall:

6.2.1 Provide Global Crossing exclusive use of interoffice transmission facilities dedicated to a particular customer or carrier, or shared use of the features, functions, and capabilities of interoffice transmission facilities shared by more than one customer or carrier;

6.2.2 Provide all technically feasible transmission facilities, features, functions, and capabilities that Global Crossing could use to provide telecommunications services;

6.2.3 Permit, to the extent technically feasible, Global Crossing to connect such interoffice facilities to equipment designated by Global Crossing, including but not limited to, Global Crossing's collocated facilities; and

6.2.4 Permit, to the extent technically feasible, Global Crossing to obtain the functionality provided by BellSouth's digital cross-connect systems in the same manner that BellSouth provides such functionality to interexchange carriers.

6.3 **Common (Shared) Transport**

6.3.1 Definition of Common (Shared) Transport

6.3.1.1 Common (Shared) Transport is an interoffice transmission path between two BellSouth end-offices, BellSouth end-office and a local tandem, or between two local tandems. Where BellSouth Network Elements are connected by intra-office wiring, such wiring is provided as a part of the Network Elements and is not Common (Shared) Transport.

6.3.2 Technical Requirements of Common (Shared) Transport

6.3.2.1 Common (Shared) Transport provided on DS1 or VT1.5 circuits, shall, at a minimum, meet the performance, availability, jitter, and delay requirements specified for Central Office to Central Office ("CO to CO") connections in the appropriate industry standards.

6.3.2.2 Common (Shared) Transport provided on DS3 circuits, STS-1 circuits, and higher transmission bit rate circuits, shall, at a minimum, meet the performance, availability, jitter, and delay requirements specified for CO to CO connections in the appropriate industry standards.

6.3.2.3 BellSouth shall be responsible for the engineering, provisioning, and maintenance of the underlying equipment and facilities that are used to provide Common (Shared) Transport.

6.3.2.4 At a minimum, Common (Shared) Transport shall meet all of the requirements set forth in the applicable industry standard technical references.

6.4 **Dedicated Transport**

6.4.1 Definitions

6.4.2 Dedicated Transport is defined as BellSouth transmission facilities dedicated to a particular customer or carrier that provide telecommunications between wire centers owned by BellSouth or requesting telecommunications carriers, or between switches owned by BellSouth or requesting telecommunications carriers.

6.4.3 Unbundled Local Channel

- 6.4.4 Unbundled Local Channel is the dedicated transmission path between Global Crossing's Point of Presence and the BellSouth Serving Wire Center's collocation.
- 6.4.5 Unbundled Interoffice Channel.
- 6.4.6 Unbundled Interoffice Channel is the dedicated transmission path that provides telecommunication between BellSouth's Serving Wire Centers' collocations.
- 6.4.7 BellSouth shall offer Dedicated Transport in each of the following ways:
- 6.4.7.1 As capacity on a shared UNE facility.
- 6.4.7.2 As a circuit (e.g., DS0, DS1, DS3) dedicated to Global Crossing. This circuit shall consist of an Unbundled Local Channel or an Unbundled Interoffice Channel or both.
- 6.4.8 When Dedicated Transport is provided it shall include:
- 6.4.8.1 Transmission equipment such as, line terminating equipment, amplifiers, and regenerators;
- 6.4.8.2 Inter-office transmission facilities such as optical fiber, copper twisted pair, and coaxial cable.
- 6.4.9 Rates for Dedicated Transport are listed in this Attachment. For those states that do not contain rates in this Attachment the rates in the applicable State Access Tariff will apply as interim rates. When final rates are developed, these interim rates will be subject to true up, and the Parties will amend the Agreement to reflect the new rates.
- 6.4.10 Technical Requirements
- 6.4.10.1 This Section sets forth technical requirements for all Dedicated Transport.
- 6.4.10.2 When BellSouth provides Dedicated Transport, the entire designated transmission service (e.g., DS0, DS1, DS3) shall be dedicated to Global Crossing designated traffic.
- 6.4.10.3 BellSouth shall offer Dedicated Transport in all technologies that become available including, but not limited to, (1) DS0, DS1 and DS3 transport services, and (2) SONET at available transmission bit rates.
- 6.4.10.4 For DS1 or VT1.5 circuits, Dedicated Transport shall, at a minimum, meet the performance, availability, jitter, and delay requirements specified for Customer Interface to Central Office ("CI to CO") connections in the appropriate industry standards.

- 6.4.10.5 Where applicable, for DS3, Dedicated Transport shall, at a minimum, meet the performance, availability, jitter, and delay requirements specified for CI to CO connections in the appropriate industry standards.
- 6.4.10.6 BellSouth shall offer the following interface transmission rates for Dedicated Transport:
- 6.4.10.6.1 DS0 Equivalent;
- 6.4.10.6.2 DS1;
- 6.4.10.6.3 DS3;
- 6.4.10.6.4 SDH (Synchronous Digital Hierarchy) Standard interface rates in accordance with International Telecommunications Union (ITU) Recommendation G.707 and Plesiochronous Digital Hierarchy (PDH) rates per ITU Recommendation G.704.
- 6.4.10.6.5 When Dedicated Transport is provided, BellSouth shall design it according to BellSouth's network infrastructure to allow for the termination points specified by Global Crossing.
- 6.4.11 At a minimum, Dedicated Transport shall meet each of the requirements set forth in the applicable industry technical references.
- 6.4.11.1 BellSouth Technical References:
- 6.4.11.2 TR-TSY-000191 Alarm Indication Signals Requirements and Objectives, Issue 1, May 1986.
- 6.4.11.3 TR 73501 LightGate[®] Service Interface and Performance Specifications, Issue D, June 1995.
- 6.4.11.4 TR 73525 MegaLink[®] Service, MegaLink Channel Service and MegaLink Plus Service Interface and Performance Specifications, Issue C, May 1996.
- 6.4.12 Provided that the facility is used to transport a significant amount of local exchange services Global Crossing shall be entitled to convert existing interoffice transmission facilities (i.e., special access) to the corresponding interoffice transport network element option.
- 6.5 Unbundled Channelization**
- 6.5.1 BellSouth agrees to offer access to Unbundled Channelization when available pursuant to following terms and conditions and at the rates set forth in the Attachment. Channelization will be offered with both the high and the low speed sides to be connected to collocation.

- 6.5.2 Definition
 - 6.5.2.1 Unbundled Channelization (UC) provides the multiplexing capability that will allow a DS1 (1.544 Mbps) or DS3 (44.736 Mbps) or STS-1 Unbundled Network Element (UNE) or collocation cross-connect to be multiplexed or channelized at a BellSouth central office. This can be accomplished through the use of a stand-alone multiplexer or a digital cross-connect system at the discretion of BellSouth. Once UC has been installed, Global Crossing can have channels activated on an as-needed basis by having BellSouth connect lower level UNEs via Central Office Channel Interfaces (COCI).

- 6.5.3 Channelization capabilities will be as follows:
 - 6.5.3.1 DS3 Channelization System: An element that channelizes a DS3 signal into 28 DS1s/STS-1s.
 - 6.5.3.2 DS1 Channelization System: An element that channelizes a DS1 signal into 24 DS0s.
 - 6.5.3.3 Central Office Channel Interfaces (COCI): Elements that can be activated on a channelization system.

- 6.5.4 DS1 Central Office Channel Interface elements can be activated on a DS3 Channelization System.

- 6.5.5 Voice Grade and Digital Data Central Office Channel Interfaces can be activated on a DS1 Channelization System.

- 6.5.6 AMI and B8ZS line coding with either Super Frame (SF) and Extended Super Frame (ESF) framing formats will be supported as options.

- 6.5.7 COCI will be billed on the lower level UNE order that is interfacing with the UC arrangement and will have to be compatible with those UNEs.

- 6.5.8 Technical Requirements
 - 6.5.8.1 In order to assure proper operation with BellSouth provided central office multiplexing functionality, the customer's channelization equipment must adhere strictly to form and protocol standards. Separate standards exist for the multiplex channel bank, for voice frequency encoding, for various signaling schemes, and for subrate digital access.
 - 6.5.8.2 DS0 to DS1 Channelization

- 6.5.8.2.1 The DS1 signal must be framed utilizing the framing structure defined in ANSI T1.107, Digital Hierarchy Formats Specifications and ANSI T1.403.02, DS1 Robbed-bit Signaling State Definitions. DS0 to DS1 Channelization requirements are essential the same as defined in BellSouth Technical Reference 73525, MegaLink[®] Service, MegaLink[®] Channel Service, MegaLink[®] Plus Service, and MegaLink[®] Light Service Interface and Performance Specification.
- 6.5.8.3 DS1 to DS3 Channelization
- 6.5.8.3.1 The DS3 signal must be framed utilizing the framing structure define in ANSI T1.107, Digital Hierarchy Formats Specifications. DS1 to DS3 Channelization requirements are essentially the same as defined in BellSouth Technical Reference 73501, LightGate[®] Service Interface and Performance Specifications. The asynchronous M13 multiplex format (combination of M12 and M23 formats) is specified for terminal equipment that multiplexes 28 DS1s into a DS3.
- 6.5.8.4 DS1 to STS Channelization
- 6.5.8.4.1 The STS-1 signal must be framed utilizing the framing structure define in ANSI T1.105, Synchronous Optical Network (SONET) – Basic Description Including Multiplex Structure, Rates and Formats and T1.105.02, Synchronous Optical Network (SONET) – Payload Mappings. DS1 to STS Channelization requirements are essentially the same as defined in BellSouth Technical Reference TR 73501, LightGate[®] Service Interface and Performance Specifications.
- 6.6 **Dark Fiber**
- 6.6.1 Definition
- 6.6.2 Dark Fiber is optical transmission facilities without attached multiplexing, aggregation or other electronics that connects two points within BellSouth's network. Dark Fiber is unused strands of optical fiber. It may be strands of optical fiber existing in aerial or underground structure. No line terminating elements terminated to such strands to operationalize its transmission capabilities will be available.
- 6.6.3 Requirements
- 6.6.3.1 BellSouth shall make available Dark Fiber where it exists in BellSouth's network and where, as a result of future building or deployment, it becomes available. If BellSouth has plans to use the fiber within a two-year period, there is no requirement to provide said fiber to Global Crossing.6.6.3.2 If the requested dark fiber has any lightwave repeater equipment interspliced to it, BellSouth will remove such equipment at Global Crossing's request subject to time and materials charges.

- 6.6.3.3 Global Crossing may test the quality of the Dark Fiber to confirm its usability and performance specifications.
- 6.6.3.4 BellSouth shall use its best efforts to provide to Global Crossing information regarding the location, availability and performance of Dark Fiber within ten (10) business days for a records based answer and twenty (20) business days for a field based answer, after receiving a request from Global Crossing ("Request"). Within such time period, BellSouth shall send written confirmation of availability of the Dark Fiber ("Confirmation"). From the time of the Request to one hundred and twenty (120) days after Confirmation, BellSouth shall hold such requested Dark Fiber for Global Crossing's use and may not allow any other Party to use such media, including BellSouth. If a Dark Fiber firm order is not received within the one hundred and twenty day period, the Dark Fiber will revert to BellSouth's Dark Fiber inventory.
- 6.6.3.5 BellSouth shall use its best efforts to make Dark Fiber available to Global Crossing within thirty (30) business days after it receives written confirmation from Global Crossing that the Dark Fiber previously deemed available by BellSouth is wanted for use by Global Crossing. This includes identification of appropriate connection points (e.g., Light Guide Interconnection (LGX) or splice points) to enable Global Crossing to connect or splice Global Crossing provided transmission media (e.g., optical fiber) or equipment to the Dark Fiber.
- 6.6.3.6 Dark Fiber shall meet the manufacturer's design specifications.
- 6.6.3.7 Global Crossing may splice and test Dark Fiber obtained from BellSouth using Global Crossing or Global Crossing designated personnel. BellSouth shall provide appropriate interfaces to allow splicing and testing of Dark Fiber. BellSouth shall provide an excess cable length of 25 feet minimum (for fiber in underground conduit) to allow the uncoiled fiber to reach from the manhole to a splicing van.

6.7 Rates

- 6.7.1 The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. If Global Crossing purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.

6.8 Operational Support Systems (OSS)

The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.

7. BellSouth SWA 8XX Toll Free Dialing Ten Digit Screening Service

All of the negotiated rates, terms and conditions set forth in this Section pertain to the provision of 8XX Access Ten Digit Screening Services.

7.1 BellSouth SWA 8XX Toll Free Dialing Ten Digit Screening Service database

7.1.1 The BellSouth SWA 8XX Toll Free Dialing Ten Digit Screening Service database (herein known as 8XX SCP) is a SCP that contains customer record information and functionality to provide call-handling instructions for 8XX calls. The 8XX SCP IN software stores data downloaded from the national SMS and provides the routing instructions in response to queries from the SSP or tandem. The BellSouth SWA 8XX Toll Free Dialing Ten Digit Screening Service (herein known as 8XX TFD), utilizes the 8XX SCP to provide identification and routing of the 8XX calls, based on the ten digits dialed. 8XX TFD is provided with or without POTS number delivery, dialing number delivery, and other optional complex features as selected by Global Crossing. BellSouth shall provide 8XX TFD in accordance with the following:

7.1.2 Technical Requirements

7.1.2.1 BellSouth shall provide Global Crossing with access to the 8XX record information located in the 8XX SCP. The 8XX SCP contains current records as received from the national SMS and will provide for routing 8XX originating calls based on the dialed ten digit 8XX number.

7.1.2.2 The 8XX SCP is designated to receive and respond to queries using the American National Standard Specification of Signaling System Seven (SS7) protocol. The 8XX SCP shall determine the carrier identification based on all ten digits of the dialed number and route calls to the carrier, POTS number, dialing number and/or other optional feature selected by Global Crossing.

7.1.2.3 The SCP shall also provide, at Global Crossing's option, such additional feature as described in SR-TSV-002275 (BOC Notes on BellSouth Networks, SR-TSV-002275, Issue 2, (Telcordia (formerly BellCore), April 1994)) as are available to BellSouth. These may include but are not limited to:

7.1.2.3.1 Network Management;

7.1.2.3.2 Customer Sample Collection; and

7.1.2.3.3 Service Maintenance.

7.2 **Rates**

The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. . If Global Crossing

purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.

7.3 **Operational Support Systems (OSS)**

The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.

8 Line Information Database (LIDB)

8.1 All of the negotiated rates, terms and conditions set forth in this Section pertain to the provision of LIDB.

8.2 BellSouth will store in its LIDB only records relating to service in the BellSouth region. The LIDB Storage Agreement is included in this Attachment.

8.2.1 Definition

8.2.2 The Line Information Database (LIDB) is a transaction-oriented database accessible through Common Channel Signaling (CCS) networks. It contains records associated with end user Line Numbers and Special Billing Numbers. LIDB accepts queries from other Network Elements and provides appropriate responses. The query originator need not be the owner of LIDB data. LIDB queries include functions such as screening billed numbers that provides the ability to accept Collect or Third Number Billing calls and validation of Telephone Line Number based non-proprietary calling cards. The interface for the LIDB functionality is the interface between BellSouth's CCS network and other CCS networks. LIDB also interfaces to administrative systems.

8.2.3 Technical Requirements

8.2.4 BellSouth will offer to Global Crossing any additional capabilities that are developed for LIDB during the life of this Agreement.

8.2.4.1 BellSouth shall process Global Crossing's Customer records in LIDB at least at parity with BellSouth customer records, with respect to other LIDB functions. BellSouth shall indicate to Global Crossing what additional functions (if any) are performed by LIDB in the BellSouth network.

8.2.4.2 Within two (2) weeks after a request by Global Crossing, BellSouth shall provide Global Crossing with a list of the customer data items, which Global Crossing would have to provide in order to support each required LIDB function. The list shall indicate which data items are essential to LIDB function, and which are required only to support certain services. For each data item, the list shall show the data formats, the acceptable values of the data item and the meaning of those values.

- 8.2.4.3 BellSouth shall provide LIDB systems for which operating deficiencies that would result in calls being blocked shall not exceed 30 minutes per year.
- 8.2.4.4 BellSouth shall provide LIDB systems for which operating deficiencies that would not result in calls being blocked shall not exceed 12 hours per year.
- 8.2.4.5 BellSouth shall provide LIDB systems for which the LIDB function shall be in overload no more than 12 hours per year.
- 8.2.4.6 All additions, updates and deletions of Global Crossing data to the LIDB shall be solely at the direction of Global Crossing. Such direction from Global Crossing will not be required where the addition, update or deletion is necessary to perform standard fraud control measures (e.g., calling card auto-deactivation).
- 8.2.4.7 BellSouth shall provide priority updates to LIDB for Global Crossing data upon Global Crossing's request (e.g., to support fraud detection), via password-protected telephone card, facsimile, or electronic mail within one hour of notice from the established BellSouth contact.
- 8.2.4.8 BellSouth shall provide LIDB systems such that no more than 0.01% of Global Crossing customer records will be missing from LIDB, as measured by Global Crossing audits. BellSouth will audit Global Crossing records in LIDB against DBAS to identify record mismatches and provide this data to a designated Global Crossing contact person to resolve the status of the records and BellSouth will update system appropriately. BellSouth will refer record of mis-matches to Global Crossing within one business day of audit. Once reconciled records are received back from Global Crossing, BellSouth will update LIDB the same business day if less than 500 records are received before 1:00PM Central Time. If more than 500 records are received, BellSouth will contact Global Crossing to negotiate a time frame for the updates, not to exceed three business days.
- 8.2.4.9 BellSouth shall perform backup and recovery of all of Global Crossing's data in LIDB including sending to LIDB all changes made since the date of the most recent backup copy, in at least the same time frame BellSouth performs backup and recovery of BellSouth data in LIDB for itself. Currently, BellSouth performs backups of the LIDB for itself on a weekly basis and when a new software release is scheduled, a backup is performed prior to loading the new release.
- 8.2.4.10 BellSouth shall provide Global Crossing with LIDB reports of data, which are missing or contain errors, as well as any misrouted errors, within a reasonable time period as negotiated between Global Crossing and BellSouth.
- 8.2.4.11 BellSouth shall prevent any access to or use of Global Crossing data in LIDB by BellSouth personnel that are outside of established administrative and fraud control personnel, or by any other Party that is not authorized by Global Crossing in writing.

8.2.4.12 BellSouth shall provide Global Crossing performance of the LIDB Data Screening function, which allows a LIDB to completely or partially deny specific query originators access to LIDB data owned by specific data owners, for Customer Data that is part of an NPA-NXX or RAO-0/1XX wholly or partially owned by Global Crossing at least at parity with BellSouth Customer Data. BellSouth shall obtain from Global Crossing the screening information associated with LIDB Data Screening of Global Crossing data in accordance with this requirement. BellSouth currently does not have LIDB Data Screening capabilities. When such capability is available, BellSouth shall offer it to Global Crossing under the BFR/NBR as set forth in General Terms and Conditions.

8.2.4.13 BellSouth shall accept queries to LIDB associated with Global Crossing customer records, and shall return responses in accordance with industry standards.

8.2.4.14 BellSouth shall provide mean processing time at the LIDB within 0.50 seconds under normal conditions as defined in industry standards.

8.2.4.15 BellSouth shall provide processing time at the LIDB within 1 second for 99% of all messages under normal conditions as defined in industry standards.

8.2.5 Interface Requirements

8.2.6 BellSouth shall offer LIDB in accordance with the requirements of this subsection.

8.2.6.1 The interface to LIDB shall be in accordance with the technical references contained within.

8.2.6.2 The CCS interface to LIDB shall be the standard interface described herein.

8.2.6.3 The LIDB Data Base interpretation of the ANSI-TCAP messages shall comply with the technical reference herein. Global Title Translation shall be maintained in the signaling network in order to support signaling network routing to the LIDB.

8.3 **Rates**

The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. If Global Crossing purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.

8.4 **Operational Support Systems (OSS)**

The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.

9. **Signaling**

- 9.1 All of the negotiated rates, terms and conditions set forth in this Section pertain to the provision of Signaling Transport Services.
- 9.2 BellSouth agrees to offer access to signaling and access to BellSouth's signaling databases subject to compatibility testing and at the rates set forth in this Attachment. BellSouth may provide mediated access to BellSouth signaling systems and databases. Available signaling elements include signaling links, signal transfer points and service control points. Signaling functionality will be available with both A-link and B-link connectivity.
- 9.3 **Signaling Link Transport**
- 9.3.1 Definition Signaling Link Transport is a set of two or four dedicated 56 Kbps. transmission paths between CLEC-designated Signaling Points of Interconnection (SPOI) that provides appropriate physical diversity.
- 9.3.2 Technical Requirements
- 9.3.2.1 Signaling Link Transport shall consist of full duplex mode 56 kbps transmission paths.
- 9.3.3 Of the various options available, Signaling Link Transport shall perform in the following two ways:
- 9.3.3.1 As an "A-link" which is a connection between a switch or SCP and a home Signaling Transfer Point Switch (STP) pair; and
- 9.3.3.2 As a "B-link" which is a connection between two STP pairs in different company networks (e.g., between two STP pairs for two Competitive Local Exchange Carriers (CLECs)).
- 9.3.4 Signaling Link Transport shall consist of two or more signaling link layers as follows:
- 9.3.4.1 An A-link layer shall consist of two links.
- 9.3.4.2 A B-link layer shall consist of four links.
- 9.3.5 A signaling link layer shall satisfy a performance objective such that:
- 9.3.5.1 There shall be no more than two minutes down time per year for an A-link layer; and
- 9.3.5.2 There shall be negligible (less than 2 seconds) down time per year for a B-link layer.
- 9.3.5.3 A signaling link layer shall satisfy interoffice and intraoffice diversity of facilities and equipment, such that:

- 9.3.5.3.1 No single failure of facilities or equipment causes the failure of both links in an A-link layer (i.e., the links should be provided on a minimum of two separate physical paths end-to-end); and
- 9.3.5.3.2 No two concurrent failures of facilities or equipment shall cause the failure of all four links in a B-link layer (i.e., the links should be provided on a minimum of three separate physical paths end-to-end).
- 9.3.5.4 Interface Requirements
- 9.3.5.4.1 There shall be a DS1 (1.544 Mbps) interface at the Global Crossing designated SPOIs. Each 56 kbps transmission path shall appear as a DS0 channel within the DS1 interface.
- 9.4 **Signaling Transfer Points (STPs)**
- 9.4.1 Definition - Signaling Transfer Points is a signaling network function that includes all of the capabilities provided by the signaling transfer point switches (STPs) and their associated signaling links which enable the exchange of SS7 messages among and between switching elements, database elements and signaling transfer point switches.
- 9.4.2 Technical Requirements
- 9.4.2.1 STPs shall provide access to Network Elements connected to BellSouth SS7 network. These include:
 - 9.4.2.1.1 BellSouth Local Switching or Tandem Switching;
 - 9.4.2.1.2 BellSouth Service Control Points/DataBases;
 - 9.4.2.1.3 Third-party local or tandem switching;
 - 9.4.2.1.4 Third-party-provided STPs.
- 9.4.2.2 The connectivity provided by STPs shall fully support the functions of all other Network Elements connected to the BellSouth SS7 network. This explicitly includes the use of the BellSouth SS7 network to convey messages which neither originate nor terminate at a signaling end point directly connected to the BellSouth SS7 network (i.e., transient messages). When the BellSouth SS7 network is used to convey transient messages, there shall be no alteration of the Integrated Services Digital Network User Part (ISDNUP) or Transaction Capabilities Application Part (TCAP) user data that constitutes the content of the message.
- 9.4.2.3 If a BellSouth tandem switch routes calling traffic, based on dialed or translated digits, on SS7 trunks between a Global Crossing local switch and third party local

switch, the BellSouth SS7 network shall convey the TCAP messages that are necessary to provide Call Management features (Automatic Callback, Automatic Recall, and Screening List Editing) between Global Crossing local STPs and the STPs that provide connectivity with the third party local switch, even if the third party local switch is not directly connected to BellSouth STPs.

- 9.4.2.4 STPs shall provide all functions of the MTP as defined in the applicable industry standard technical references.
- 9.4.2.5 STPs shall provide all functions of the SCCP necessary for Class 0 (basic connectionless) service, as defined in Telcordia (formerly BellCore) ANSI Interconnection Requirements. In particular, this includes Global Title Translation (GTT) and SCCP Management procedures, as specified in T1.112.4. In cases where the destination signaling point is a Global Crossing or third party local or tandem switching system directly connected to BellSouth SS7 network, BellSouth shall perform final GTT of messages to the destination and SCCP Subsystem Management of the destination. In all other cases, BellSouth shall perform intermediate GTT of messages to a gateway pair of STPs in an SS7 network connected with BellSouth SS7 network, and shall not perform SCCP Subsystem Management of the destination. If BellSouth performs final GTT to a Global Crossing database, then Global Crossing agrees to provide BellSouth with the Destination Point Code for the Global Crossing database.
- 9.4.2.6 STPs shall provide on a non-discriminatory basis all functions of the OMAP commonly provided by STPs, as specified in the reference in Section 12 of this Attachment. All OMAP functions will be on a "where available" basis and can include:
- 9.4.2.6.1 MTP Routing Verification Test (MRVT); and
- 9.4.2.6.2 SCCP Routing Verification Test (SRVT).
- 9.4.2.7 In cases where the destination signaling point is a BellSouth local or tandem switching system or database, or is a Global Crossing or third party local or tandem switching system directly connected to the BellSouth SS7 network, STPs shall perform MRVT and SRVT to the destination signaling point. In all other cases, STPs shall perform MRVT and SRVT to a gateway pair of STPs in an SS7 network connected with the BellSouth SS7 network. This requirement shall be superseded by the specifications for Internetwork MRVT and SRVT if and when these become approved ANSI standards and available capabilities of BellSouth STPs, and if mutually agreed upon by Global Crossing and BellSouth.
- 9.4.2.8 STPs shall be on parity with BellSouth.
- 9.4.2.9 SS7 Advanced Intelligent Network (AIN) Access

- 9.4.2.9.1 When technically feasible and upon request by Global Crossing, SS7 Access shall be made available in association with switching. SS7 AIN Access is the provisioning of AIN 0.1 triggers in an equipped BellSouth local switch and interconnection of the BellSouth SS7 network with the Global Crossing SS7 network to exchange TCAP queries and responses with a Global Crossing SCP.
- 9.4.2.9.2 SS7 AIN Access shall provide Global Crossing SCP access to BellSouth local switch in association with switching via interconnection of BellSouth SS7 and Global Crossing SS7 Networks. BellSouth shall offer SS7 access through its STPs. If BellSouth requires a mediation device on any part of its network specific to this form of access, BellSouth must route its messages in the same manner. The interconnection arrangement shall result in the BellSouth local switch recognizing the Global Crossing SCP as at least at parity with BellSouth's SCP's in terms of interfaces, performance and capabilities.
- 9.4.3 Interface Requirements
- 9.4.3.1 BellSouth shall provide the following STPs options to connect Global Crossing or Global Crossing-designated local switching systems or STPs to the BellSouth SS7 network:
- 9.4.3.1.1 An A-link interface from Global Crossing local switching systems; and,
- 9.4.3.1.2 A B-link interface from Global Crossing local STPs.
- 9.4.3.2 Each type of interface shall be provided by one or more sets (layers) of signaling links.
- 9.4.3.3 The Signaling Point of Interconnection (SPOI) for each link shall be located at a cross-connect element, such as a DSX-1, in the Central Office (CO) where BellSouth STP is located. There shall be a DS1 or higher rate transport interface at each of the SPOIs. Each signaling link shall appear as a DS0 channel within the DS1 or higher rate interface. BellSouth shall offer higher rate DS1 signaling for interconnecting Global Crossing local switching systems or STPs with BellSouth STPs as soon as these become approved ANSI standards and available capabilities of BellSouth STPs. BellSouth and Global Crossing will work jointly to establish mutually acceptable SPOIs.
- 9.4.3.4 BellSouth CO shall provide intraoffice diversity between the SPOIs and BellSouth STPs, so that no single failure of intraoffice facilities or equipment shall cause the failure of both B-links in a layer connecting to a BellSouth STP. BellSouth and Global Crossing will work jointly to establish mutually acceptable SPOIs.
- 9.4.3.5 STPs shall provide all functions of the MTP as defined in the applicable industry standard technical references.
- 9.4.3.6 Message Screening

- 9.4.3.6.1 BellSouth shall set message screening parameters so as to accept valid messages from Global Crossing local or tandem switching systems destined to any signaling point within BellSouth's SS7 network where the Global Crossing switching system has a legitimate signaling relation.
- 9.4.3.6.2 BellSouth shall set message screening parameters so as to pass valid messages from Global Crossing local or tandem switching systems destined to any signaling point or network accessed through BellSouth's SS7 network where the Global Crossing switching system has a legitimate signaling relation.
- 9.4.3.6.3 BellSouth shall set message screening parameters so as to accept and pass/send valid messages destined to and from Global Crossing from any signaling point or network interconnected through BellSouth's SS7 network where the Global Crossing SCP has a legitimate signaling relation.
- 9.4.4 STPs shall be equal to or better than all of the requirements for STPs set forth in the applicable industry standard technical references.

9.5 **Service Control Points/Databases**

9.5.1 Definition

- 9.5.1.1 Databases are the Network Elements that provide the functionality for storage of, access to, and manipulation of information required to offer a particular service and/or capability. Databases include, but are not limited to: Local Number Portability, LIDB, Toll Free Number Database, Automatic Location Identification/Data Management System, Calling Name Database, access to Service Creation Environment and Service Management System (SCE/SMS) application databases and Directory Assistance.

- 9.5.2 A Service Control Point (SCP) is a specific type of Database functionality deployed in a Signaling System 7 (SS7) network that executes service application logic in response to SS7 queries sent to it by a switching system also connected to the SS7 network. Service Management Systems provide operational interfaces to allow for provisioning, administration and maintenance of subscriber data and service application data stored in SCPs.

9.5.3 Technical Requirements for SCPs/Databases

- 9.5.3.1 Requirements for SCPs/Databases within this section address storage of information, access to information (e.g. signaling protocols, response times), and administration of information (e.g., provisioning, administration, and maintenance). All SCPs/Databases shall be provided to Global Crossing in accordance with the following requirements.
- 9.5.3.2 BellSouth shall provide physical access to SCPs through the SS7 network and protocols with TCAP as the application layer protocol.

- 9.5.3.3 BellSouth shall provide physical interconnection to databases via industry standard interfaces and protocols (e.g. SS7, ISDN and X.25).
- 9.5.3.4 The reliability of interconnection options shall be consistent with requirements for diversity and survivability.
- 9.5.4 Database Availability
- 9.5.4.1 Call processing databases shall have a maximum unscheduled unavailability of 30 minutes per year. Unavailability due to software and hardware upgrades shall be scheduled during minimal usage periods and only be undertaken upon proper notification to providers, which might be impacted. Any downtime associated with the provision of call processing related databases will impact all service providers, including BellSouth, equally.
- 9.5.4.2 The operational interface provided by BellSouth shall complete Database transactions (i.e., add, modify, delete) for Global Crossing customer records stored in BellSouth databases within 3 days, or sooner where BellSouth provisions its own customer records within a shorter interval.
- 9.6 **Local Number Portability Database**
- 9.6.1 Definition
- 9.6.2 The Permanent Number Portability (PNP) database supplies routing numbers for calls involving numbers that have been ported from one local service provider to another. PNP is currently being worked in industry forums. The results of these forums will dictate the industry direction of PNP. BellSouth agrees to provide access to the PNP database at rates, terms and conditions as set forth by BellSouth and in accordance with an effective FCC or Commission directive.
- 9.7 **SS7 Network Interconnection**
- 9.7.1 Definition.
- 9.7.2 SS7 Network Interconnection is the interconnection of Global Crossing local Signaling Transfer Point Switches (STP) and Global Crossing local or tandem switching systems with BellSouth STPs. This interconnection provides connectivity that enables the exchange of SS7 messages among BellSouth switching systems and databases (DBs), Global Crossing local or tandem switching systems, and other third-party switching systems directly connected to the BellSouth SS7 network.
- 9.7.3 Technical Requirements
- 9.7.3.1 SS7 Network Interconnection shall provide connectivity to all components of the BellSouth SS7 network. These include:

- 9.7.3.1.1 BellSouth local or tandem switching systems;
- 9.7.3.1.2 BellSouth DBs; and
- 9.7.3.1.3 Other third-party local or tandem switching systems.
- 9.7.4 The connectivity provided by SS7 Network Interconnection shall fully support the functions of BellSouth switching systems and DBs and Global Crossing or other third-party switching systems with A-link access to the BellSouth SS7 network.
- 9.7.5 If traffic is routed based on dialed or translated digits between a Global Crossing local switching system and a BellSouth or other third-party local switching system, either directly or via a BellSouth tandem switching system, then it is a requirement that the BellSouth SS7 network convey via SS7 Network Interconnection the TCAP messages that are necessary to provide Call Management services (Automatic Callback, Automatic Recall, and Screening List Editing) between the Global Crossing local STPs and BellSouth or other third-party local switch.
- 9.7.6 When the capability to route messages based on Intermediate Signaling Network Identifier (ISNI) is generally available on BellSouth STPs, the BellSouth SS7 Network shall also convey TCAP messages using SS7 Network Interconnection in similar circumstances where the BellSouth switch routes traffic based on a Carrier Identification Code (CIC).
- 9.7.7 SS7 Network Interconnection shall provide all functions of the MTP as specified in ANSI T1.111. This includes:
 - 9.7.7.1 Signaling Data Link functions, as specified in ANSI T1.111.2;
 - 9.7.7.2 Signaling Link functions, as specified in ANSI T1.111.3; and
 - 9.7.7.3 Signaling Network Management functions, as specified in ANSI T1.111.4.
- 9.7.8 SS7 Network Interconnection shall provide all functions of the SCCP necessary for Class 0 (basic connectionless) service, as specified in ANSI T1.112. In particular, this includes Global Title Translation (GTT) and SCCP Management procedures, as specified in T1.112.4. Where the destination signaling point is a BellSouth switching system or DB, or is another third-party local or tandem switching system directly connected to the BellSouth SS7 network, SS7 Network Interconnection shall include final GTT of messages to the destination and SCCP Subsystem Management of the destination. Where the destination signaling point is a Global Crossing local or tandem switching system, SS7 Network Interconnection shall include intermediate GTT of messages to a gateway pair of Global Crossing local STPs, and shall not include SCCP Subsystem Management of the destination.

- 9.7.9 SS7 Network Interconnection shall provide all functions of the Integrated Services Digital Network User Part (ISDNUP), as specified in ANSI T1.113.
- 9.7.10 SS7 Network Interconnection shall provide all functions of the TCAP, as specified in ANSI T1.114.
- 9.7.11 If and when Internetwork MTP Routing Verification Test (MRVT) and SCCP Routing Verification Test (SRVT) become approved ANSI standards and available capabilities of BellSouth STPs, SS7 Network Interconnection shall provide these functions of the OMAP.
- 9.7.12 SS7 Network Interconnection shall be equal to or better than the following performance requirements:
- 9.7.12.1 MTP Performance, as specified in ANSI T1.111.6;
- 9.7.12.2 SCCP Performance, as specified in ANSI T1.112.5; and
- 9.7.12.3 ISDNUP Performance, as specified in ANSI T1.113.5.
- 9.7.13 Interface Requirements
- 9.7.13.1 BellSouth shall offer the following SS7 Network Interconnection options to connect Global Crossing or Global Crossing-designated local or tandem switching systems or STPs to the BellSouth SS7 network:
- 9.7.13.1.1 A-link interface from Global Crossing local or tandem switching systems; and
- 9.7.13.1.2 B-link interface from Global Crossing STPs.
- 9.7.13.2 The Signaling Point of Interconnection (SPOI) for each link shall be located at a cross-connect element, such as a DSX-1, in the Central Office (CO) where the BellSouth STP is located. There shall be a DS1 or higher rate transport interface at each of the SPOIs. Each signaling link shall appear as a DS0 channel within the DS1 or higher rate interface. BellSouth shall offer higher rate DS1 signaling links for interconnecting Global Crossing local switching systems or STPs with BellSouth STPs as soon as these become approved ANSI standards and available capabilities of BellSouth STPs. BellSouth and Global Crossing will work jointly to establish mutually acceptable SPOI.
- 9.7.13.3 BellSouth CO shall provide intraoffice diversity between the SPOIs and the BellSouth STP, so that no single failure of intraoffice facilities or equipment shall cause the failure of both B-links in a layer connecting to a BellSouth STP. BellSouth and Global Crossing will work jointly to establish mutually acceptable SPOI.

- 9.7.13.4 The protocol interface requirements for SS7 Network Interconnection include the MTP, ISDNUP, SCCP, and TCAP. These protocol interfaces shall conform to the applicable industry standard technical references.
- 9.7.13.5 BellSouth shall set message screening parameters to accept messages from Global Crossing local or tandem switching systems destined to any signaling point in the BellSouth SS7 network with which the Global Crossing switching system has a legitimate signaling relation.
- 9.7.13.6 SS7 Network Interconnection shall be equal to or better than all of the requirements for SS7 Network Interconnection set forth in the applicable industry standard technical references.

9.8 **Rates**

The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. If Global Crossing purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.

9.9 **Operational Support Systems (OSS)**

The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.

10. **Operator Call Processing, Inward Operator Services and Directory Assistance Services**

- 10.1 All of the negotiated rates, terms and conditions set forth in this Section pertain to the provision of Operator Call Processing, Inward Operator Services and Directory Assistance Services.

10.2 **Operator Systems**

- 10.2.1 Definition. Operator Systems is the Network Element that provides operator and automated call handling and billing, special services, end user telephone listings and optional call completion services. The Operator Systems, Network Element provides two types of functions: Operator Service functions and Directory Assistance Service functions, each of which are described in detail below.

10.3 **Operator Service**

- 10.3.1 Definition. Operator Service provides: (1) operator handling for call completion (for example, collect, third number billing, and manual credit card calls), (2) operator or automated assistance for billing after the end user has dialed the called number (for example, credit card calls); and (3) special services including but not

limited to Busy Line Verification and Emergency Line Interrupt (ELI), Emergency Agency Call, Operator-assisted Directory Assistance, and Rate Quotes.

10.3.2 Requirements

- 10.3.2.1 When Global Crossing requests BellSouth to provide Operator Services, the following requirements apply:
 - 10.3.2.1.1 BellSouth shall complete 0+ and 0- dialed local calls.
 - 10.3.2.1.2 BellSouth shall complete 0+ intraLATA toll calls.
 - 10.3.2.1.3 BellSouth shall process calls that are billed to Global Crossing end user's calling card that can be validated by BellSouth.
 - 10.3.2.1.4 BellSouth shall complete person-to-person calls.
 - 10.3.2.1.5 BellSouth shall complete collect calls.
 - 10.3.2.1.6 BellSouth shall provide the capability for callers to bill to a third party and complete such calls.
 - 10.3.2.1.7 BellSouth shall complete station-to-station calls.
 - 10.3.2.1.8 BellSouth shall process emergency calls.
 - 10.3.2.1.9 BellSouth shall process Busy Line Verify and Emergency Line Interrupt requests.
 - 10.3.2.1.10 BellSouth shall process emergency call trace, as it does for its own end users prior to the Effective Date. Call must originate from a 911 provider.
 - 10.3.2.1.11 BellSouth shall process operator-assisted directory assistance calls.
 - 10.3.2.1.12 BellSouth shall adhere to equal access requirements, providing Global Crossing local end users the same IXC access as provided to BellSouth end users.
 - 10.3.2.1.13 BellSouth shall exercise at least the same level of fraud control in providing Operator Service to Global Crossing that BellSouth provides for its own operator service.
 - 10.3.2.1.14 BellSouth shall perform Billed Number Screening when handling Collect, Person-to-Person, and Billed-to-Third-Party calls.
 - 10.3.2.1.15 BellSouth shall direct customer account and other similar inquiries to the customer service center designated by Global Crossing.
 - 10.3.2.1.16 BellSouth shall provide a feed of customer call records in "EMI" format to Global Crossing in accordance with CLEC ODUF standards specified in Attachment 7.

10.3.3 Interface Requirements

10.3.3.1 With respect to Operator Services for calls that originate on local switching capability provided by or on behalf of Global Crossing, the interface requirements shall conform to the then current established system interface specifications for the platform used to provide Operator Service and the interface shall conform to industry standards.

10.4 **Directory Assistance Service**

10.4.1 Definition. Directory Assistance Service provides local end user telephone number listings with the option to complete the call at the caller's direction separate and distinct from local switching.

10.4.2 Requirements

10.4.3 Directory Assistance Service shall provide up to two listing requests per call. If available and if requested by Global Crossing's end user, BellSouth shall provide caller-optional directory assistance call completion service at rates contained in this Attachment to one of the provided listings, equal to that which BellSouth provides its end users. If not available, Global Crossing may request such requirement pursuant to the BFR/NBR Process as set forth in General Terms and Conditions.

10.4.4 Directory Assistance Service Updates

10.4.4.1 BellSouth shall update end user listings changes daily. These changes include:

10.4.4.1.1 New end user connections: BellSouth will provide service to Global Crossing that is equal to the service it provides to itself and its end users;

10.4.4.1.2 End user disconnections: BellSouth will provide service to Global Crossing that is equal to the service it provides to itself and its end users; and

10.4.4.1.3 End user address changes: BellSouth will provide service to Global Crossing that is equal to the service it provides to itself and its end users;

10.4.4.1.4 These updates shall also be provided for non-listed and non-published numbers for use in emergencies.

10.4.5 Branding for Operator Call Processing and Directory Assistance

10.4.5.1 The BellSouth Operator Systems Branding Feature provides a definable announcement to Global Crossing end users using Directory Assistance (DA)/Operator Call Processing (OCP) prior to placing them in queue or connecting them to an available operator or automated operator system. This feature allows Global Crossing to have its calls custom branded with Global

Crossing's name on whose behalf BellSouth is providing Directory Assistance and/or Operator Call Processing. Rates for Custom Branding, Operator Call Process and Directory Assistance are set forth in this Attachment.

- 10.4.5.2 BellSouth offers four service levels of branding to Global Crossing when ordering Directory Assistance and/or Operator Call Processing.
 - 10.4.5.2.1 Service Level 1 - BellSouth Branding
 - 10.4.5.2.2 Service Level 2 - Unbranded
 - 10.4.5.2.3 Service Level 3 - Custom Branding
 - 10.4.5.2.4 Service Level 4 - Self Branding (applicable only to Global Crossing for Resale or use with an Unbundled Port when routing to an operator service provider other than BellSouth).
- 10.4.6 For Resellers and Use with an Unbundled Port
 - 10.4.6.1 BellSouth Branding is the Default Service Level.
 - 10.4.6.2 Unbranding, Custom Branding, and Self Branding require Global Crossing to order selective routing for each originating BellSouth end office identified by Global Crossing. Rates for Selective Routing are set forth in this Attachment.
 - 10.4.6.3 Custom Branding and Self Branding require Global Crossing to order dedicated trunking from each BellSouth end office identified by Global Crossing, to either the BellSouth Traffic Operator Position System (TOPS) or Global Crossing Operator Service Provider. Rates for trunks are set forth in applicable BellSouth tariffs.
 - 10.4.6.4 Unbranding - Unbranded Directory Assistance and/or Operator Call Processing calls ride common trunk groups provisioned by BellSouth from those end offices identified by Global Crossing to the BellSouth TOPS. These calls are routed to "No Announcement."
- 10.4.7 For Facilities Based Carriers
 - 10.4.7.1 All Service Levels require Global Crossing to order dedicated trunking from their end office(s) point of interface to the BellSouth TOPS Switches. Rates for trunks are set forth in applicable BellSouth tariffs.
 - 10.4.7.2 Customized Branding includes charges for the recording of the branding announcement and the loading of the audio units in each TOPS Switch, Interactive Voice Subsystem (IVS) and Network Applications Vehicle (NAV) equipment for which Global Crossing requires service.

- 10.4.8 Directory Assistance customized branding uses:
 - 10.4.8.1 the recording of the name;
 - 10.4.8.2 the front-end loading of the Digital Recorded Announcement Machine (DRAM) in each TOPS switch.
- 10.4.9 Operator Call Processing customized branding uses:
 - 10.4.9.1 the recording of the name;
 - 10.4.9.2 the front-end loading of the DRAM in the TOPS Switch;
 - 10.4.9.3 the back-end loading in the audio units in the Automated Alternate Billing System (AABS) in the Interactive Voice Subsystem (IVS);
 - 10.4.9.4 the 0- automation loading for the audio units in the Enhanced Billing and Access Service (EBAS) in the Network Applications Vehicle (NAV).
 - 10.4.9.5 BellSouth will provide to Global Crossing purchasing local BellSouth switching and reselling BellSouth local exchange service, selective routing of calls to a requested directory assistance services platform or operator services platform. Global Crossing end users may use the same dialing arrangements as BellSouth end users, but obtain a Global Crossing branded service.
- 10.5 **Directory Assistance Database Service (DADS)**
 - 10.5.1 BellSouth shall make its Directory Assistance Database Service (DADS) available solely for the expressed purpose of providing Directory Assistance type services to Global Crossing end users. The term “end user” denotes any entity which obtains Directory Assistance type services for its own use from a DADS customer. Directory Assistance type service is defined as Voice Directory Assistance (DA Operator assisted and Electronic Directory Assistance (Data System assisted)). Global Crossing agrees that DADS will not be used for any purpose which violates federal or state laws, statutes, regulatory orders or tariffs. Except for the permitted users, Global Crossing agrees not to disclose DADS to others and shall provide due care in providing for the security and confidentiality of DADS. Further, Global Crossing authorizes the inclusion of Global Crossing Directory Assistance listings in the BellSouth Directory Assistance products.
 - 10.5.2 BellSouth shall provide Global Crossing initially with a base file of subscriber listings which reflect all listing change activity occurring since Global Crossing’s most recent update via magnetic tape, and subsequently using electronic connectivity such as Network Data Mover to be developed mutually by Global Crossing and BellSouth. Global Crossing agrees to assume the costs associated with CONNECT: Direct™ connectivity, which will vary depending upon volume and mileage.

- 10.5.3 BellSouth will require approximately one month after receiving an order to prepare the Base File. BellSouth will provide daily updates which will reflect all listing change activity occurring since CLEC's most recent update. BellSouth shall provide updates to Global Crossing on a Business, Residence, or combined Business and Residence basis. Global Crossing agrees that the updates shall be used solely to keep the information current. Delivery of Daily Updates will commence the day after Global Crossing receives the Base File.
- 10.5.4 BellSouth is authorized to include Global Crossing Directory Assistance Listing Information in its DADS. Any other use by BellSouth of Global Crossing Directory Assistance Listing Information is not authorized and with the exception of a request for DADS, BellSouth shall refer any request for such information to Global Crossing.
- 10.5.5 Rates for DADS are as set forth in this Attachment.
- 10.6 **Direct Access to Directory Assistance Service**
- 10.6.1 Direct Access to Directory Assistance Service (DADAS) will provide Global Crossing's directory assistance operators with the ability to search all available BellSouth subscriber listings using the Directory Assistance search format. Subscription to DADAS will allow Global Crossing to utilize its own switch, operator workstations and optional audio subsystems.
- 10.6.2 Rates, terms and conditions for provisioning DADAS are as set forth in the FCC tariff No. 1.
- 10.7 **Automatic Location Identification/Data Management System (ALI/DMS)**
- 10.7.1 The ALI/DMS Database contains end user information (including name, address, telephone information, and sometimes special information from the local service provider or end user) used to determine to which Public Safety Answering Point (PSAP) to route the call. The ALI/DMS database is used to provide more routing flexibility for E911 calls than Basic 911. BellSouth shall provide the Emergency Services Database in accordance with the following:
- 10.7.2 Technical Requirements
- 10.7.2.1 BellSouth shall offer Global Crossing a data link to the ALI/DMS database or permit Global Crossing to provide its own data link to the ALI/DMS database. BellSouth shall provide error reports from the ALI/DMS database to Global Crossing immediately after Global Crossing inputs information into the ALI/DMS database. Alternately, Global Crossing may utilize BellSouth, to enter end user information into the database on a demand basis, and validate end user information on a demand basis.
- 10.7.2.2 The ALI/DMS database shall contain the following end user information:

- 10.7.2.2.1 Name;
 - 10.7.2.2.2 Address;
 - 10.7.2.2.3 Telephone number; and
 - 10.7.2.2.4 Other information as appropriate (e.g., whether an end user is blind or deaf or has another disability).
- 10.7.2.3 When BellSouth is responsible for administering the ALI/DMS database in its entirety, ported number NXXs entries for the ported numbers should be maintained unless Global Crossing requests otherwise and shall be updated if Global Crossing requests, provided Global Crossing supplies BellSouth with the updates.
- 10.7.2.4 When Remote Call Forwarding (RCF) is used to provide number portability to the local end user and a remark or other appropriate field information is available in the database, the shadow or “forwarded-to” number and an indication that the number is ported shall be added to the customer record.
- 10.7.2.5 If BellSouth is responsible for configuring PSAP features (for cases when the PSAP or BellSouth supports an ISDN interface) it shall ensure that CLASS Automatic Recall (Call Return) is not used to call back to the ported number. Although BellSouth currently does not have ISDN interface, BellSouth agrees to comply with this requirement once ISDN interfaces are in place.
- 10.7.3 **Interface Requirements**
- The interface between the E911 Switch or Tandem and the ALI/DMS database for Global Crossing end users shall meet industry standards.
- 10.8 **Rates**
- The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. If Global Crossing purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.
- 10.9 **Operational Support Systems (OSS)**
- The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.
11. **Calling Name (CNAM) Database Service**
- 11.1 All of the negotiated rates, terms and conditions set forth in this Section pertain to the provision of CNAM.

- 11.2 The Agreement for CNAM with standard pricing is included as Exhibit B to this Attachment. Global Crossing must provide to its account manager a written request with a requested activation date to activate this service. If Global Crossing is interested in requesting CNAM with volume and term pricing, Global Crossing must contact its account manager to request a separate CNAM volume and term Agreement.
- 11.3 SCPs/Databases shall be equal to or better than all of the requirements for SCPs/Databases set forth in the applicable industry standard technical references.
- 11.4 **Service Creation Environment and Service Management System (SCE/SMS) Advanced Intelligent Network (AIN) Access**
- 11.4.1 BellSouth's Service Creation Environment and Service Management System (SCE/SMS) Advanced Intelligent Network (AIN) Access shall provide Global Crossing the capability that will allow Global Crossing and other third parties to create service applications in a BellSouth SCE and deploy those applications in a BellSouth SMS to a BellSouth SCP. The third party service applications interact with AIN triggers provisioned on a BellSouth SSP.
- 11.4.2 BellSouth's SCE/SMS AIN Access shall provide access to SCE hardware, software, testing and technical support (e.g., help desk, system administrator) resources available to Global Crossing. Scheduling procedures shall provide Global Crossing equivalent priority to these resources.
- 11.4.2 BellSouth SCP shall partition and protect Global Crossing service logic and data from unauthorized access, execution or other types of compromise.
- 11.4.3 When Global Crossing selects SCE/SMS AIN Access, BellSouth shall provide training, documentation, and technical support to enable Global Crossing to use BellSouth's SCE/SMS AIN Access to create and administer applications. Training, documentation, and technical support will address use of SCE and SMS access and administrative functions, but will not include support for the creation of a specific service application.
- 11.4.4 When Global Crossing selects SCE/SMS AIN Access, BellSouth shall provide for a secure, controlled access environment in association with its internal use of AIN components. Global Crossing access will be provided via remote data connection (e.g., dial-in, ISDN).
- 11.4.5 When Global Crossing selects SCE/SMS AIN Access, BellSouth shall allow Global Crossing to download data forms and/or tables to BellSouth SCP via BellSouth SMS without intervention from BellSouth (e.g., service customization and end user subscription).
- 11.5 **Rates**

The prices that Global Crossing shall pay to BellSouth for Network Elements and Other Services are set forth in Exhibit D to this Attachment. If Global Crossing purchases a service(s) from a tariff, all terms and conditions and rates as set forth in such tariff shall apply.

11.6 Operational Support Systems (OSS)

The terms, conditions and rates for OSS are as set forth in Section 2.13 of this Attachment.

12. Basic 911 and E911

12.1 All of the negotiated terms and conditions set forth in this Section pertain to the provision of Basic 911 and E911.

12.2 If Global Crossing orders network elements and other services, then Global Crossing is also responsible for providing E911 to its end users. BellSouth agrees to offer access to the 911/E911 network pursuant to the following terms and conditions set forth in this Attachment.

12.3 Definition

12.4 Basic 911 and E911 is an additional requirement that provides a caller access to the applicable emergency service bureau by dialing a 3-digit universal telephone number (911).

12.5 Requirements

12.5.1 Basic 911 Service Provisioning. For Basic 911 service, BellSouth will provide to Global Crossing a list consisting of each municipality that subscribes to Basic 911 service. The list will also provide, if known, the E911 conversion date for each municipality and, for network routing purposes, a ten-digit directory number representing the appropriate emergency answering position for each municipality subscribing to 911. Global Crossing will be required to arrange to accept 911 calls from its end users in municipalities that subscribe to Basic 911 service and translate the 911 call to the appropriate 10-digit directory number as stated on the list provided by BellSouth. Global Crossing will be required to route that call to BellSouth at the appropriate tandem or end office. When a municipality converts to E911 service, Global Crossing will be required to discontinue the Basic 911 procedures and being using E911 procedures.

12.5.2 E911 Service Provisioning. For E911 service, Global Crossing will be required to install a minimum of two dedicated trunks originating from the Global Crossing serving wire center and terminating to the appropriate E911 tandem. The dedicated trunks shall be, at a minimum, DS-0 level trunks configured either as a 2-wire analog interface or as part of a digital (1.544 Mb/s) interface. Either configuration shall use CAMA-type signaling with multifrequency (“MF”)

pulsing that will deliver automatic number identification (“ANI”) with the voice portion of the call. If the user interface is digital, MF pulses, as well as other AC signals, shall be encoded per the u-255 Law convention. Global Crossing will be required to provide BellSouth daily updates to the E911 database. Global Crossing will be required to forward 911 calls to the appropriate E911 tandem, along with ANI, based upon the current E911 end office to tandem homing arrangement as provided by BellSouth. If the E911 tandem trunks are not available, Global Crossing will be required to route the call to a designated 7-digit local number residing in the appropriate Public Service Answering Point (“PSAP”). This call will be transported over BellSouth’s interoffice network and will not carry the ANI of the calling party. Global Crossing shall be responsible for providing BellSouth with complete and accurate data for submission to the 911/E911 database for the purpose of providing 911/E911 to its end users.

- 12.5.3 Rates. Charges for 911/E911 service are borne by the municipality purchasing the service. BellSouth will impose no charge on Global Crossing beyond applicable charges for BellSouth trunking arrangements.
- 12.5.4 Basic 911 and E911 functions provided to Global Crossing shall be at least at parity with the support and services that BellSouth provides to its end users for such similar functionality.
- 12.5.5 Detailed Practices and Procedures. The detailed practices and procedures contained in the E911 Local Exchange Carrier Guide For Facility-Based Providers as amended from time to time during the term of this Agreement will determine the appropriate practices and procedures for BellSouth and Global Crossing to follow in providing 911/E911 services.

13. True-Up

This section applies only to Tennessee and other rates that are interim or expressly subject to true-up under this attachment.

- 13.1 The interim prices for Network Elements and Other Services and Local Interconnection shall be subject to true-up according to the following procedures:
- 13.2 The interim prices shall be trued-up, either up or down, based on final prices determined either by further agreement between the Parties, or by a final order (including any appeals) of the Commission which final order meets the criteria of (3) below. The Parties shall implement the true-up by comparing the actual volumes and demand for each item, together with interim prices for each item, with the final prices determined for each item. Each Party shall keep its own records upon which the true-up can be based, and any final payment from one Party to the other shall be in an amount agreed upon by the Parties based on such records. In the event of any disagreement as between the records or the Parties regarding the amount of such true-up, the Parties agree that the body having

jurisdiction over the matter shall be called upon to resolve such differences, or the Parties may mutually agree to submit the matter to the Dispute Resolution process in accordance with the provisions of Section 12 of the General Terms and Conditions and Attachment 1 of the Agreement.

13.3 The Parties may continue to negotiate toward final prices, but in the event that no such Agreement is reached within nine (9) months, either Party may petition the Commission to resolve such disputes and to determine final prices for each item. Alternatively, upon mutual agreement, the Parties may submit the matter to the Dispute Resolution Process set forth in Section 12 of the General Terms and Conditions and Attachment 1 of the Agreement, so long as they file the resulting Agreement with the Commission as a “negotiated Agreement” under Section 252(e) of the Act.

- (a) 13.4 An effective order of the Commission that forms the basis of a true-up shall be based upon cost studies submitted by either or both Parties to the Commission and shall be binding upon BellSouth and Global Crossing specifically or upon all carriers generally, such as a generic cost proceeding.

EXHIBIT A

**LINE INFORMATION DATA BASE (LIDB)
STORAGE AGREEMENT**

I. SCOPE

- A. This Agreement sets forth the terms and conditions pursuant to which BellSouth agrees to store in its LIDB certain information at the request of Global Crossing and pursuant to which BellSouth, its LIDB customers and Global Crossing shall have access to such information. Global Crossing understands that BellSouth provides access to information in its LIDB to various telecommunications service providers pursuant to applicable tariffs and agrees that information stored at the request of Global Crossing, pursuant to this Agreement, shall be available to those telecommunications service providers. The terms and conditions contained herein shall hereby be made a part of this Interconnection Agreement upon notice to Global Crossing's account team to activate this LIDB Storage Agreement. The General Terms and Conditions of the Interconnection/Resale Agreement shall govern this LIDB Storage Agreement. The terms and conditions contained in the attached Addendum is hereby made a part of this LIDB Storage Agreement as if fully incorporated herein.
- B. LIDB is accessed for the following purposes:
1. Billed Number Screening
 2. Calling Card Validation
 3. Fraud Control
- C. BellSouth will provide seven days per week, 24-hours per day, fraud monitoring on Calling Cards, bill-to-third and collect calls made to numbers in BellSouth's LIDB, provided that such information is included in the LIDB query. BellSouth will establish fraud alert thresholds and will notify Global Crossing of fraud alerts so that Global Crossing may take action it deems appropriate. Global Crossing understands and agrees BellSouth will administer all data stored in the LIDB, including the data provided by Global Crossing pursuant to this Agreement, in the same manner as BellSouth's data for BellSouth's end user customers. BellSouth shall not be responsible to Global Crossing for any lost revenue which may result from BellSouth's administration of the LIDB pursuant to its established practices and

procedures as they exist and as they may be changed by BellSouth in its sole discretion from time to time.

Global Crossing understands that BellSouth currently has in effect numerous billing and collection agreements with various interexchange carriers and billing clearinghouses. Global Crossing further understands that these billing and collection customers of BellSouth query BellSouth's LIDB to determine whether to accept various billing options from end users. Additionally, Global Crossing understands that presently BellSouth has no method to differentiate between BellSouth's own billing and line data in the LIDB and such data which it includes in the LIDB on Global Crossing's behalf pursuant to this Agreement. Therefore, until such time as BellSouth can and does implement in its LIDB and its supporting systems the means to differentiate Global Crossing's data from BellSouth's data and the Parties to this Agreement execute appropriate amendments hereto, the following terms and conditions shall apply:

- (a) Global Crossing agrees that it will accept responsibility for telecommunications services billed by BellSouth for its billing and collection customers for Global Crossing's end user accounts which are resident in LIDB pursuant to this Agreement. Global Crossing authorizes BellSouth to place such charges on Global Crossing's bill from BellSouth and agrees that it shall pay all such charges. Charges for which Global Crossing hereby takes responsibility include, but are not limited to, collect and third number calls.
- (b) Charges for such services shall appear on a separate BellSouth bill page identified with the name of the entity for which BellSouth is billing the charge.
- (c) Global Crossing shall have the responsibility to render a billing statement to its end users for these charges, but Global Crossing's obligation to pay BellSouth for the charges billed shall be independent of whether Global Crossing is able or not to collect from Global Crossing's end users.
- (d) BellSouth shall not become involved in any disputes between Global Crossing and the entities for which BellSouth performs billing and collection. BellSouth will not issue adjustments for charges billed on behalf of an entity to Global Crossing. It shall be the responsibility of Global Crossing and the other entity to negotiate and arrange for any appropriate adjustments.

II. FEES FOR SERVICE AND TAXES

- A. Global Crossing will not be charged a fee for storage services provided by BellSouth to Global Crossing, as described in Section I of this Agreement.

- B. Sales, use and all other taxes (excluding taxes on BellSouth's income) determined by BellSouth or any taxing authority to be due to any federal, state or local taxing jurisdiction with respect to the provision of the service set forth herein will be paid by Global Crossing in accordance with the tax provisions set forth in the General Terms and Conditions of this Agreement.

III. MISCELLANEOUS

- A. It is understood and agreed to by the Parties that BellSouth may provide similar services to other companies.
- B. All terms, conditions and operations under this Agreement shall be performed in accordance with, and subject to, all applicable local, state or federal legal and regulatory tariffs, rulings, and other requirements of the federal courts, the U. S. Department of Justice and state and federal regulatory agencies. Nothing in this Agreement shall be construed to cause either Party to violate any such legal or regulatory requirement and either Party's obligation to perform shall be subject to all such requirements.
- C. This LIDB Storage Agreement constitutes the entire Agreement between Global Crossing and BellSouth with respect to the subject matter hereof and supersedes all prior Agreements or contracts, oral or written representations, statements, negotiations, understandings, proposals and undertakings with respect to LIDB Storage.

**FACILITIES BASED ADDENDUM
TO LINE INFORMATION DATA BASE (LIDB)
STORAGE AGREEMENT**

This is a Facilities Based Addendum to the Line Information Data Base Storage Agreement dated _____, between BellSouth Telecommunications, Inc. (“BellSouth”), and _____ (“Global Crossing”), effective the _____ day of _____, _____.

I. GENERAL

This Addendum sets forth the terms and conditions for Global Crossing’s provision of billing number information to BellSouth for inclusion in BellSouth’s LIDB. BellSouth will store in its LIDB the billing number information provided by Global Crossing, and BellSouth will provide responses to on-line, call-by-call queries to this information for purposes specified in Section I.B. of the Agreement.

II. DEFINITIONS

- A. Billing number - a number that Global Crossing creates for the purpose of identifying an account liable for charges. This number may be a line or a special billing number.
- B. Line number - a ten digit number that identifies a telephone line administered by Global Crossing.
- C. Special billing number - a ten-digit number that identifies a billing account established by Global Crossing.
- D. Calling Card number - a billing number plus PIN number.
- E. PIN number - a four-digit security code assigned by Global Crossing which is added to a billing number to compose a fourteen-digit calling card number.
- F. Toll billing exception indicator - associated with a billing number to indicate that it is considered invalid for billing of collect calls or third number calls or both, by Global Crossing.

- G. Billed Number Screening - refers to the activity of determining whether a toll billing exception indicator is present for a particular billing number.
- H. Calling Card Validation - refers to the activity of determining whether a particular calling card number exists as stated or otherwise provided by a caller.
- I. Billing number information - information about billing number, Calling Card number and toll billing exception indicator provided to BellSouth by Global Crossing.

III. RESPONSIBILITIES OF PARTIES

- A. Global Crossing will provide its billing number information to BellSouth's LIDB each business day by a method that has been mutually agreed upon by both Parties.
- B. BellSouth will store in its LIDB the billing number information provided by Global Crossing. Under normal operating conditions, BellSouth shall include Global Crossing's billing number information in its LIDB no later than two business days following BellSouth's receipt of such billing number information, provided that BellSouth shall not be held responsible for any delay or failure in performance to the extent such delay or failure is caused by circumstances or conditions beyond BellSouth's reasonable control. BellSouth will store in its LIDB an unlimited volume of Global Crossing's working telephone numbers.
- C. BellSouth will provide responses to on-line, call-by-call queries to the stored information for the specific purposes listed in the next paragraph.
- D. BellSouth is authorized to use the billing number information provided by Global Crossing to perform the following functions for authorized users on an on-line basis:
 - 1. Validate a 14 digit Calling Card number where the first 10 digits are a line number or special billing number assigned by Global Crossing, and where the last four digits (PIN) are a security code assigned by Global Crossing.
 - 2. Determine whether Global Crossing or the subscriber has identified the billing number as one which should not be billed for collect or third number calls, or both.
- E. Global Crossing will provide its own billing number information to BellSouth for storage and to be used for Billed Number Screening and Calling Card Validation. Global Crossing will arrange and pay for transport of updates to BellSouth.

IV. COMPLIANCE

Unless expressly authorized in writing by Global Crossing, all billing number information provided pursuant to this Addendum shall be used for no purposes other than those set forth in this Addendum.

EXHIBIT B

CALLING NAME DELIVERY (CNAM) DATABASE SERVICES

1. Definitions

For the purpose of this Attachment, the following terms shall be defined as:

CALLING NAME DELIVERY DATABASE SERVICE (CNAM) - The ability to associate a name with the calling party number, allowing the end user subscriber (to which a call is being terminated) to view the calling party's name before the call is answered. This service also provides Global Crossing the opportunity to load and store its subscriber names in the BellSouth CNAM SCPs.

CALLING PARTY NUMBER (CPN) - The number of the calling party that is delivered to the terminating switch using common channel signaling system 7 (CCS7) technology, and that is contained in the Initial Address Message (IAM) portion of the CCS7 call setup.

COMMON CHANNEL SIGNALING SYSTEM 7 (CCS7) - A network signaling technology in which all signaling information between two or more nodes is transmitted over high-speed data links, rather than over voice circuits.

SERVICE CONTROL POINTs (SCPs) - The real-time data base systems that contain the names to be provided in response to queries received from CNAM SSPs.

SERVICE MANAGEMENT SYSTEM (SMS) - The main operations support system of CNAM DATABASE SERVICE. CNAM records are loaded into the SMS, which in turn downloads into the CNAM SCP.

SERVICE SWITCHING POINTs (SSPs) - Features of computerized switches in the telephone network that determine that a terminating line has subscribed to CNAM service, and then communicate with CNAM SCPs in order to provide the name associated with the calling party number.

SUBSYSTEM NUMBER (SSN) - The address used in the Signaling Connection Control Part (SCCP) layer of the SS7 protocol to designate an application at an end signaling point. A SSN for CNAM at the end office designates the CNAM application within the end office. BellSouth uses the CNAM SSN of 232.

2. Attachment

- 2.1 This Attachment contains the terms and conditions where BellSouth will provide to Global Crossing access to the BellSouth CNAM SCP for query or record storage purposes.
- 2.2 Global Crossing shall submit to BellSouth a notice of its intent to access and utilize BellSouth CNAM Database Services pursuant to the terms and conditions of this

Attachment. Said notice shall be in writing, no less than 60 days prior to Global Crossing's access to BellSouth's CNAM Database Services and shall be addressed to Global Crossing's Account Manager.

3. Physical Connection and Compensation

- 3.1 BellSouth's provision of CNAM Database Services to Global Crossing requires interconnection from Global Crossing to BellSouth CNAM Service Control Points (SCPs). Such interconnections shall be established pursuant to Attachment 3 of this Agreement. The appropriate charge for access to and use of the BellSouth CNAM Database service shall be as set forth in this Attachment.
- 3.2 In order to formulate a CNAM query to be sent to the BellSouth CNAM SCP, Global Crossing shall provide its own CNAM SSP. Global Crossing's CNAM SSPs must be compliant with TR-NWT-001188, "CLASS Calling Name Delivery Generic Requirements".
- 3.3 If Global Crossing elects to access the BellSouth CNAM SCP via a third party CCS7 transport provider, the third party CCS7 provider shall interconnect with the BellSouth CCS7 network according to BellSouth's Common Channel Signaling Interconnection Guidelines and Telcordia (formerly BellCore)'s CCS Network Interface Specification document, TR-TSV-000905. In addition, the third party provider shall establish CCS7 interconnection at the BellSouth Local Signal Transfer Points (LSTPs) serving the BellSouth CNAM SCPs that Global Crossing desires to query.
- 3.4 **Out-Of-Region Customers**
- If the customer queries the BellSouth CNAM SCP via a third party national SS7 transport provider, the third party SS7 provider shall interconnect with the BellSouth CCS7 network according to BellSouth's Common Channel Signaling Interconnection Guidelines and Telcordia's (formerly BellCore's) CCS Network Interface Specification document, TR-TSV-000905. In addition, the third party provider shall establish SS7 interconnection at one or more of the BellSouth Gateway Signal Transfer Points (STPs). The payment of all costs associated with the transport of SS7 signals via a third party will be established by mutual agreement of the Parties in writing and shall, by this reference become an integral part of this Agreement.

4. CNAM Record Initial Load and Updates

- 4.1 The mechanism to be used by Global Crossing for initial CNAM record load and/or updates shall be determined by mutual agreement. The initial load and all updates shall be provided by Global Crossing in the BellSouth specified format and shall contain records for every working telephone number that can originate phone calls. It is the responsibility of Global Crossing to provide accurate information to BellSouth on a current basis.

- 4.2 Updates to the SMS shall occur no less than once a week, reflect service order activity affecting either name or telephone number, and involve only record additions, deletions or changes.
- 4.3 Global Crossing CNAM records provided for storage in the BellSouth CNAM SCP shall be available, on a SCP query basis only, to all Parties querying the BellSouth CNAM SCP. Further, CNAM service shall be provided by each Party consistent with state and/or federal regulation.

