# APPENDIX

## SUMMARY OF CHANGES TO UNEP REPORT, MAY TO AUGUST, 2002

Changes in methodology and corrections of errors:

- We changed our MOU (minutes of use) assumption from 1200 to 1411, to account for toll minutes, based on footnote 252 of the FCC's Pennsylvania order.

- For the columns that calculate full UNEP based on DEM (dial-equipment minutes), there is no change. Thus, for comparison, we are showing full UNEP based on DEM for both May and August in our tables.

- We corrected an error in the formula that calculated amortized non-recurring charges for Verizon's MA, NH, NY, DE, PA. For NV, KS, MO, OK and TX, we now have some non-recurring charges that we did not have in our last iteration. For Maryland, we are no longer using the compliance rates that we used in May. Statewide loop rate averages changed in several BellSouth, Qwest and Verizon states, though the actual rates did not, based on new estimates of the distributions of lines per zone: KY, LA, MS, SC, NM, ME, RI, PA.

- Once we assemble our data, we ask all the relevant state commissions, RBOCs and the two major IXCs to comment on its accuracy. We received specific feedback on the accuracy of our tables from all the RBOCs and many states.

## SUMMARY OF RBOC CHANGES

- UNE prices continue to trend down.

- For all RBOCs the full UNEP average (assuming DEM) dropped by 10% from that which we reported in May.

- On a national basis, full UNEP average (assuming DEM) now stands at $20.28 vs. the $22.58 average we reported in May.

- The range is a high of $24.38 for BellSouth and a low of $17.50 for SBC, within the range we predicted in our May report.

- SBC experienced a roughly 20% decline (with an even sharper decline in California) and Qwest experienced a roughly 15% decline in full UNEP (DEM) average since our May report.

- The RBOC-wide total switching and transport average dropped 21%, from the $8.34 we reported in May to $6.59 in August.

- Several states' full UNEP (DEM) price appear to increase or actually increased from that which we reported in May. In some cases, as noted above, we changed the non-recurring formula. In some cases we changed the distribution

of loops among zones, thus changing the average. In a few cases, rates actually rose. In AL, FL, LA, MS and SC, there is now a cross-connect charge that is part of the non-recurring charges that we amortize. In Oregon, the port rate increased slightly.

— Anna Maria Kovacs, Ph.D., CFA
— Kristin L. Burns, Ph.D.
— Gregory S. Vitale

## COMPANIES MENTIONED IN THIS REPORT

| Company Name | Symbol | Price |
|---|---|---|
| BellSouth | BLS | $25.44 |
| SBC | SBC | $27.89 |
| Qwest | Q | $2.82 |
| Verizon | VZ | $31.18 |
| AT&T | T | $11.79 |
| WorldCom's MCI | WCOEQ | $0.12 |
| Z-Tel | ZTEL | $1.44 |
| Comcast | CMCSK | $22.99 |
| Dow Jones Industrial | DJIA | 8,887.87 |
| S&P 500 Stock Index | SPX | 941.06 |

## EXHIBIT 1: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - ALL RBOCS

| RBOC Regionwide Averages | ACCESS LINES (000s) | % OF TOTAL ACCESS LINES | LOOP RATE (per month) | TOTAL SWITCHING AND TRANSPORT (per month) Assumes 1411 originating minutes | TOTAL SWITCHING AND TRANSPORT (per month) Assumes DEM minutes | ALL OTHER (per month) Assumes 1411 originating minutes | ALL OTHER (per month) Assumes DEM minutes | FULL UNEP ORIGINATING AND TERMINATING Assumes 1411 originating minutes | FULL UNEP ORIGINATING AND TERMINATING Assumes DEM minutes | MAY 2002 FULL UNEP ORIGINATING AND TERMINATING Assumes DEM minutes |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | KEY INPUTS | SUBTOTALS | | | | TOTALS | | |
| *Average, All RBOCS* | 145,078 | 100% | $13.04 | $7.28 | $6.59 | $0.62 | $0.66 | $20.94 | $20.28 | $22.58 |
| High | | | $16.60 | $8.42 | $6.97 | $1.61 | $2.01 | $24.58 | $24.38 | $28.21 |
| RBOC | | | Q | VZ | Q | BLS | BLS | Q | BLS | Q |
| Low | | | $11.03 | $5.92 | $5.91 | $0.19 | $0.18 | $18.30 | $17.50 | $19.81 |
| RBOC | | | SBC | BLS | SBC | VZ | VZ | SBC | SBC | VZ |
| BellSouth Regionwide Avg. | 24,052 | 17% | $13.42 | $5.92 | $6.95 | $1.61 | $2.01 | $22.94 | $24.38 | $26.06 |
| High | | | $22.37 | $6.78 | $8.77 | $2.63 | $3.11 | $29.34 | $29.82 | $36.09 |
| State | | | MS | NC | GA | FL | FL | MS | MS | AL |
| Low | | | $12.55 | $4.30 | $5.31 | $0.99 | $1.18 | $19.48 | $20.88 | $20.90 |
| State | | | GA | TN | TN | KY | MS | TN | TN | TN |
| Qwest Regionwide Avg. | 17,961 | 12% | $16.60 | $7.55 | $6.97 | $0.43 | $0.46 | $24.58 | $23.97 | $28.21 |
| High | | | $23.98 | $12.22 | $10.25 | $0.75 | $0.70 | $34.95 | $34.64 | $39.98 |
| State | | | MT | SD | SD | OR | OR | MT | MT | MT |
| Low | | | $13.43 | $5.13 | $4.44 | $0.18 | $0.18 | $20.65 | $20.54 | $22.17 |
| State | | | UT | NM | NM | IA | IA | UT | UT | OR |
| SBC Regionwide Avg. | 58,138 | 40% | $11.03 | $6.67 | $5.91 | $0.60 | $0.55 | $18.30 | $17.50 | $21.54 |
| High | | | $20.52 | $13.24 | $10.13 | $2.90 | $2.82 | $33.84 | $30.63 | $30.54 |
| State | | | NY | NV | WI | WI | WI | NY | NY | NV |
| Low | | | $7.01 | $3.85 | $3.71 | $0.03 | $0.02 | $12.20 | $12.05 | $14.50 |
| State | | | OH | IN | IN | IN | IN | IN | IN | MI |
| AMERITECH Region Avg. | 21,841 | 38% | $9.21 | $6.42 | $5.94 | $0.65 | $0.58 | $16.28 | $15.73 | $16.32 |
| High | | | $10.90 | $11.27 | $10.13 | $2.90 | $2.82 | $25.07 | $23.85 | $23.85 |
| State | | | WI | WI | WI | WI | WI | WI | WI | WI |
| Low | | | $7.01 | $3.85 | $3.71 | $0.03 | $0.02 | $12.20 | $12.05 | $14.50 |
| State | | | OH | IN | IN | IN | IN | IN | IN | MI |
| PACIFIC BELL Region Avg. | 19,001 | 33% | $10.15 | $6.90 | $5.54 | $0.08 | $0.08 | $17.13 | $15.77 | $17.54 |
| High | | | $20.52 | $15.24 | $10.02 | $0.08 | $0.08 | $33.84 | $30.63 | $30.54 |
| State | | | NV | NV | NV | CA, NV | CA, NV | NV | NV | NV |
| Low | | | $9.93 | $6.77 | $5.44 | $0.08 | $0.08 | $16.78 | $15.46 | $27.47 |
| State | | | CA | CA | CA | CA, NV | CA, NV | CA | CA | CA |
| SWBT Region Avg. | 17,296 | 30% | $14.31 | $6.73 | $6.29 | $1.10 | $1.02 | $22.14 | $21.63 | $21.54 |
| High | | | $15.71 | $8.45 | $8.03 | $1.37 | $1.30 | $25.53 | $25.03 | $34.88 |
| State | | | OK | OK | OK | OK | OK | OK | OK | OK |
| Low | | | $13.09 | $5.75 | $5.16 | $0.27 | $0.27 | $20.13 | $19.60 | $19.49 |
| State | | | AR | AR,KS | KS | MO | MO | AR | KS | KS |
| Verizon Regionwide Avg. | 44,917 | 31% | $12.93 | $8.69 | $7.12 | $0.19 | $0.18 | $21.82 | $20.23 | $19.81 |
| High | | | $24.58 | $20.32 | $19.32 | $0.69 | $0.66 | $45.52 | $44.02 | $44.02 |
| State | | | WV | WV | WV | DE | DE | WV | WV | WV |
| Low | | | $9.52 | $6.41 | $5.25 | $0.00 | $0.00 | $17.15 | $15.14 | $15.14 |
| State | | | NJ | NY | PA | DC | DC | NJ | NJ | NJ |
| NYNEX Region Avg. | 19,487 | 43% | $12.92 | $8.13 | $6.82 | $0.13 | $0.12 | $21.18 | $19.85 | $20.36 |
| High | | | $18.10 | $12.91 | $10.54 | $0.46 | $0.38 | $28.08 | $25.42 | $29.77 |
| State | | | NH | MA | VT | NH | NH | MA | MA | NH |
| Low | | | $11.49 | $6.41 | $5.39 | $0.04 | $0.03 | $17.98 | $17.17 | $17.35 |
| State | | | NY | NY | NY | RI,VT | RI,VT | NY | NY | NY |
| BELL ATLANTIC Region Avg. | 25,439 | 57% | $12.95 | $9.11 | $7.35 | $0.24 | $0.22 | $22.31 | $20.52 | $19.39 |
| High | | | $24.28 | $20.82 | $19.32 | $0.69 | $0.66 | $45.52 | $44.02 | $44.02 |
| State | | | WV | WV | WV | DE | DE | WV | WV | WV |
| Low | | | $9.52 | $6.49 | $5.25 | $0.00 | $0.00 | $17.15 | $15.14 | $15.14 |
| State | | | NJ | PA | PA | DC | DC | NJ | NJ | NJ |

*Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.*

# Exhibit 1A: Unbundled Network Element Rate Comparison Matrix Summary - All RBOCS

| RBOC Regionwide Averages | | LOOP RATE (per month) | PORT RATE (per month) | Local originating SWITCHING (per MOU) | Local terminating SWITCHING (per MOU) | OTHER SWITCHING AND TRANSPORT (per MOU) | DUF (per month) | DUF (per month) | Other Switching and Transport (per month) | Other Switching and Transport (per month) | FEATURE COST (per month) | AMORTIZED NRC (per month) | TOTAL DEM (per line, per month) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Assumes 1411 originating minutes | Assumes DEM minutes | Assumes 1411 originating minutes | Assumes DEM minutes | | | |
| | | KEY INPUTS | | | | | SUBTOTALS | | | | | | |
| Average, All RBOCS | | $13.04 | $2.02 | $0.001663 | $0.001547 | $0.000675 | $0.45 | $0.48 | $0.95 | $0.82 | $0.33 | $0.17 | 2,171 |
| | High | $16.60 | $2.49 | $0.002388 | $0.002199 | $0.001036 | $1.46 | $1.86 | $1.46 | $1.32 | $0.61 | $0.23 | 3,168 |
| | RBOC | Q | SBC | VZ | VZ | Q | BLS | BLS | Q | Q | BLS | SBC | BLS |
| | Low | $11.08 | $1.41 | $0.001150 | $0.001150 | $0.000517 | $0.06 | $0.05 | $0.73 | $0.56 | $0.20 | $0.13 | 1,871 |
| | RBOC | SBC | Q | SBC | SBC | BLS | VZ | VZ | BLS | VZ | VZ | Q, VZ | VZ |
| BellSouth Regionwide Avg. | | $15.42 | $1.73 | $0.001151 | $0.001151 | $0.000517 | $1.46 | $1.86 | $0.73 | $0.93 | $0.61 | $0.14 | 3,168 |
| | High | $22.37 | $2.30 | $0.001868 | $0.001868 | $0.000782 | $2.45 | $2.94 | $1.10 | $1.46 | $2.26 | $0.22 | 3,574 |
| | State | MS | SC | LA | LA | KY | FL | FL | KY | KY | FL | NC | GA |
| | Low | $12.55 | $1.15 | $0.000703 | $0.000703 | $0.000408 | $0.88 | $1.03 | $0.58 | $0.80 | $0.00 | $0.06 | 2,754 |
| | State | GA | KY | AL | AL | AL | NC | MS | AL | AL | AL,GA, KY,LA, | KY | MS |
| Qwest Regionwide Avg. | | $16.80 | $1.41 | $0.001731 | $0.001731 | $0.001036 | $0.30 | $0.28 | $1.56 | $1.32 | $0.40 | $0.13 | 2,129 |
| | High | $23.98 | $2.64 | $0.001469 | $0.005409 | $0.001301 | $0.39 | $0.46 | $3.84 | $1.66 | $4.36 | $0.36 | 2,947 |
| | State | MT | WY | SD | SD | MN | MN,ND,OR, | ND | MN | MN | UT | OR | ND |
| | Low | $13.43 | $0.93 - | $0.000000 | $0.000000 | $0.000721 | $0.00 | $0.00 | $1.02 | $0.83 | $0.00 | $0.00 | 2,001 |
| | State | UT | UT | UT | UT | NM | IA | IA | NM | NM | ,CO,IA,ID,MN,N | MN | SD |
| SBC Regionwide Avg. | | $11.03 | $2.49 | $0.001156 | $0.001150 | $0.000746 | $0.36 | $0.32 | $1.05 | $0.81 | $0.29 | $0.23 | 1,974 |
| | High | $20.52 | $6.25 | $0.002259 | $0.002259 | $0.005408 | $1.06 | $1.02 | $7.63 | $5.52 | $0.90 | $2.57 | 2,186 |
| | State | NV | WI | OK | OK | NV | AK,KS,OK,TX | AK | NV | NV | CA | WI | AR |
| | Low | $7.01 | $0.88 | $0.000000 | $0.000000 | $0.000299 | $0.00 | $0.00 | $0.42 | $0.38 | $0.00 | $0.01 | 1,764 |
| | State | OH | CA | IL,IN | IL, IN | TX | CA,NV,MO | CA,NV,MO | TX | TX | IL,IN,OH,MI,WI | IN | IL |
| AMERITECH Region Avg. | | $9.21 | $4.20 | $0.000436 | $0.000436 | $0.000810 | $0.17 | $0.20 | $1.14 | $0.88 | $0.00 | $0.38 | 1,906 |
| | High | $10.90 | $6.25 | $0.001319 | $0.001319 | $0.001247 | $0.33 | $0.27 | $1.76 | $1.36 | n/a | $2.57 | 2,097 |
| | State | WI | WI | WI | WI | WI | WI | OH | WI | WI | n/a | WI | OH |
| | Low | $7.01 | $2.53 | $0.000000 | $0.000000 | $0.000548 | $0.02 | $0.01 | $0.77 | $0.58 | n/a | $0.01 | 1,764 |
| | State | OH | MI | IL,IN | IL, IN | MI | IN | IN | MI | MI | n/a | IN | IL |
| PACIFIC BELL Region Avg. | | $10.15 | $0.90 | $0.001482 | $0.001482 | $0.001036 | $0.00 | $0.00 | $1.46 | $1.07 | $0.88 | $0.08 | 1,813 |
| | High | $20.32 | $1.63 | $0.001610 | $0.001610 | $0.005408 | n/a | n/a | $7.63 | $5.52 | $0.90 | $0.08 | 1,814 |
| | State | NV | NV | NV | NV | NV | n/a | n/a | NV | NV | CA | CA, NV | CA |
| | Low | $9.93 | $0.88 | $0.001480 | $0.001480 | $0.000944 | n/a | n/a | $1.33 | $0.98 | $0.00 | $0.08 | 1,786 |
| | State | CA | CA | CA | CA | CA | n/a | n/a | CA | CA | NV | CA, NV | NV |
| SWBT Region Avg | | $14.31 | $2.08 | $0.001688 | $0.001688 | $0.004345 | $0.89 | $0.81 | $0.49 | $0.44 | $0.00 | $0.21 | 2,237 |
| | High | $15.71 | $2.22 | $0.002259 | $0.002259 | $0.000489 | $1.06 | $1.02 | $0.69 | $0.64 | $0.00 | $0.31 | 2,186 |
| | State | OK | TX | OK | OK | OK | AR,KS,OK,TX | AR | OK | OK | n/a | OK | AR |
| | Low | $13.09 | $1.61 | $0.001490 | $0.001490 | $0.000299 | $0.00 | $0.00 | $0.42 | $0.38 | $0.00 | $0.18 | 2,115 |
| | State | AR | AR, KS | AR, KS | AR, KS | TX | MO | MO | TX | TX | n/a | TX | KS |
| Verizon Regionwide Avg. | | $12.93 | $1.79 | $0.002575 | $0.002199 | $0.000523 | $0.06 | $0.05 | $0.74 | $0.56 | $0.20 | $0.13 | 1,871 |
| | High | $24.58 | $2.57 | $0.008868 | $0.005622 | $0.001540 | $0.43 | $0.35 | $2.17 | $1.65 | $1.36 | $0.56 | 2,277 |
| | State | WV | NY | WV | WV | MA | NH | NH | MA | MA | MD | DE | WV |
| | Low | $9.52 | $0.71 | $0.001147 | $0.001111 | $0.000162 | $0.00 | $0.00 | $0.23 | $0.16 | $0.00 | $0.00 | 1,317 |
| | State | NJ | NH | NY | NY | VA | NY,DC | NY,DC | VA | NJ | ME,MA,DC,DE, | RI,VT,DC | DC |
| NYNEX Region Avg. | | $13.85 | $2.24 | $0.001832 | $0.001804 | $0.000875 | $0.03 | $0.03 | $1.24 | $0.95 | $0.17 | $0.09 | 1,908 |
| | High | $20.96 | $2.57 | $0.004003 | $0.004003 | $0.001540 | $0.43 | $0.35 | $2.17 | $1.65 | $0.32 | $0.15 | 2,009 |
| | State | NH | NY | VT | VT | MA | NH | NH | MA | MA | RI | MA | VT |
| | Low | $11.49 | $0.71 | $0.001147 | $0.001111 | $0.000578 | $0.00 | $0.00 | $0.82 | $0.63 | $0.00 | $0.00 | 1,870 |
| | State | NY | NH | NY | NY | NY | NY | NY | NY | NY | ME,MA | RI,VT | MA |
| BELL ATLANTIC Region Avg. | | $12.95 | $1.45 | $0.003144 | $0.002501 | $0.000253 | $0.09 | $0.06 | $0.36 | $0.27 | $0.22 | $0.16 | 1,842 |
| | High | $24.58 | $2.23 | $0.008868 | $0.005622 | $0.000696 | $0.13 | $0.12 | $0.98 | $0.70 | $1.36 | $0.56 | 2,277 |
| | State | WV | DE | WV | WV | DC | DE, WV | WV | DC | WV | MD | DE | WV |
| | Low | $9.52 | $0.73 | $0.001802 | $0.001615 | $0.000162 | $0.00 | $0.00 | $0.23 | $0.16 | $0.00 | $0.00 | 1,317 |
| | State | NJ | NJ | PA | PA | VA | DC | DC | VA | NJ | DC,DE,NJ | DC,NJ,WV | DC |

*Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.*

## EXHIBIT 2: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - BELLSOUTH

| STATE | DENSITY ZONES | ACCESS LINES (000) | % of TOTAL ACCESS LINES | LOOP RATE (per month) | TOTAL SWITCHING AND TRANSPORT (per month) Assumes 1411 originating minutes | TOTAL SWITCHING AND TRANSPORT (per month) Assumes DEM minutes | ALL OTHER (per month) Assumes 1411 originating minutes | ALL OTHER (per month) Assumes DEM minutes | FULL UNEP ORIGINATING AND TERMINATING Assumes 1411 originating minutes | FULL UNEP ORIGINATING AND TERMINATING Assumes DEM minutes | MAY 2002 FULL UNEP ORIGINATING AND TERMINATING Assumes DEM minutes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | KEY INPUT | SUBTOTALS | | | | TOTALS | | |
| Alabama | Avg. | 1,942 | 8% | $16.66 | $4.55 | $5.46 | $1.07 | $1.43 | $22.28 | $23.55 | $36.09 |
| | 1 | | | $11.55 | | | | | | | |
| | 2 | | | $20.04 | | | | | | | |
| | 3 | | | $33.65 | | | | | | | |
| Florida | Avg. | 6,514 | 27% | $15.55 | $6.03 | $6.55 | $2.63 | $3.11 | $24.21 | $25.21 | $26.18 |
| | 1 | | | $11.77 | | | | | | | |
| | 2 | | | $15.89 | | | | | | | |
| | 3 | | | $30.70 | | | | | | | |
| Georgia | Avg. | 4,115 | 17% | $13.55 | $6.61 | $8.77 | $1.77 | $2.51 | $20.93 | $23.83 | $23.83 |
| | 1 | | | $10.80 | | | | | | | |
| | 2 | | | $12.47 | | | | | | | |
| | 3 | | | $19.83 | | | | | | | |
| Kentucky | Avg. | 1,232 | 5% | $17.26 | $5.21 | $6.53 | $0.99 | $1.29 | $23.46 | $25.08 | $23.36 |
| | 1 | | | $9.64 | | | | | | | |
| | 2 | | | $14.37 | | | | | | | |
| | 3 | | | $30.39 | | | | | | | |
| Louisiana | Avg. | 3,351 | 10% | $16.24 | $6.63 | $7.83 | $1.05 | $1.26 | $23.91 | $25.37 | $25.37 |
| | 1 | | | $11.77 | | | | | | | |
| | 2 | | | $22.39 | | | | | | | |
| | 3 | | | $48.26 | | | | | | | |
| Mississippi | Avg. | 1,326 | 6% | $22.37 | $5.99 | $6.28 | $1.07 | $1.18 | $29.34 | $29.82 | $29.01 |
| | 1 | | | $10.98 | | | | | | | |
| | 2 | | | $15.91 | | | | | | | |
| | 3 | | | $25.04 | | | | | | | |
| | 4 | | | $43.68 | | | | | | | |
| North Carolina | Avg. | 2,473 | 10% | $14.18 | $6.78 | $7.64 | $1.10 | $1.27 | $22.06 | $23.09 | $27.00 |
| | 1 | | | $10.75 | | | | | | | |
| | 2 | | | $19.05 | | | | | | | |
| | 3 | | | $30.33 | | | | | | | |
| South Carolina | Avg. | 1,475 | 6% | $16.51 | $6.15 | $6.81 | $1.08 | $1.26 | $23.74 | $24.58 | $26.93 |
| | 1 | | | $13.76 | | | | | | | |
| | 2 | | | $20.38 | | | | | | | |
| | 3 | | | $26.04 | | | | | | | |
| Tennessee | Avg. | 2,624 | 11% | $14.12 | $4.30 | $5.31 | $1.07 | $1.45 | $19.48 | $20.88 | $26.90 |
| | 1 | | | $12.48 | | | | | | | |
| | 2 | | | $16.31 | | | | | | | |
| | 3 | | | $21.32 | | | | | | | |

*Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.*

# Exhibit 2A: Unbundled Network Element Rate Comparison Matrix Summary - BellSouth

| STATE | LOOP RATE (per month) | PORT RATE (per month) | LOCAL ORIGINATING SWITCHING (per MOU) | LOCAL TERMINATING SWITCHING (per MOU) | OTHER SWITCHING AND TRANSPORT (per MOU) | DUF (per month) Assumes 1411 originating minutes | DUF (per month) Assumes DEM minutes | Other Switching and Transport (per month) Assumes 1411 originating minutes | Other Switching and Transport (per month) Assumes DEM minutes | FEATURE COST (per month) | AMORTIZED NRC (per month) | TOTAL DEM (per line, per month) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | KEY INPUTS | | | | | SUBTOTALS | | | | | | |
| Alabama | $16.66<br>$11.55<br>$20.04<br>$33.65 | $2.24 | $0.000703 | $0.000703 | $0.000498 | $0.52 | $1.28 | $0.58 | $0.80 | | $0.15 | 3,444 |
| Florida | $15.55<br>$11.77<br>$15.89<br>$30.70 | $1.17 | $0.000766 | $0.000766 | $0.000505 | $2.45 | $2.94 | $0.71 | $0.85 | $2.26 | $0.17 | 2,960 |
| Georgia | $12.55<br>$10.80<br>$12.47<br>$19.83 | $1.79 | $0.001633 | $0.001633 | $0.000559 | $1.66 | $2.40 | $0.79 | $1.14 | $0.00 | $0.11 | 3,574 |
| Kentucky | $17.26<br>$9.64<br>$14.37<br>$50.39 | $1.15 | $0.001197 | $0.001197 | $0.000782 | $0.93 | $1.23 | $1.10 | $1.46 | $0.00 | $0.06 | 3,272 |
| Louisiana | $16.24<br>$11.97<br>$22.39<br>$48.26 | $1.36 | $0.001868 | $0.001868 | $0.000465 | $0.90 | $1.12 | $0.66 | $0.81 | $0.00 | $0.14 | 3,052 |
| Mississippi | $22.37<br>$10.98<br>$15.91<br>$25.04<br>$43.68 | $2.64 | $0.001027 | $0.001027 | $0.000513 | $0.92 | $1.03 | $0.72 | $0.81 | | $0.15 | 2,734 |
| North Carolina | $14.18<br>$10.75<br>$19.05<br>$30.33 | $2.28 | $0.001500 | $0.001500 | $0.000561 | $0.88 | $1.05 | $0.79 | $0.94 | $0.00 | $0.22 | 2,944 |
| South Carolina | $16.51<br>$13.76<br>$20.38<br>$26.04 | $2.80 | $0.001052 | $0.001052 | $0.000534 | $0.93 | $1.11 | $0.75 | $0.90 | | $0.15 | 2,954 |
| Tennessee | $14.12<br>$12.48<br>$16.31<br>$21.32 | $1.70 | $0.000804 | $0.000804 | $0.000432 | $0.98 | $1.36 | $0.61 | $0.85 | $0.00 | $0.09 | 3,438 |

*Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.*

# EXHIBIT 3: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - QWEST

| STATE | DENSITY ZONES | ACCESS LINES (000s) | % of TOTAL ACCESS LINES | LOOP RATE (per month) | TOTAL SWITCHING AND TRANSPORT (per month) | TOTAL SWITCHING AND TRANSPORT (per month) | ALL OTHER (per month) | ALL OTHER (per month) | FULL UNEP ORIGINATING AND TERMINATING | FULL UNEP ORIGINATING AND TERMINATING | MAY 2002 FULL UNEP ORIGINATING AND TERMINATING |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Assumes 1411 originating minutes | Assumes DEM minutes | Assumes 1411 originating minutes | Assumes DEM minutes | Assumes 1411 originating minutes | Assumes DEM minutes | Assumes DEM minutes |
| | | | | KEY INPUT | SUBTOTALS | | | | TOTALS | | |
| Arizona | Avg. | 3,001 | 17% | $15.85 | $10.05 | $8.80 | $0.36 | $0.33 | $26.26 | $24.98 | $36.62 |
| | 1 | | | $5.91 | | | | | | | |
| | 2 | | | $12.31 | | | | | | | |
| | 3 | | | $32.74 | | | | | | | |
| Colorado | Avg. | 2,950 | 18% | $15.86 | $6.82 | $6.12 | $0.45 | $0.40 | $23.12 | $22.38 | $25.95 |
| | 1 | | | $5.91 | | | | | | | |
| | 2 | | | $12.31 | | | | | | | |
| | 3 | | | $32.74 | | | | | | | |
| Idaho | Avg. | 585 | 3% | $20.42 | $6.93 | $5.98 | $0.50 | $0.44 | $27.85 | $26.82 | $35.14 |
| | 1 | | | $13.81 | | | | | | | |
| | 2 | | | $24.01 | | | | | | | |
| | 3 | | | $40.92 | | | | | | | |
| Iowa | Avg. | 1,165 | 6% | $16.47 | $7.22 | $6.81 | $0.18 | $0.18 | $23.87 | $23.45 | $28.80 |
| | 1 | | | $13.11 | | | | | | | |
| | 2 | | | $15.64 | | | | | | | |
| | 3 | | | $27.27 | | | | | | | |
| Minnesota | Avg. | 2,383 | 13% | $17.87 | $7.38 | $6.80 | $0.39 | $0.35 | $25.64 | $25.02 | $25.02 |
| | 1 | | | $9.81 | | | | | | | |
| | 2 | | | $12.33 | | | | | | | |
| | 3 | | | $14.48 | | | | | | | |
| | 4 | | | $21.91 | | | | | | | |
| Montana | Avg. | 394 | 2% | $23.98 | $10.45 | $10.15 | $0.52 | $0.51 | $34.95 | $34.64 | $39.98 |
| | BRA | | | $23.10 | | | | | | | |
| | 1 | | | $23.90 | | | | | | | |
| | 2 | | | $27.13 | | | | | | | |
| | 3 | | | $29.29 | | | | | | | |
| Nebraska | Avg. | 508 | 2% | $17.51 | $8.69 | $8.80 | $0.31 | $0.31 | $26.51 | $26.63 | $30.80 |
| | 1 | | | $12.14 | | | | | | | |
| | 2 | | | $28.11 | | | | | | | |
| | 3 | | | $62.50 | | | | | | | |
| New Mexico | Avg. | 894 | 5% | $21.43 | $5.13 | $4.44 | $0.48 | $0.42 | $27.04 | $26.29 | $25.91 |
| | 1 | | | $17.75 | | | | | | | |
| | 2 | | | $20.30 | | | | | | | |
| | 3 | | | $26.23 | | | | | | | |
| North Dakota | Avg. | 326 | 1% | $17.79 | $8.59 | $10.01 | $0.57 | $0.64 | $26.95 | $28.44 | $33.24 |
| | 1 | | | $14.78 | | | | | | | |
| | 2 | | | $24.92 | | | | | | | |
| | 3 | | | $36.44 | | | | | | | |
| Oregon | Avg. | 1,522 | 8% | $15.00 | $7.27 | $6.59 | $0.75 | $0.70 | $23.02 | $22.29 | $22.17 |
| | 1 | | | $13.95 | | | | | | | |
| | 2 | | | $25.20 | | | | | | | |
| | 3 | | | $56.21 | | | | | | | |
| South Dakota | Avg. | 272 | 2% | $21.09 | $12.22 | $10.25 | $0.41 | $0.37 | $33.72 | $31.71 | $32.58 |
| | 1 | | | $17.01 | | | | | | | |
| | 2 | | | $18.54 | | | | | | | |
| | 3 | | | $24.37 | | | | | | | |
| Utah | Avg. | 1,140 | 6% | $13.44 | $6.95 | $6.85 | $0.27 | $0.25 | $20.65 | $20.54 | $29.69 |
| | urban | | | $11.41 | | | | | | | |
| | suburban | | | $13.83 | | | | | | | |
| | rural | | | $19.11 | | | | | | | |
| Washington | Avg. | 2,647 | 15% | $14.41 | $5.87 | $5.86 | $0.50 | $0.50 | $20.78 | $20.77 | $24.00 |
| | 1 | | | $6.41 | | | | | | | |
| | 2 | | | $11.35 | | | | | | | |
| | 3 | | | $12.76 | | | | | | | |
| | 4 | | | $14.31 | | | | | | | |
| | 5 | | | $19.06 | | | | | | | |
| Wyoming | Avg. | 374 | 2% | $23.58 | $8.33 | $7.92 | $0.36 | $0.32 | $32.67 | $32.02 | $37.45 |
| | BRA | | | $19.91 | | | | | | | |
| | 1 | | | $26.94 | | | | | | | |
| | 2 | | | $30.13 | | | | | | | |
| | 3 | | | $40.98 | | | | | | | |

*Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.*

# Exhibit 3A: Unbundled Network Element Rate Comparison Matrix Summary - Qwest

| STATE | LOOP RATE (per month) | PORT RATE (per month) | Local originating SWITCHING (per MOU) | Local terminating SWITCHING (per MOU) | OTHER SWITCHING AND TRANSPORT (per MOU) | DUF (per month) Assumes 1411 originating minutes | DUF (per month) Assumes DEM minutes | Other Switching and Transport (per month) Assumes 1411 originating minutes | Other Switching and Transport (per month) Assumes DEM minutes | FEATURE COST (per month) | AMORTIZED NRC (per month) | TOTAL DEM (per month, per line) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | KEY INPUTS | | | | | SUBTOTALS | | | | | | |
| Arizona | $13.83<br>$5.91<br>$12.31<br>$12.74 | $1.68 | $0.002800 | $0.002800 | $0.001029 | $0.26 | $0.22 | $1.45 | $1.24 | $0.00 | $0.10 | 2,103 |
| Colorado | $15.80<br>$5.91<br>$12.31<br>$32.74 | $1.55 | $0.001610 | $0.001610 | $0.000929 | $0.31 | $0.27 | $1.31 | $1.14 | $0.00 | $0.13 | 2,124 |
| Idaho | $20.42<br>$15.81<br>$24.01<br>$40.92 | $1.34 | $0.001733 | $0.001733 | $0.000929 | $0.32 | $0.26 | $1.31 | $1.08 | $0.00 | $0.18 | 2042 |
| Iowa | $16.47<br>$13.11<br>$15.64<br>$27.27 | $1.15 | $0.001929 | $0.001929 | $0.000929 | $0.00 | $0.00 | $1.31 | $1.22 | $0.00 | $0.18 | 2,300 |
| Minnesota | $17.87<br>$8.81<br>$12.33<br>$14.48<br>$21.91 | $1.08 | $0.001810 | $0.001810 | $0.001301 | $0.39 | $0.35 | $1.84 | $1.66 | $0.00 | $0.00 | 2,240 |
| Montana | $23.98<br>$23.16<br>$23.90<br>$27.13<br>$29.29 | $1.58 | $0.002923 | $0.002923 | $0.000929 | $0.35 | $0.34 | $1.31 | $1.27 | $0.34 | $0.17 | 2,383 |
| Nebraska | $17.51<br>$12.14<br>$28.11<br>$62.50 | $2.47 | $0.001989 | $0.001989 | $0.000929 | $0.29 | $0.30 | $1.31 | $1.33 | $0.00 | $0.02 | 2,511 |
| New Mexico | $21.43<br>$17.75<br>$20.30<br>$26.23 | $1.38 | $0.001108 | $0.001108 | $0.000721 | $0.31 | $0.25 | $1.02 | $0.85 | $0.00 | $0.17 | 2,014 |
| North Dakota | $17.79<br>$14.78<br>$24.92<br>$56.44 | $1.27 | $0.002435 | $0.002435 | $0.000929 | $0.39 | $0.48 | $1.51 | $1.56 | $0.00 | $0.18 | 2,947 |
| Oregon | $15.00<br>$13.95<br>$25.20<br>$56.21 | $1.26 | $0.001330 | $0.001330 | $0.001178 | $0.39 | $0.34 | $1.66 | $1.44 | $1.08 | $0.36 | 2,134 |
| South Dakota | $21.09<br>$17.01<br>$18.54<br>$24.37 | $1.84 | $0.003469 | $0.003469 | $0.001286 | $0.25 | $0.20 | $1.81 | $1.47 | $0.00 | $0.17 | 2,001 |
| Utah | $13.43<br>$11.41<br>$13.83<br>$19.11 | $0.93<br>$0.92<br>$0.90<br>$1.02 | $0.000000 | $0.000000 | $0.000890 | $0.18 | $0.16 | $1.26 | $1.16 | $4.76 | $0.09 | 2,272 |
| Washington | $14.41<br>$6.41<br>$11.35<br>$12.76<br>$14.31<br>$19.06 | $1.34 | $0.001200 | $0.001200 | $0.001112 | $0.39 | $0.39 | $1.57 | $1.56 | $0.00 | $0.13 | 2,463 |
| Wyoming | $23.58<br>$19.91<br>$26.94<br>$30.13<br>$40.98 | $3.64 | $0.001854 | $0.001854 | $0.000929 | $0.39 | $0.35 | $1.31 | $1.17 | $0.00 | $0.18 | 2,212 |

*Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.*

# Exhibit 4: Unbundled Network Element Rate Comparison Matrix Summary - SBC

| STATE | DENSITY ZONES | ACCESS LINES (000s) | % of TOTAL ACCESS LINES | LOOP RATE (per month) | TOTAL SWITCHING AND TRANSPORT (per month) | TOTAL SWITCHING AND TRANSPORT (per month) | ALL OTHER (per month) | ALL OTHER (per month) | FULL UNEP ORIGINATING AND TERMINATING | FULL UNEP ORIGINATING AND TERMINATING | May 2002 FULL UNEP ORIGINATING AND TERMINATING |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Assumes 1411 originating minutes | Assumes DEM minutes | Assumes 1411 originating minutes | Assumes DEM minutes | Assumes 1411 originating minutes | Assumes DEM minutes | Assumes DEM minutes |
| | | | | KEY INPUT | SUBTOTALS | | | | TOTALS | | |
| **LEC - Ameritech** | | | | | | | | | | | |
| Illinois | wtd. avg. | 7,216 | 12% | $9.53 | $6.35 | $5.96 | $0.41 | $0.31 | $16.28 | $15.81 | $15.96 |
| | metro | | | $2.59 | | | | | | | |
| | suburban | | | $7.07 | | | | | | | |
| | rural | | | $11.40 | | | | | | | |
| Indiana | wtd. avg. | 2,196 | 4% | $8.32 | $3.85 | $3.71 | $0.03 | $0.02 | $12.20 | $12.05 | $16.87 |
| | metro | | | $8.03 | | | | | | | |
| | suburban | | | $8.15 | | | | | | | |
| | rural | | | $8.99 | | | | | | | |
| Michigan | wtd. avg. | 5,629 | 10% | $10.16 | $4.59 | $4.09 | $0.30 | $0.25 | $15.06 | $14.50 | $14.50 |
| | metro | | | $8.47 | | | | | | | |
| | suburban | | | $8.73 | | | | | | | |
| | rural | | | $12.54 | | | | | | | |
| Ohio | wtd. avg. | 4,306 | 7% | $7.01 | $7.80 | $7.32 | $0.64 | $0.59 | $15.45 | $14.93 | $14.90 |
| | urban | | | $5.93 | | | | | | | |
| | suburban | | | $7.97 | | | | | | | |
| | rural | | | $9.52 | | | | | | | |
| Wisconsin | wtd. avg. | 2,294 | 4% | $10.90 | $11.77 | $10.13 | $2.90 | $2.82 | $25.07 | $23.85 | $23.85 |
| | suburban | | | $10.90 | | | | | | | |
| | rural | | | $10.90 | | | | | | | |
| **LEC - Pacific Bell** | | | | | | | | | | | |
| California | wtd. avg. | 18,612 | 32% | $9.93 | $6.77 | $5.44 | $0.08 | $0.08 | $16.78 | $15.46 | $27.47 |
| | 1 | | | $8.38 | | | | | | | |
| | 2 | | | $11.27 | | | | | | | |
| | 3 | | | $19.64 | | | | | | | |
| Nevada | wtd. avg. | 389 | 1% | $20.52 | $13.34 | $10.02 | $0.08 | $0.08 | $33.84 | $30.63 | $30.54 |
| | urban | | | $11.77 | | | | | | | |
| | suburban | | | $22.64 | | | | | | | |
| | rural | | | $66.35 | | | | | | | |
| **LEC - Southwestern Bell** | | | | | | | | | | | |
| Arkansas | wtd. avg. | 1,071 | 2% | $13.09 | $5.75 | $5.61 | $1.29 | $1.26 | $20.13 | $19.96 | $19.82 |
| | urban | | | $11.86 | | | | | | | |
| | suburban | | | $13.64 | | | | | | | |
| | rural | | | $23.34 | | | | | | | |
| Kansas | wtd. avg. | 1,423 | 2% | $13.30 | $5.75 | $5.16 | $1.30 | $1.15 | $20.35 | $19.60 | $19.49 |
| | urban | | | $11.86 | | | | | | | |
| | suburban | | | $13.64 | | | | | | | |
| | rural | | | $23.34 | | | | | | | |
| Missouri | wtd. avg. | 2,742 | 5% | $13.19 | $7.93 | $7.26 | $0.27 | $0.27 | $23.39 | $22.72 | $22.63 |
| | urban | | | $12.71 | | | | | | | |
| | suburban | | | $18.64 | | | | | | | |
| | rural | | | $19.74 | | | | | | | |
| | MO-Spgfld | | | $16.41 | | | | | | | |
| Oklahoma | wtd. avg. | 1,712 | 3% | $15.71 | $8.45 | $8.05 | $1.32 | $1.30 | $25.53 | $25.03 | $24.88 |
| | urban | | | $12.14 | | | | | | | |
| | suburban | | | $13.65 | | | | | | | |
| | rural | | | $26.25 | | | | | | | |
| Texas | wtd. avg. | 10,348 | 18% | $14.11 | $6.36 | $5.98 | $1.24 | $1.14 | $21.71 | $21.23 | $21.16 |
| | urban | | | $12.14 | | | | | | | |
| | suburban | | | $13.65 | | | | | | | |
| | rural-1 | | | $18.98 | | | | | | | |

*Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.*

# Exhibit 4A: Unbundled Network Element Rate Comparison Matrix Summary - SBC

| STATE | LOOP RATE (per month) | PORT RATE (per month) | Local originating SWITCHING (per MOU) | Local terminating SWITCHING (per MOU) | OTHER SWITCHING AND TRANSPORT (per MOU) | DUF (per month) Assumes 1411 originating minutes | DUF (per month) Assumes DEM minutes | Other Switching and Transport (per month) Assumes 1411 originating minutes | Other Switching and Transport (per month) Assumes DEM minutes | FEATURE COST (per month) | AMORTIZED NRC (per month) | TOTAL DEM (per month, per line) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | KEY INPUTS | | | | | SUBTOTALS | | | | | | |
| **LEC - Ameritech** | | | | | | | | | | | | |
| **Illinois** | $9.53<br>$2.59<br>$7.07<br>$11.40 | $5.01 | na | na | $0.000947 | $0.32 | $0.23 | $1.34 | $0.95 | $0.00 | $0.08 | 1,764 |
| **Indiana** | $8.32<br>$8.03<br>$8.15<br>$8.99 | $2.98 | $0.000000 | $0.000000 | $0.000617 | $0.02 | $0.01 | $0.87 | $0.73 | $0.00 | $0.01 | 2,071 |
| **Michigan** | $10.16<br>$8.47<br>$8.73<br>$12.54 | $2.53 | $0.000522 | $0.000522 | $0.000548 | $0.24 | $0.18 | $0.77 | $0.58 | $0.00 | $0.07 | 1,869 |
| **Ohio** | $7.01<br>$5.93<br>$7.97<br>$9.52 | $4.63 | $0.000826 | $0.000826 | $0.000800 | $0.31 | $0.27 | $1.13 | $0.96 | $0.00 | $0.33 | 2,097 |
| **Wisconsin** | $10.90<br>$10.90<br>$10.90 | $6.25 | $0.001319 | $0.001319 | $0.001247 | $0.33 | $0.26 | $1.76 | $1.36 | $0.00 | $2.57 | 1,908 |
| **LEC - Pacific Bell** | | | | | | | | | | | | |
| **California** | $9.93<br>$8.38<br>$11.27<br>$19.64 | $0.88 | $0.001480 | $0.001480 | $0.000944 | $0.00 | $0.00 | $1.33 | $0.98 | $0.90 | $0.08 | 1,814 |
| **Nevada** | $20.52<br>$11.77<br>$22.64<br>$68.25 | $1.63 | $0.001610 | $0.001610 | $0.003408 | $0.00 | $0.00 | $7.63 | $3.52 | $0.00 | $0.08 | 1,786 |
| **LEC - Southwestern Bell** | | | | | | | | | | | | |
| **Arkansas** | $13.09<br>$11.86<br>$13.64<br>$23.34 | $1.61 | $0.001490 | $0.001490 | $0.000326 | $1.06 | $1.02 | $0.46 | $0.44 | $0.00 | $0.23 | 2,386 |
| **Kansas** | $13.30<br>$11.86<br>$13.64<br>$23.34 | $1.61 | $0.001490 | $0.001490 | $0.000326 | $1.06 | $0.91 | $0.46 | $0.39 | $0.00 | $0.24 | 2,115 |
| **Missouri** | $15.39<br>$12.71<br>$18.64<br>$19.74<br>$16.41 | $1.89 | $0.002192 | $0.002192 | $0.000446 | $0.00 | $0.00 | $0.63 | $0.56 | $0.00 | $0.27 | 2,196 |
| **Oklahoma** | $15.71<br>$12.14<br>$13.65<br>$26.25 | $2.18 | $0.002259 | $0.002259 | $0.000489 | $1.06 | $0.99 | $0.69 | $0.64 | $0.00 | $0.31 | 2,303 |
| **Texas** | $14.11<br>$12.14<br>$13.65<br>$18.98 | $2.22 | $0.001507 | $0.001507 | $0.000299 | $1.06 | $0.96 | $0.42 | $0.38 | $0.00 | $0.18 | 2,238 |

*Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.*

## EXHIBIT 5: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - VERIZON

| STATE | DENSITY ZONES | ACCESS LINES (000s) | % of TOTAL ACCESS LINES | LOOP RATE (per month) | TOTAL SWITCHING AND TRANSPORT (per month) | TOTAL SWITCHING AND TRANSPORT (per month) | ALL OTHER (per month) | ALL OTHER (per month) | FULL UNEP ORIGINATING AND TERMINATING | FULL UNEP ORIGINATING AND TERMINATING | MAY 2002 FULL UNEP ORIGINATING AND TERMINATING |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Assumes 1411 originating minutes | Assumes DEM minutes | Assumes 1411 originating minutes | Assumes DEM minutes | Assumes 1411 originating minutes | Assumes DEM minutes | Assumes DEM minutes |
| | | | | KEY INPUT | SUBTOTALS | | | | TOTALS | | |
| **LEC - NYNEX** | | | | | | | | | | | |
| Maine | Avg. | 760 | 3% | $16.18 | $7.25 | $5.72 | $0.18 | $0.17 | $23.61 | $22.07 | $22.18 |
| | 1 | | | $11.44 | | | | | | | |
| | 2 | | | $13.47 | | | | | | | |
| | 3 | | | $18.75 | | | | | | | |
| Massachusetts | Avg. | 4,589 | 10% | $14.98 | $12.81 | $10.26 | $0.19 | $0.18 | $28.08 | $25.42 | $25.77 |
| | 1 | | | $7.54 | | | | | | | |
| | 2 | | | $14.11 | | | | | | | |
| | 3 | | | $16.12 | | | | | | | |
| | 4 | | | $20.04 | | | | | | | |
| New Hampshire | Avg. | 825 | 2% | $18.10 | $7.21 | $6.03 | $0.46 | $0.38 | $25.77 | $24.51 | $29.77 |
| | 1 | | | $11.97 | | | | | | | |
| | 2 | | | $16.04 | | | | | | | |
| | 3 | | | $25.00 | | | | | | | |
| New York | Avg. | 12,253 | 27% | $11.49 | $6.41 | $5.59 | $0.08 | $0.08 | $17.98 | $17.17 | $17.35 |
| | 1 | | | $7.70 | | | | | | | |
| | 2 | | | $11.31 | | | | | | | |
| | 3 | | | $15.51 | | | | | | | |
| Rhode Island | Avg. | 681 | 2% | $13.93 | $6.56 | $5.73 | $0.04 | $0.03 | $20.54 | $19.70 | $22.07 |
| | 1 | | | $11.19 | | | | | | | |
| | 2 | | | $15.44 | | | | | | | |
| | 3 | | | $19.13 | | | | | | | |
| Vermont | Avg. | 378 | 1% | $14.41 | $12.71 | $10.54 | $0.04 | $0.03 | $27.16 | $24.99 | $25.09 |
| | 1 | | | $7.72 | | | | | | | |
| | 2 | | | $8.35 | | | | | | | |
| | 3 | | | $21.63 | | | | | | | |
| **LEC - BELL ATLANTIC** | | | | | | | | | | | |
| D.C. | 1 | 1,019 | 2% | $10.81 | $9.94 | $6.02 | $0.00 | $0.00 | $20.75 | $16.83 | $16.83 |
| Delaware | Avg. | 612 | 1% | $12.05 | $9.68 | $8.09 | $0.69 | $0.66 | $22.42 | $20.81 | $20.21 |
| | 1 | | | $10.07 | | | | | | | |
| | 3 | | | $13.13 | | | | | | | |
| | 3 | | | $16.67 | | | | | | | |
| Maryland | Avg. | 4,101 | 9% | $14.50 | $13.15 | $11.50 | $0.26 | $0.25 | $27.91 | $26.25 | $19.28 |
| | 1 | | | $12.11 | | | | | | | |
| | 2 | | | $13.85 | | | | | | | |
| | 3 | | | $25.96 | | | | | | | |
| | 4 | | | $18.40 | | | | | | | |
| New Jersey | Avg. | 7,030 | 16% | $9.52 | $7.53 | $5.55 | $0.10 | $0.07 | $17.15 | $15.14 | $15.14 |
| | 1 | | | $8.12 | | | | | | | |
| | 2 | | | $9.59 | | | | | | | |
| | 3 | | | $10.92 | | | | | | | |
| Pennsylvania | Avg. | 7,309 | 16% | $13.81 | $6.49 | $5.25 | $0.20 | $0.17 | $20.50 | $19.23 | $19.36 |
| | 1 | | | $10.25 | | | | | | | |
| | 2 | | | $13.00 | | | | | | | |
| | 3 | | | $14.00 | | | | | | | |
| | 4 | | | $16.75 | | | | | | | |
| Virginia | Avg. | 4,460 | 10% | $13.76 | $9.56 | $7.57 | $0.54 | $0.52 | $23.86 | $21.85 | $21.68 |
| | 1 | | | $10.74 | | | | | | | |
| | 2 | | | $16.45 | | | | | | | |
| | 3 | | | $29.40 | | | | | | | |
| West Virginia | Avg. | 967 | 2% | $24.58 | $20.82 | $19.32 | $0.13 | $0.12 | $45.52 | $44.02 | $44.02 |
| | 1 | | | $14.49 | | | | | | | |
| | 2 | | | $22.04 | | | | | | | |
| | 3 | | | $45.44 | | | | | | | |

*Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.*

## Exhibit 5A: Unbundled Network Element Rate Comparison Matrix Summary - Verizon

| STATE | LOOP RATE (per month) | PORT RATE (per month) | Local originating SWITCHING (per MOU) | Local terminating SWITCHING (per MOU) | OTHER SWITCHING AND TRANSPORT (per MOU) | DUF (per month) Assumes 1411 originating minutes | DUF (per month) Assumes DEM minutes | Other Switching and Transport (per month) Assumes 1411 originating minutes | Other Switching and Transport (per month) Assumes DEM minutes | FEATURE COST (per month) | AMORTIZED NRC (per month) | TOTAL DEM (per line, per month) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | KEY INPUTS | | | | | SUBTOTALS | | | | | | |
| LEC - NYNEX | | | | | | | | | | | | |
| Maine | $16.18<br>$11.44<br>$13.47<br>$18.76 | $0.94 | $0.001680 | $0.001680 | $0.001529 | $0.04 | $0.03 | $2.16 | $1.64 | $0.00 | $0.14 | 1,871 |
| Massachusetts | $14.98<br>$7.54<br>$14.11<br>$16.12<br>$20.04 | $2.00 | $0.003537 | $0.003537 | $0.001540 | $0.04 | $0.03 | $2.17 | $1.65 | $0.00 | $0.15 | 1,870 |
| New Hampshire | $18.10<br>$11.97<br>$16.04<br>$25.00 | $0.71 | $0.002064 | $0.002064 | $0.000853 | $0.43 | $0.35 | $1.20 | $0.98 | $0.20 | $0.03 | 2,007 |
| New York | $11.49<br>$7.70<br>$11.31<br>$13.51 | $2.57 | $0.001147 | $0.001111 | $0.000578 | $0.00 | $0.00 | $0.82 | $0.63 | $0.23 | $0.08 | 1,910 |
| Rhode Island | $13.93<br>$11.19<br>$15.44<br>$19.13 | $1.86 | $0.001958 | $0.001192 | $0.000853 | $0.04 | $0.03 | $1.20 | $0.98 | $0.32 | $0.00 | 2,000 |
| Vermont | $14.41<br>$7.72<br>$8.35<br>$21.63 | $1.03 | $0.004003 | $0.004003 | $0.001228 | $0.04 | $0.03 | $1.73 | $1.41 | $0.06 | $0.00 | 2,009 |
| LEC - BELL ATLANTIC | | | | | | | | | | | | |
| D.C. | $10.81 | $1.55 | $0.003000 | $0.003000 | $0.000696 | $0.00 | $0.00 | $0.98 | $0.32 | $0.00 | $0.00 | 1,317 |
| Delaware | $13.05<br>$10.07<br>$13.13<br>$16.67 | $2.23 | $0.003634 | $0.001927 | $0.000300 | $0.13 | $0.10 | $0.28 | $0.22 | $0.00 | $0.56 | 1,944 |
| Maryland | $14.50<br>$12.11<br>$12.85<br>$25.96<br>$18.40 | $1.90 | $0.003800 | $0.003800 | $0.000183 | $0.05 | $0.04 | $0.31 | $0.43 | $1.36 | $0.32 | 2,058 |
| New Jersey | $9.52<br>$8.11<br>$9.59<br>$10.92 | $0.73 | $0.002775 | $0.002508 | $0.000163 | $0.10 | $0.07 | $0.23 | $0.16 | $0.00 | $0.00 | 1,751 |
| Pennsylvania | $13.81<br>$10.25<br>$11.00<br>$14.00<br>$16.75 | $1.90 | $0.001802 | $0.001615 | $0.000242 | $0.09 | $0.07 | $0.34 | $0.25 | $0.00 | $0.11 | 1,399 |
| Virginia | $13.76<br>$10.74<br>$16.45<br>$29.40 | $1.30 | $0.004129 | $0.002079 | $0.000162 | $0.09 | $0.07 | $0.23 | $0.17 | $0.00 | $0.46 | 1,874 |
| West Virginia | $24.58<br>$14.49<br>$22.04<br>$43.44 | $1.60 | $0.008868 | $0.005622 | $0.000556 | $0.13 | $0.12 | $0.76 | $0.70 | $0.00 | $0.00 | 2,577 |

*Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.*

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# SBC Communications, Inc. (SBC)
## Meeting with SBC CFO highlights key initiatives; no estimate or ratings change.

**Analyst Comment**

11:05 AM – August 22, 2002

Market Outperformer

Large-Cap Value

Price: US$28.11

United States

| Stock data | |
|---|---|
| 52-week range | US$47.34–23.30 |
| Yield | 3.8% |

| Price performance | 1M | 3M | 12M |
|---|---|---|---|
| Absolute | 5% | –19% | –35% |
| Rel to S&P 500 | –7% | –7% | –17% |

| Capitalization | |
|---|---|
| Market cap | US$93.5bn |
| Latest net debt/(cash) | – |
| Free float | – |
| Shares outstanding | 3325mn |

| Forecasts/valuation | 2002E | 2003E |
|---|---|---|
| EPS* | US$2.30 | US$2.30 |
| GSCOPE EPS* | – | – |
| GSCOPE P/E | – | – |

* May differ from US GAAP

**SBC considers fixing the UNE–P mess, as a prime corporate objective. Delayed LD entry in key locations, combined with the lowest UNE–P rates in the country, have uniquely exposed SBC to profit–eroding share loss. Despite this, SBC's CFO Randall Stephenson still sees stable cash flows through aggressive cost cutting, combined with the ability to maintain trends in share repurchases and dividend hikes. Consolidation in wireless is another key objective of SBC. Acknowledging the proliferation of conversations among wireless carriers, Stephenson indicated all talks are still preliminary. In the meantime Cingular is raising prices, sacrificing sub growth, and looking to improve profits.**

### Full details

WHAT TO DO WITH THE STOCK? We continue our cautious view of telecom, although recent stock price declines make us somewhat less cautious.
Within the group the Bells and rural telcos should provide the best returns. And, within the Bells, we continue to view Verizon as the best choice right now. As management indicates, share loss to UNE– P is going to be quite damaging to SBC. And we believe it will suffer the greatest consequences of this phenomenon among the three Bells. Thus, the valuation premium that SBC trades at relative to Verizon on P/E, EV/EBITDA, and dividend yield is probably not sustainable over the next six months. We continue to use our current EPS estimates of $2.30 for this year and next.

UNE– P A BIG PROBLEM WITHOUT LD. SBC has been the most vocal critic of UNE– P, and is working hard to raise prices and diminish the negative effect. In the absence of pervasive long distance approval, UNE– P has been and will continue to be very damaging to SBC. With LD approval in the Ameritech region not likely until the middle or second half of '03, and California not likely until yearend '02, SBC stands quite exposed at the moment. However, we should not extrapolate the SBC experience uniformly to the other RBOCs. No others face the unique combination of low priced UNE– P, high residential rates (in the Ameritech region), big concentrated industrial states, and no LD capability. Thus, we don't see Verizon in particular, and BellSouth to a lesser degree has having the same degree of exposure. So, yes, if an ILEC loses a customer to UNE– P it's a big hit to the bottom line – but it has to lose the customer for the hit to be taken.
And in our view VZ and BLS are likely to be able to offset this materially better than SBC over the next year. It should be noted that SBC has been enjoying these same benefits share retention in its states where it has long distance approval. SBC intends to file cost studies in key jurisdictions, using the regulatory path as one attempt at raising rates.
In addition, it continues to try to use bundling as aggressively as possible to offset share loss.

WIRELESS CONSOLIDATION A KEY OBJECTIVE. Newspaper reports have

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exaggerated the speed of wireless consolidation and the progress that has been made to date. However, the desirability of getting a deal done is obvious, and the company acknowledged active conversations. Mr. Stephenson noted that of the two options for deals AWE presents less dilution, but greater regulatory and integration hurdles. Voicestream presents higher dilution but far easier regulatory approval and integration. Furthermore, similar to press accounts, he indicated a deal for Voicestream may be impractical without taking in DT as an equity participant (i.e. no all-cash deal.) And, importantly, SBC is open to that possibility.

WIRELESS PRICE HIKES, DESPITE SLOWER SUB GROWTH. The healing effects of wireless mergers are not nearly upon us yet. In the meantime, Cingular is taking steps to 'heal thyself.' The price hikes are geared to boost profitability, even as it sacrifices sub growth. The particular increase in national plan rates announced this week are geared to both reduce off- network roaming costs and slow down the consumption of TDMA network capacity. SBC and BLS are fully expecting their joint venture to experience low to no sub growth as a result of these actions as well as the customer churn that will be stimulated by the WorldCom reseller shift.

CAPEX TO REVENUE SHOULD BE NO HIGHER THAN 15%, AND WILL BE LOWER ABSENT GROWTH. There is a broad effort to cut capex in both wireline and wireless operations. In wireline, Stephenson indicated that current thinking is that capex to sales should be no higher than 15%, and that in the current environment it should be no higher than 13%, and yet it is. Thus, further capex cuts should occur. In our view, if demand recovery continues to falter it would not be surprising to see capex to sales fall below the 13% rate, as it has in other countries. On the wireless side, capex cuts are also anticipated. In our view, slower capex spending in wireless is further supported by the prospects of industry consolidation.

COST REDUCTIONS KEY TO MAINTAINING EARNINGS AND BOOSTING MARGINS. SBC sees the margin differential between it and VZ and BLS as indicating an opportunity for further cost cutting. Pointing to opportunities in consolidating call centers, raising efficiencies in network operations, and generally trimming overhead costs, Stephenson is focused and confident in using these steps to help improve margins in the face of share loss.

CALIFORNIA DSL EXPERIENCE GIVES CONFIDENCE IN LONG TERM POTENTIAL. In California, SBC is enjoying the benefits of scale DSL operations, having achieved about 10% penetration so far. As a result, operations are already EBITDA positive and on the trajectory to reach SBC's targeted hurdle rate.
The steps that got California to scale include: an effective self- installation program; low help desk costs; effective churn control (down towards 2-3%); and effective marketing against the cable operators. SBC believes that mass market deployment of DSL will occur, and that tiered offerings are one step in getting there. This will allow lower monthly prices for lower speeds, but should be able to maintain an average monthly price of approximately $40. This is a little higher than our long term estimate, but directionally our models look at the market in the same way. Due to the absence of long distance approval in California and the Ameritech states, SBC will continue to try to bundle DSL as a way of offsetting share loss, indicating that churn falls 75% for those customers taking DSL on top of their local service.

BLS: US$ 25.99, SBC: US$ 28.11, VZ: US$ 32.35

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Legg Mason

Legg Mason

09:22am EDT 22-Aug-02 Legg Mason (Levin, Blair(202)778-1595) Q T VZ BLS SBC Q.N
Bells Retrain Guns on UNE-P, but Quick Kill Unlikely part 1

Legg Mason Wood Walker, Inc.

Industry Update
August 22, 2002

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Bells Retrain Guns on UNE-P, but Quick Kill Unlikely

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All relevant disclosures appear on the last page of this report.

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KEY POINTS:
* We believe the debate at the FCC over the future of UNE-P has surpassed the broadband debate in intensity and near-term importance for the telecom sector, as the Bells have been thrown on the defensive due to line losses to rivals.
* We believe that the Bells (SBC, BLS, VZ, Q) will have a difficult time convincing regulators to quickly eliminate the rights of local competitors to lease out Bell networks (UNE-P) at deep discounts. This is problematic for all the Bells but, in our view, is particularly problematic for SBC as its lack of long-distance progress in the Ameritech region makes it more vulnerable to UNE-P competitors. The Bells could gain some immediate relief in business markets (as well as some relief toward deregulating their broadband offerings in separate proceedings), but we doubt the FCC will eliminate UNE-P in residential markets in the near term.
* We believe the Commission is likely to establish a sunset or triggers for phasing out UNE-P. While the details of such rules are far from settled, we think the result will give key UNE-P providers, WorldCom (WCOEQ) and AT&T (T), time to continue to change the facts on the ground. The more they win new local customers, the more they increase the potential for a backlash if the phase-out dismantles the main platform for residential competition.
• Even if the FCC scraps or pares back UNE-P, many state regulators would likely try to retain it. Also, all decisions would be subject to court challenge that could take years to resolve, with the courts likely to maintain the legal status quo in the meantime.
* While the Bells will not gain immediate regulatory relief, we believe that through bundling and other marketing efforts, they can significantly reduce the negative impact of UNE-P competition.
* We believe another potential nightmare for the Bells would be if cable begins using UNE-P to accelerate its budding cable telephony offerings.

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As we noted when WorldCom announced its "Neighborhood" plan, the intensified efforts by WorldCom (WCOEQ) and AT&T (T) to compete using the Bell Unbundled Network Elements Platform (UNE-P) has dramatically raised the stakes of the FCC unbundling policy debates. (See our April 23 note WCOM/MCI Bundled Phone Offer Challenges Rivals and Regulators.) The most recent Bell quarterly reports suggest that the impact of UNE-P is quickly growing. (For a discussion of the economics of UNE-P, see the report by our colleagues Daniel Zito and Brad Wilson, Cautious Long-Distance Outlook, June 27, 2002. For a state-by-state UNE pricing and sensitivity study, see attachment to VZ: Comments on RBOC Weakness, August 21, 2002, by our collegues Michael J. Balhoff and Christopher. C. King.)
The impact of UNE-P has caused the Regional Bell Operating Companies (SBC, BLS, Q, VZ) to shift their priorities in seeking regulatory relief.

While the core Bell policy thrust had been to gain deregulation of their broadband services, recent events suggest the Bells have ramped up their lobbying efforts to cripple the ability of competitors to use UNE-P to gain market share in the traditional voice market.

Some in the Bell camp have predicted the FCC will act to eliminate UNE-P in a flash cut. FCC action on UNE-P is still months away (probably 4-8 months) but our current view is that prediction is likely to prove largely inaccurate in the near term, particularly concerning the availability of UNE-P in residential markets. This note outlines some of the dynamics affecting the resolution of the UNE-P debate.
Background on UNE-P. UNE-P offers competitors an opportunity to use all the UNEs at discounted "TELRIC" (Total Element Long Run Incremental Cost) rates and to add further value-added services on top of the platform. According to an industry estimate building on a FCC survey of incumbent local exchange carriers (ILECs), of the 20-plus million lines won by long-distance companies (IXCs) and other local competitors (CLECs) as of June 2002, about 7.7 million are UNE-P based. It is the fastest growing method of competitive entry. In 2001, according to FCC data, more than 60% of the CLEC line growth was due to UNE-P, about twice the rate in 2000. T and WCOEQ are capturing most of the UNE-P line growth but other companies are responsible for about 43% of UNE-P lines.

Reasons for Increase in UNE-P Competition. While UNE-P has been available for some time, its use has ramped up significantly over the last year. In our view, this is due to two critical developments. First, numerous states have lowered wholesale UNE-P rates. Second, the Bells have achieved sufficient long-distance entry to give the IXCs the incentive to more aggressively use UNE-P to protect their existing markets.
Differing Impact on the Bells. UNE-P has had a differing impact on each of the Bells, affecting SBC and BLS more negatively in the last quarter than VZ. The reason for this difference, in our view, is that VZ's relative lead in gaining long-distance entry (with 74% of its lines already eligible) has given it the ability to bundle local and long distance in more states, providing a stronger defense against competition. As a measure of the value of long distance offerings in combating UNE-P competition, we note that SBC estimates that where it offers long distance, it doubles its winback rates. We also think that VZ's intensified strategy of bundling their landline voice services with wireless and Internet access services will provide an even stronger defense against UNE-P competitors.

We surmise that BLS will have greater success in stemming the tide of UNE-P line loss once it gains the right to offer long distance services in more states. It currently has applications pending in 5 of the remaining 7 states where it cannot offer such services. An FCC decision on these 5 is due in mid-September and we believe the prospects for approval are good.
In light of UNE-P competition, SBC's problems in advancing its Sec. 271 long-distance applications become more important to SBC's financial picture. This is particularly true in the Ameritech region and California. SBC has a large window of vulnerability in the Ameritech region where state regulators have been aggressive in providing incentives for UNE-P competition, but SBC has not made significant progress with the testing and verification required for Sec. 271 approval. In California, SBC has better prospects, as it hopes to send the FCC its long-distance application in September. Given the TELRIC price cuts just announced by the state PUC and California's size, we expect a major push by T to sign up customers before SBC gets approval to offer long distance services.

Q has some vulnerability to UNE-P, due to its lack of long-distance approval, but we expect Q to gain approval to offer long distance services in a number of states in the next several months. While Q's states are not the highest priority states for the UNE-P based competitors, we note that UNE-P competition has attracted more than 5% market share in Iowa, North Dakota, South Dakota, and Wyoming.

The Bells' Attack on UNE-P. The Bells have two basic strategies for attacking the viability of UNE-P. First, they can challenge the TELRIC discounts at both the federal and state levels in an effort to raise UNE-P rates and squeeze their competitors' margins. Verizon recently took this tact at the FCC through a letter by its General Counsel suggesting ways the agency could "clarify" TELRIC, all in ways that would have the affect of raising the price for competitors. We expect the other Bell companies to join this effort. The Bells are also likely to challenge individual state UNE pricing decisions in regulatory proceedings and in court. For example, SBC has already filed a petition to raise TELRIC rates in OH and we have heard they are considering filing a petition to do the same in Illinois, though they are waiting until after the November election, in which three of the five members of the State PUC could change. The Bells are also contemplating filing suits challenging some of the states' TELRIC decisions as an unconstitutional taking.

Second, as part of the FCC's "Triennial Review" proceding, the Bells hope to convince the FCC to remove certain elements, most notably switching, from the UNE list. Such a decision would not only raise the cost of providing services through UNE-P, it also would make UNE-P impractical for the consumer market due to the difficulty of seamlessly migrating tens of thousands of lines from the ILEC's to the competitor's switches. We note that as offering unbundled switching is specifically listed as one of the requirements for gaining long-distance entry, the legal burden of eliminating the requirement is likely to be higher.
While the Republican majority at the Commission wants to move in a deregulatory direction, we do not believe that majority has yet decided how that impulse should be channeled in revising the UNE rules. The staff is evaluating the effects of UNEs in various markets, and that analysis, particularly regarding the impact of UNE-P on investment in facilities, could swing any of the commissioners in different directions. (The review is at an early stage as the staff is currently immersed in evaluating 17 pending Sec. 271 applications.) But some of the dynamics affecting the UNE-P policy process are already apparent.

FCC Direction: Set Out Path for Gradual Elimination of UNE-P. We believe that the FCC is likely to view UNE-P as a transitional vehicle to more facilities-based competition. We also believe that the Commission views the D.C. Circuit's May 24 USTA v. FCC ruling on UNEs favoring the ILECs, as subjecting any decision to eliminate an element on a national basis to a material legal risk. In that light, we believe the Commission is likely to view its job in the Triennial Review not as deciding whether to keep or eliminate UNE-P, but rather to set forth the right balance of incentives and market signals for creating a glide path from UNE-P to facilities-based competition.
Transitional Tools: Sunsets and Triggers. There are two basic ways the Commission could act. First, it can eliminate UNE-P at a date certain (a "sunset"). While that approach provides the most market certainty, it is legally vulnerable. Critics could attack an FCC projection of future market conditions as not reflecting the requirement that competitors' should be able to gain access to network elements without which their ability to compete would be "impaired." One way to mitigate the legal risk is to provide a "soft" sunset in which the date merely creates a presumption that the FCC would act to eliminate UNE-P. While such a rule is more defensible, it provides less certainty to the market and the companies, effectively delaying the ultimate debate for another day; a day, it is worth noting, in which the composition of the Commission and the market structure of the telecom industry could be very different.

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The second method is to provide "triggers" by which the Commission would measure whether access to switching, or the UNE-P platform, is no longer needed. These could include competitive metrics, such as a market share loss, or technical prerequisites to a healthy unregulated wholesale market, such as electronic loop provisioning. Triggers would be stronger legally but would retain market uncertainty about the long-term prospects of UNE-P. Further, there is a question as to whether the federal or state regulators would have the task of doing the fact finding on the triggers, a decision that could further impact the timing of when and whether the trigger is actually pulled. Another way of transitioning away from UNE-P is to continue to require the Bells to provide access to the platform but to no longer require TELRIC pricing. Rather, the price could be set by the states as a tariff that would have to be "just and reasonable." While this would probably increase the cost to competitors, it would likely involve lengthy litigation and regulatory delay.

We believe the debate over UNE-P will ultimately move to a debate about this transition. In such a debate, just like the legislative and regulatory debate over the 14-point checklist for Bell long-distance entry, details are critical. Also, just as with the legislative and subsequent regulatory fights over Section 271, the significance of the details is both a market structure issue (that is, how will the market look when the transition is over) and a timing issue (that is, how long will it take for the sunset to occur or the trigger to take affect.) The Bells will be arguing for fast, certain and limited transitional elements; their opponents will argue for the opposite. The critical point, from our perspective, is that adoption of sunsets or triggers will not end the debate; rather, just as with Section 271, it changes the debate but inevitably leads to a longer time period before a material change in the current status.
Eliminating UNE-P Quickly: The Bells have some hope. The Bells still have some hope of either eliminating or quickly transitioning away from UNE-P. This is particularly true regarding switching for business offerings. First, we note that the analysis for using UNE-P to serve business and residential customers is different. We believe the FCC is more sympathetic to the Bell's case for paring back unbundled switching in business markets, as competitors have installed numerous switches to serve such customers. Such installations call into question whether new entrants' ability to compete in business markets would be impaired without unbundled switching. We think the FCC generally wants to cut back on the use of UNE-P for business customers. It could rule, for example, that the current exemption of unbundled switching for customers with four or more lines should apply in all markets, and not just the top 50. An alternative approach would be to have a trade-off between the number of lines and the market size, such as an exemption for the smaller markets (i.e., markets 50 through 100) where the line count was greater (i.e., 12 lines or higher.) A key political issue here is whether small business advocacy groups, which generally do not engage in telecom policy debates, will fight any further restrictions on the use of UNE-P.

Regarding UNE-P generally, FCC Chairman Michael Powell and other key policymakers have expressed a preference for facilities-based competition. Some officials believe that UNE-P does not really provide sustainable, new benefits to consumers and therefore should eventually be eliminated. The Bells will use their depressed stock prices and earnings to argue that the economics of UNE-P will cripple the last remaining strong players in the telecom sector, ILECs, and thereby threaten network investment and reliability. Market trends toward the end of the decision-making process could affect the details of the transition that the FCC ultimately chooses. The Bells will also benefit from the reduced political firepower of the IXC/CLEC sector. With WorldCom and others under enormous financial constraints, the competitors' ability to utilize a battalion of lawyers,

lobbyists and economists to shape the debate is reduced. Moreover, some in the telecom manufacturing community and Silicon Valley are likely to join the Bells in pushing for regulatory relief as they fear maintenance of the status quo will exacerbate the cuts in telecom capital spending. Finally, the Bells might be successful in some of the court challenges to the specific state rate settings.
But a quick kill of UNE-P is an uphill battle. In addition to having to make persuasive policy arguments, the Bells will have to overcome a number of political hurdles to succeed.

The Bells can't win everything and broadband relief is easier politically than eliminating UNE-P in a flash cut. The FCC has teed up numerous telecom rulemakings but at their core, they will address two fundamental issues: how to regulate the current Bell network to enable telephony competition and how to regulate the Bell network as it offers broadband. While these issues raise many separate policy decisions, and while we believe the Bells are likely to improve their position as a result of the proceedings, it is a basic rule of Washington that no one wins everything. We think it unlikely that the Bells will get what they want on both broad sets of issues. For a number of reasons, we think it is easier for the FCC to grant the Bells relief on broadband than UNE-P. Given the precedents, radically changing the UNE rules now would be more disruptive than clarifying broadband rules. Chairman Powell welcomed the Supreme Court's May decision in the TELRIC case by saying it was good because it finally gave some certainty to the pricing issues. While every chairman has an opportunity to change the direction of FCC policy, it would be improbable for Mr. Powell to change direction on some of the FCC's core current policies, given his view on the value of certainty. Further, even if the FCC did adopt new rules for implementing TELRIC, it is unlikely the FCC would require all states to immediately redo their existing rates. Just as important, it is easier to provide the Bells relief for investments in networks for new, broadband services than to grant them relief in a way that immediately raises competitors' costs to the point at which they would have to drop their voice services or dramatically raise prices for millions of customers. An FCC move to scrap UNE-P in a flash cut could spark a consumer and political backlash -- and the potential force of such a backlash is growing. By adding hundreds of thousands of new local customers (and possibly millions by the time of a decision), the latest WorldCom and AT&T local offensives are changing the facts on the ground and increasing the risks for the Commission.

Moreover, broadband regulation was not as fully debated at the time of the Act. Therefore, in combination with the fact that cable is winning the majority of broadband connections, there is more sympathy for the Bells position on deregulating investments in new services. Certain changes, such as deregulating access to remote terminals, faces limited political opposition as so few CLECs are actually seeking such access. This is not to suggest that the Bells will easily win everything they seek in the broadband proceedings. There are a number of issues, such as the impact on universal service, that are causing great concern at the agency and on Capitol Hill. Nonetheless, we think it will be generally easier for the Commission to grant some relief for the Bells in how they invest in the broadband networks of tomorrow than give relief that eliminates existing consumer choices today. Even if the Bells win at the federal level, they will have a difficult time prevailing in the states. If the Bells succeed at the FCC in changing TELRIC or eliminating unbundled switching, we believe it is likely that they will meet stiff resistance in the states, particularly those states that have seen significant market penetration through UNE-P. A number of state regulators have already suggested that they view the FCC decisions regarding what constitutes a UNE as essentially advisory. If the FCC eliminates UNE requirements, many state commissions believe they have a right to retain existing UNE rules under prior state regulatory orders or state law. Many states have implemented unbundling as part of a price-cap/alternative-regulation plan. Some states are going to be reluctant to eliminate the platform for what they see as the only serious competition benefiting Bell

consumers. While the Bells would like the FCC to preempt the states, the Bells own position on states' rights in the early days of the implementation of the Act gives the FCC plenty of political cover for not intervening. Further, Republicans generally are more reluctant to preempt the states. The FCC has recently taken action, such as in the Customer Proprietary Network Information (CPNI) proceeding, to explicitly welcome state modification of FCC rules. Any effort by Chairman Powell to preempt state action is likely to cause a negative reaction by some who are generally supportive of him.

We also note an FCC move to pare back UNE-P requirements would be subject to immediate legal challenge from the states and local competitors. Of course, the Bells could also challenge an FCC decision that they believe does not go far enough. Either way, however, we believe both the FCC and the Courts are likely to favor maintaining the status quo to avoid market disruptions until the case is definitively resolved, which could take two or three years.
Attacking UNE-P changes the principal Bell message of deregulating broadband. For the last several years, the Bells have been trying to have their broadband investments deregulated, principally through the Tauzin-Dingell legislation, which passed the House but has stalled in the Senate. By focusing on advocating for new rules for new investments, they sent a message to government officials that deregulating competitors' access to the current telephone network, while welcome, was of a lesser priority. While the Bells see no policy contradiction in asking for both broadband relief and UNE-P, in terms of their political message, the Bells' intensified drumbeat on UNE-P adjusts their message in a way that we believe inevitably makes it less effective.

The UNE-P debate forces the regulators to confront how they will stimulate competition and the Bells to confront how they want to be treated. The UNE-P debate is particularly important, as the decisions will shape both market structure and investment incentives for all telecom players.
The debate forces regulators to confront whether they are willing to wait for full, inter-modal competition or feel the need to generate a greater competitive dynamic now. The great hope of regulators is that cable and wireless will fully compete some day with the wired phone network eliminating the need for much regulation. While cable modem service and wireless have affected the provision of non-primary residential phone lines, they have not yet affected primary residential lines in a way that we believe would cause regulators to conclude that regulation is no longer necessary. Moreover, given the current capital constraints on cable and on the non-Bell-affiliated wireless companies, the regulators have to question how long it will be before full facilities-based competition is available.

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The debate forces the Bells to confront how they want to be treated. The Bells want to be deregulated, preferably without having to face any significant competition for their primary line service. We believe such a goal, however, is unrealistic. We do not think they will be successful on either the federal or state level in advocating for deregulation without primary line competition. If the Bells are successful in eliminating UNE-P, we think it will mean continued retail regulation at the state level, which will also have the affect of distorting investment incentives for the Bells. For example, one alternative is for the Bells to accept the UNE-based competition and then challenge the state retail regulation. Certainly the Bells could argue that if the wholesale rules are working well, there is no need for retail regulation. This approach was adopted by VZ in New York where, in effect, VZ received a $2 month increase in residential phone rates in exchange for TELRIC rate decreases. For the Bells, this tactic at least has the merits of keeping a significant percentage of the revenue in the Bell network. While we don't believe the Bells will adopt this approach, we note it to suggest that the critical question is not whether the Bells' core telephone network will be deregulated -- it is how it will be regulated until facilities-based competition for its primary lines spreads more broadly, and then what will the Bell revenue stream look like when that happens.
In this regard, we note that while UNE-P does in the short term hurt Bell economics, in the long term, the Bells do have significant defenses against such competition. As noted above, VZ, the leading Bell in long-distance entry, has already proven it can stop the tide of UNE-P line encroachment. We believe VZ's intensified efforts to sell bundles will help even more. We think the other Bells are likely to follow VZ's lead in using bundles as a defense to UNE-P. (For a review of the Bell advantages in Bundling see our report, The Battle of the Bundles, June 2002.)

The Bells' real nightmare - cable using UNE-P to ramp up. Ed Whitacre, CEO of SBC, said that AT&T and WorldCom were "abusing" UNE-P because they had no intention of building their own facilities. We note that while UNE-P is no doubt having a negative impact on the Bells, it would be far more damaging for the Bells if a facilities-based competitor, most notably cable companies, used UNE-P to attract a sufficient number of customers to justify the incremental investments in their own networks, to build up their back office systems and marketing while generating revenues, and then to migrate the customers entirely off the Bell network. While we have no indication that anyone in the cable industry is contemplating such a strategy, (though SBC has asked the FCC to prohibit the merged Comcast/ AT&T Broadband cable company from using UNE-P) and we believe any such move by cable could set off a heightened political battle in which the Bells would receive greater deregulation, we note that UNE-P presents a way for cable companies to ramp up their telephony business in a more capital-efficient manner while being consistent with the ultimate goal of facilities-based competition. We also note that in the long-run, the continued growth of wireless and data will take an increasing share of telecom revenues.

Summary

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Additional Information Available Upon Request.
Investment Rating: B-Buy, H-Hold, S-Sell
Risk Rating: 1-Low, 2-Average, 3-High

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