Executive
Summary

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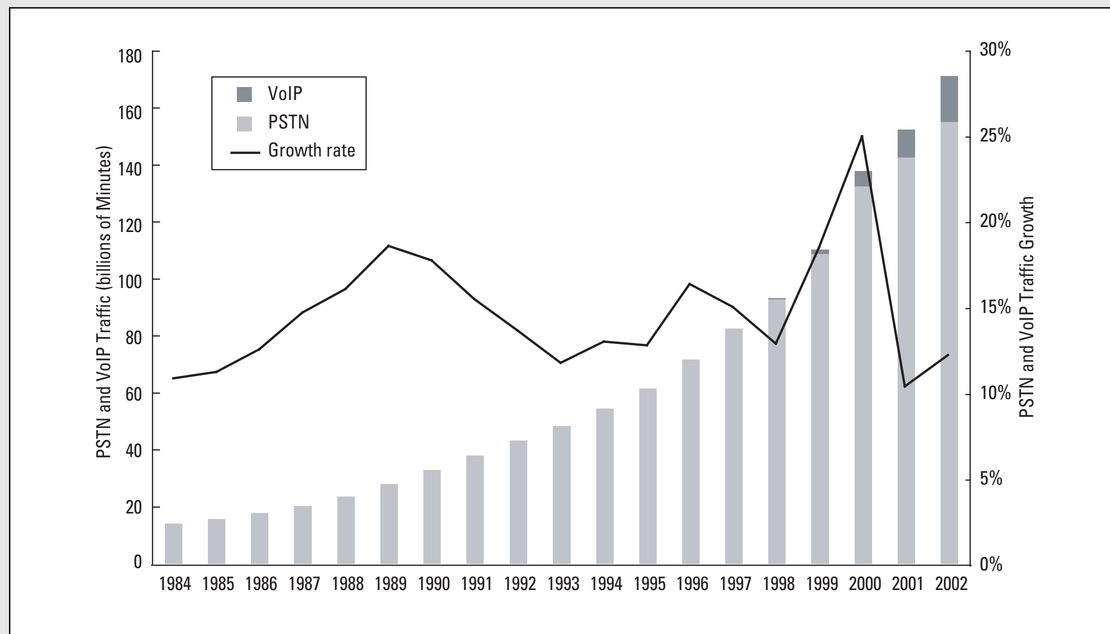
If something cannot go on forever, it will stop.
—Stein's Law

Plummeting prices and surging traffic volumes were the hallmarks of the late 1990s international long-distance market. Market liberalization and competition caused prices to tumble, encouraging individuals to place far more calls than ever. For several consecutive years, carriers enjoyed double-digit annual volume growth, and revenues soared. As the economist Herbert Stein noted, however, markets must return to equilibrium eventually. The decade-long market expansion finally came to an end in 2000. Annual call volume growth crested at 25 percent, as did carrier revenues, which peaked at $72 billion.

Since its zenith in 2000, the international carrier market has turned decidedly sour. Despite four years of aggressive price cuts by carriers, call minute growth rates have slowed, sending revenues spiraling downward. With some currently questioning whether the international voice sector is altogether doomed, now may be the time to recall Stein's Law. Call volume growth stabilized in 2002, and the relentless price decreases showed signs of possibly slowing.

Figure 1. Call Volumes and Growth Rates, 1984-2002



Source: TeleGeography research

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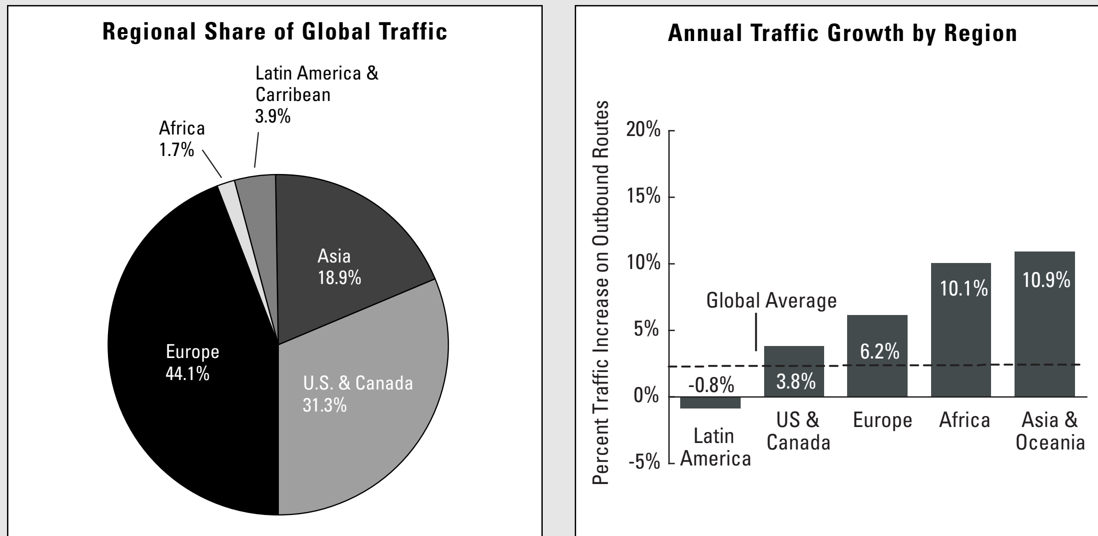
Figure 2. International Traffic Volumes and Growth by Region



Notes: Global traffic was 155.2 billion minutes in 2002. Data do not include VoIP traffic.

Source: TeleGeography research

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Traffic

International switched traffic increased just over six percent in 2002 to 155.2 billion minutes (see Figure 1. Call Volumes and Growth Rates, 1984-2002). Growth was particularly slow in Europe and North America, the two regions where international carrier markets liberalized earliest and matured most quickly. Europe and North America generate 75 percent of the world's international traffic and, thus, drive global trends (see Figure 2. International Traffic Volumes and Growth by Region). Consequently, sluggish growth in these markets led to the single-digit annual increase in worldwide switched traffic.

VoIP

Examining only switched traffic volumes provides a partial picture of the international voice sector. Voice-over-Internet-Protocol (VoIP) traffic surged 80 percent in 2002 to 18.7 billion minutes, accounting for almost 11 percent of international traffic. The growth in VoIP traffic—and its substitution for switched calls—has contributed considerably to anemic switched traffic growth. VoIP appears to have had a particularly notable impact in Latin America, where switched traffic volumes decreased in 2002. Including traffic transmitted via Voice-over-Internet Protocol, aggregate international minutes growth reached approximately 11.3 percent, slightly higher than in 2001.

Despite its recent growth, VoIP is still primarily used to bypass high settlement rates in developing countries. However, industry acceptance of VoIP is increasing. Incumbent carriers in a growing number of developing countries now accept and terminate incoming VoIP traffic. The VoIP sector received a significant vote of confidence in November 2003, when Teleglobe, the former monopoly incumbent of Canada, announced that it was acquiring ITXC, the largest VoIP wholesale carrier.

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Mobiles

Mobile-originated international traffic surged upward by approximately 19 percent in 2002 to 27.9 billion minutes. As a result, calls from mobile phones accounted for 17.4 percent of the world's international traffic. Few mobile carriers operate their own international links, making them a crucial contributor to wholesale carriers' revenues from outgoing international calls. However, persistently high mobile termination costs make mobile growth a mixed blessing. In Europe, for example, mobile-terminated calls accounted for 32 percent of incoming international traffic but over 70 percent of international carriers' estimated termination costs. These cost differentials have prompted regulatory investigations from both European and U.S. authorities.

RBOC Entry into Long-Distance

Regulatory shackles have historically prevented the four U.S. Regional Bell Operating Companies (RBOC) from competing effectively in the long-distance market. While the four former Bell companies accounted for 87 percent of local access lines in the U.S., TeleGeography estimates that they carried only one percent of U.S. outgoing international traffic in 2002.

Over the course of 2002 and 2003, authorities eliminated most of these regulatory constraints. The Bells have launched a ferocious assault on both the domestic and international long-distance market. The RBOCs' initial success has been resounding. Qwest's long-distance subscriber base more than doubled in the second quarter of 2003, and BellSouth's long-distance revenues surged 70 percent between the third quarters of 2002 and 2003. As of late 2003, however, the Bells' impact in the international long-distance market has been mixed. While their retail traffic volume is growing dramatically, some RBOCs are relying almost completely on wholesale carriers to deliver their international traffic. Consequently, the RBOCs may prove to be fierce rivals of established retail long-distance carriers, but major customers of wholesale international carriers.

Revenues

During the boom years of the late 1990s, optimists predicted that traffic growth would more than offset falling prices. Unfortunately, the opposite turned out to be true. Price declines have outpaced traffic growth in the past two years, causing retail revenues from international traffic to decline from $72 billion in 2000 to $53 billion in 2002. Between 1999 and year-end 2003, TeleGeography estimates that average price decreases of 17.2 percent per year will have undermined annual call volume increases of 11.9 percent, with net revenue growth spiraling downward by an annual global average of 7.3 percent.

Carriers suffering in this multi-year market adjustment may be consoled by a few hopeful signs. First, the pace of retail rate decreases appears to have slackened. Prices for many of the world's highest-volume routes (e.g., U.S.-to-Canada) have already reached their floor and will likely stabilize or, at worst, drift slowly downward. Second, despite the surge of international VoIP traffic, cheap VoIP calls have not undermined international call revenues as much as feared. Evidence suggests that the substitution of inexpensive VoIP calls for higher-priced switched calls dragged down international service revenue by just two cents per minute in 2002, to 32 cents. Finally, plunging settlement outpayments have cushioned the decline in gross revenues. In fact, U.S. international

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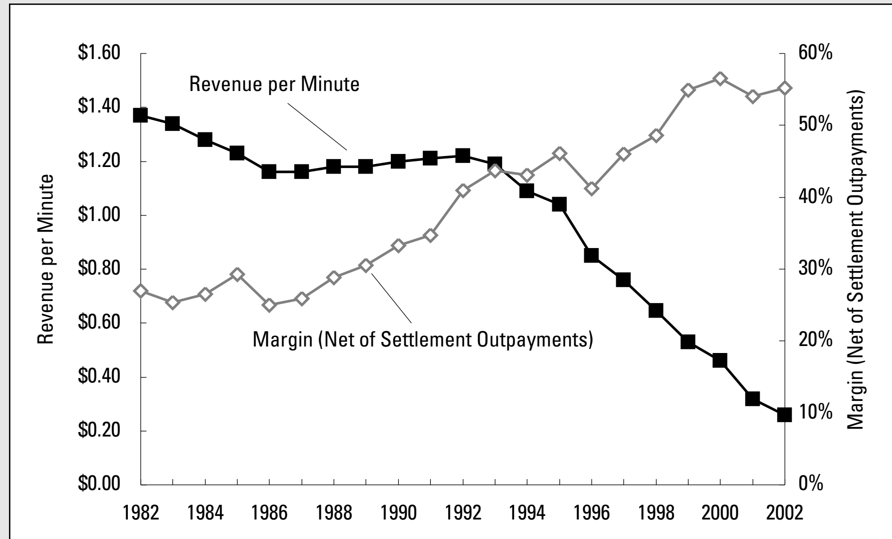
Figure 3. U.S. Carrier International Call Prices and Margins, 1982-2002



Notes: Revenue per Minute indicates average revenue per minute on outgoing international calls from the U.S. Calls to Canada and Mexico are excluded.

Source: FCC carrier filings and TeleGeography research

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carriers enjoyed the highest average margins (revenues net of settlement outpayments) in 20 years (see Figure 3. U.S. Carrier International Call Prices and Margins, 1982-2002).

Measuring Change

For beleaguered international carriers, 2002 offered some encouraging signals. Though call volume growth remained anemic, the rate of price decreases gave some indication of abating. However, further turbulence is projected. Technologically, VoIP is emerging as a legitimate substitute for the switched network. Consumer migration from fixed-line phones to mobile handsets have created a new set of problems and possibilities for international carriers. Regulatory developments—VoIP, mobile termination, and the emergence of RBOCs as a force in the ILD market—continue to shape the international carrier market.

This year's edition of *TeleGeography*—the twelfth of our annual series—offers a comprehensive picture of an industry in flux. The report's call volume data set of over 3,000 international routes in 116 countries remains the principal tool for gauging change. In addition, *TeleGeography 2004* presents detailed analysis on traffic, prices, revenues, and technology trends for the international long-distance sector. To place this analysis in context of the industry at large, the report also incorporates over 30 pages of charts and tables from TeleGeography's original research on long-haul terrestrial networks, undersea cables, and international Internet backbones.

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