

SUMMARY OF STRATEGIC TRENDS IN THE U.S. TELECOMMUNICATIONS INDUSTRY

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SUMMARY OF STRATEGIC TRENDS: INTRODUCTION

Strategic Trends presents perspectives shared by a wide range of industry participants on what has occurred, is occurring, and, most importantly, can be expected to occur in the telecommunications industry. The document has two objectives: (1) bring some degree of consensus out of the confusing strategic situation of late 2001; and (2) provide input to the strategic planning processes of companies struggling to survive the current downturn and then thrive during the recovery.

Strategic Trends constitutes a joint effort. Over 50 senior industry executives and providers of professional services (e.g., bankers, attorneys, consultants) contributed to the final version.¹

The method employed was a modified Delphi in which industry experts react to a hypothetical “future” with a mix of agreement, criticism, and alternative explanations and interpretations. Opinions were not attributable to individuals and represent personal views not “official” corporate positions. Given that the participating experts have decision authority in their organizations, it is probable that they will act in accordance with their perceptions/beliefs, thereby creating the classic “self-fulfilling prophecy.” Therefore, whether you as an

¹ Some of the readers of this document may wonder why their comments were not included or noted in some way. This occurred because the compilation process focuses on consensus positions and only includes minority views that have considerable support (e.g., the extent to which RBOCs will compete with each other). A key value of the Delphi technique is its concentration on the identification of convictions/opinions held by decisionmakers that are likely to affect the future strategies of their organizations.

SUMMARY OF STRATEGIC TRENDS: INTRODUCTION (Continued)

individual agree or disagree with the consensus, you can expect that the strategic and tactical plans of participating industry stakeholders will reflect the consensus view of *Strategic Trends* or a close variation thereof.

***Strategic Trends* began as a late August 2001 email brainstorming session among three consulting firms. Clients of those firms were then asked to comment. More-and-more input has occurred as versions of the document have been forwarded throughout the industry, posted on websites, and presented at industry forums.**

Within two weeks of the tragedy, decisionmakers began to react to the events of September 11 and its aftermath. Several issue areas in this version reflect post-September 11 abandonment/ modification/reinforcement of previously-held views. Such changes in perspective reflect both: (1) the commercial consequences to telecommunications companies of “exogenous” economic/political/social events that originate outside the industry; and (2) the fragility of the current economic outlook that is vulnerable to such unanticipated events.

Readers are encouraged to read the footnotes. Many of these notes contain clarifications or additional insight that is integral to the industry consensus.

SUMMARY OF STRATEGIC TRENDS: INTRODUCTION (Continued)

I would like to express my gratitude to all those who participated in the development of *Strategic Trends*. Based on comments received, those participating believe that the process of structuring their own opinions and/or reacting to those of peers was professionally and personally beneficial.

There appears to be a consensus to update the consensus. Therefore, please advise me if you would like to participate and have your perspective incorporated in the next version. The request for comments, insights, and disagreements will be issued in Q3 of this year. Those who submit comments will then be included on distribution for the mid-year 2002 update of *Strategic Trends*.

Regards,

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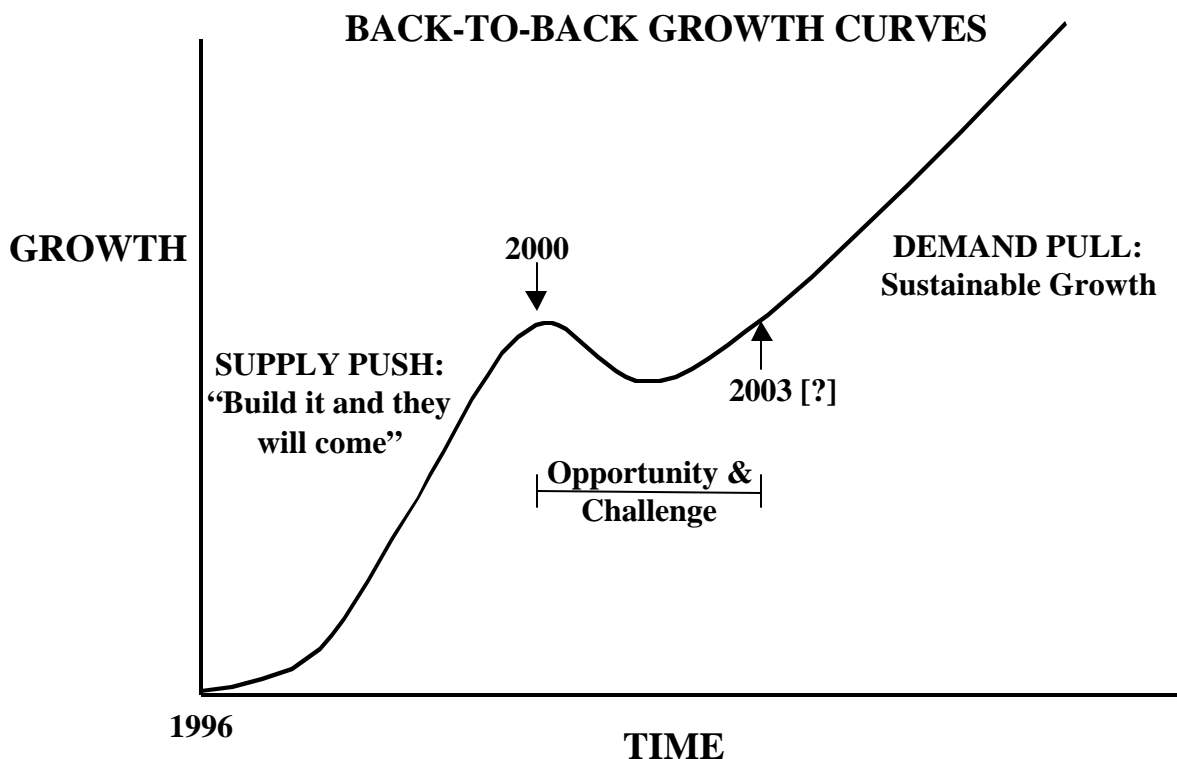
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1. In the *best case* scenario there will be no material recovery in the telecommunications industry until at least the Summer of 2003.² The delay in recovery means that the slump will be longer and deeper than the late 2001 conventional wisdom.
 - The telecommunications industry will *lag, not lead*, the recovery of the U.S. economy. The lag will be two to three quarters (i.e., for the industry to recover in mid-2003, the economy must experience a sustained recovery before the end of 2002).
 - The period from now until the recovery will be one of “triage” during which dead and dying businesses will be identified and closed out so as to maximize the remaining opportunities for the survivors. The triage process began in late 2000 and will continue at least through 2002.
 - Recovery will be determined by general economic and, increasingly, political factors not under the control of the telecommunications industry.
 - Aggressive and well-managed companies will recover sooner and take advantage of the industry situation to improve their competitive position both through internal growth and acquisitions.

² “Recovery” may be measured by such factors as increases in the rate of growth of revenue, operating income, cashflow, and capital expenditures at the industry, segment, and/or company levels. Improved performance of industry stock indices will confirm a turnaround.

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2. “Supply Push” dominated the 1996-2000 period when aggregate network capacity came online far in excess of near-term demand.
- The next growth period (2003 [?] and beyond) will be characterized increasingly by “Demand Pull” as: (1) customers sort out the applications they require and the amounts they will pay; and (2) younger and more “wired” generations (born 1970 and after) start households and increase their discretionary income.
 - The management challenge is to take maximum advantage of the opportunities present as the industry consolidates and retrenches.



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- 3. The carrier segment of the telecommunications industry is consolidating with an eventual (circa 2004-05) configuration similar to the airline industry - - three or four majors, a few regionals, and some niche players.**
- The distinction between “local” and “long distance” will disappear. Telephone service (including local and long distance) will be delivered by vertically integrated suppliers.**
 - The total number of licensed wireline carriers in the U.S. will decrease by 75% between year end 2000 and year end 2003. In contrast to the chaos of the last 18 months, markets will stabilize. There will be many fewer carriers to offer price, product, or service competition. However, customers will have confidence that their carriers of choice will remain in business and deliver services in accordance with contracts (i.e., be viable in the long term).**
 - The September 11 attack reinforces the need for robust, interconnected networks that have a high probability of survival in the event of natural or man-made disaster. That argues for a consolidated base of carriers operating with agreed-upon disaster protocols.**
 - Financially stressed carriers will have a debt load that is a burden. Therefore, acquisition of such a carrier (on an asset value basis) may be financially viable only after the carrier files for bankruptcy or restructures in a way so as to disadvantage existing debt and equity holders.**

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3. The carrier segment (Continued)

- **Consolidation will not be easy, particularly for smaller carriers. If one carrier acquires another, then the result is more customers on separate networks that may not be technically capable of integration at the physical and logical layers. In the short run, this works against achieving economies of scale.**
- **In most cases, the post-transaction period continues for 12 to 24 months. During that time, the risk is that the acquirer's management loses market focus and becomes distracted by organizational design and personnel issues.**
- **Consolidation in North America will increase the pressure to create continental-sized carriers in Europe. Such European consolidations more likely to receive EC regulatory approval subsequent to creation of mega-carriers in North America.**

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4. **Of all the participants across all of the segments in the industry, the RBOCs are the most likely to survive and thrive. In fact, the most visible sign of the industry recovery will be an improvement in RBOC financial performance.**
- **The RBOCs will dominate North America and most likely absorb *at least* the traditional long distance businesses of AT&T, WorldCom, and Sprint, all three of which are “failing companies.” The local infrastructure developed over the last decade by AT&T and MCI would also be included.³**
 - **RBOC executives and other observers forecast that RBOC vs. RBOC competition will accelerate and intensify as: (1) industry consolidation takes place; and (2) the RBOCs transform themselves into national and global full service providers. *This is a very controversial position with which non-RBOC commentators disagree.* Instead, the dissenters argue that there are no economic incentives for inter-RBOC competition. Therefore, these dissenters argue further that the RBOCs will structure their regions as “fortress hubs” and not compete in their core businesses or geographies (known as the “polite oligopoly” scenario).**
 - **In addition to inter-RBOC rivalry, the primary sources of competition for the RBOCs will be: (1) surviving CLECs operating as regional or niche service providers; (2) mobile wireless companies; and (3) cable MSOs in residential and small business markets.**

³ Local infrastructure in an acquiring RBOCs home region would be divested to meet antitrust requirements.

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4. RBOCs (Continued)

- **The RBOCs remain vulnerable to a video-Internet access-telephony service bundle sold by the MSOs.⁴ However, a critical unknown is the extent to which the MSOs can and will finance and manage the deployment, marketing, sale, and provisioning of such a service bundle.⁵**

⁴ Market research shows a potential penetration level of up to 30% of urban households and 8-10% of businesses with 500 or fewer employees.

⁵ Preliminary comments by Comcast management at the announcement of the acquisition of AT&T Broadband indicate that the successor company will market and sell aggressively a video-Internet-telephony service bundle.

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- 5. The first phase of the CLEC era ended with a bang that is still reverberating through the capital markets. Lost in the noise of so many failures is the fact that a strong demand remains for an alternative local service provider to the incumbent LEC.⁶**
- Surviving CLECs will be predominately facilities-based⁷ and serve small and medium sized business customers. The survivors will function as regional or niche providers, *not* as “Integrated Communications Providers” on a *national* basis.**
 - To be viable CLECs must: (1) have access to operating capital; (2) achieve a minimum level of scale economics; (3) develop a high loyalty/low churn customer base; and (4) follow a very focused business plan. One viable CLEC model is an independent telephone company extending service into an adjacent RBOC’s service area.**
 - The first phase of the CLEC industry was characterized by: (1) too much cheap capital; (2) very bad business plans; (3) poor management; (4) RBOC unpreparedness; and (5) inappropriate regulatory theories and actions. The most visible legacies of the first phase are bankruptcies, litigation, and the collapse of investor community confidence.⁸**

⁶ While ILECs appear to have prevailed in voice-centric competition with the CLECs, they may have been victorious in the wrong war as: (a) voice traffic migrates to wireless; and (b) wireline competition becomes data-centric.

⁷ “Predominately facilities-based” includes the operating model in which a CLEC leases LEC unbundled loops on a long-term or short-term basis, depending on the economics of the transaction.

⁸ Distressed CLEC assets can be purchased for 20¢ or less for each dollar on the CLECs balance sheet.

SUMMARY OF STRATEGIC TRENDS

5. CLECs (Continued)

- **Regulatory/legislative intervention to “save the CLECs” (e.g., divide the RBOCs into separate wholesale and retail businesses) will distract management (of both the RBOCs and the CLECs), confuse investors, and, potentially, become a major cause of delay in overall industry recovery.**
- **Suppliers (e.g., network equipment manufacturers and professional services firms) built unneeded capacity to serve the collapsing CLEC industry. The suppliers themselves must now, in turn, consolidate and shrink. Recovery for suppliers will *lag* recovery for carriers by one year or more (i.e., if carriers recover in mid-2003, suppliers will recover in mid-2004).**

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- 6. High-speed Internet access penetration of U.S. households may have almost doubled in 2001. However, final year-end data will show that high-speed Internet access adoption by residential and small business customers fell below the original 2001 forecast.**
- **The original industry consensus forecast was 11 million residential and small business connections by year end 2001.⁹ Consensus estimates are between 9.0 and 10.0 million as of December 31, 2001.**
 - **The expectation is that the growth for 2002 and 2003 will also be below industry expectations. The primary causes of the shortfall appear to be: (1) price sensitivity under conditions of economic uncertainty; and (2) lack of ubiquitous DSL-based solutions in urban and suburban areas.**
 - **Analysts distinguish “availability” from “take rate.”¹⁰ Cable and telephone companies in combination claim that high-speed access *is available* in urban and suburban areas and that the *take rate shortfall* results from a lack of content and applications that appeal to consumers and small businesses. Conversely, companies in the content/applications businesses argue that high-speed access availability is either overstated or overpriced or both.**

⁹ FCC statistics show 5.2 million “high-speed” connections (i.e., 200 Kbs or better) at year end 2000 of which 64% were cable modems, 31% ADSL, and 5% other. Based on these numbers, only four to five percent of U.S. households had high-speed connections at the end of 2000.

¹⁰ The official position of the FCC is that availability, not take rate, is the key measure.

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6. High-speed Internet access (Continued)

- **The near-term demand for high-speed access will be driven by existing content and applications. Over the longer-term, new content and applications will be created as one of the results of the increased base of potential customers with high-speed access. The synergistic effect is that of a “virtuous circle” with access and content/applications reinforcing each other in a positive direction.**
- **The pace of high-speed Internet access rollout is more than an esoteric discussion because the conventional wisdom is that acceleration of high-speed access will affect the economy favorably. The stimulus will occur because of both: (a) the spending stimulus associated with the capital expenditures to build the networks; and (b) the benefits of expanded B2C electronic commerce.**
- **Beneficiaries of broadband include the local network companies (cable operators as well as LECs), along with a myriad of others including network equipment vendors, PC makers, chip manufacturers, software companies, and media companies like AOL-Time Warner. In addition, there are thousands of companies for which the Internet is a low-cost distribution channel. Secondary effects would be experienced by the suppliers to these companies.**

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6. High-speed Internet access (Continued)

- **Regulators and policy makers debate increasingly whether slow adoption is: (1) a market failure that requires intervention; (2) typical at this point in time in the rollout of a potential mass market service; or (3) a situation that requires a Federal “industrial policy” regardless of whether or not the market has failed. The outcome of the debate will affect the nature and extent of government intervention.¹¹**

- **The current dispute as to whether RBOCs must unbundle newly constructed fiber networks for sale to competitors will slow down the near-term deployment of telephone network-based high-speed access capabilities. This will have two effects:**
 - (a) **Cable-based systems will become the method of choice for high-speed access; and**
 - (b) **Deployment of fiber by the telephone companies to the neighborhood, curb, or home will be delayed materially.**

- **In the event terrorist activities force quarantine restrictions on personnel movements due to biological or chemical attack, dispersed work sites (including homes) with high-speed access will be required.**

¹¹ The range of potential government interventions includes: (1) tax subsidies for high-speed access providers and/or homeowners; (2) direct subsidies similar to the Universal Service Fund; (3) removal of restraints such as problems with digital rights management (DRM) and rights-of-way; and (4) government responsibility for construction and operation of networks especially in rural areas.

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- 7. The ultimate bandwidth-eating “killer application” will be video.**
- Video applications will include:**
 - (a) entertainment video downloaded from the Internet as well as received over cable or satellite system;**
 - (b) business video including video conferencing (potentially from non-traditional work sites such as homes) and corporate training (real-time class room and user-initiated downloads);**
 - (c) distance learning for formal education (K-12th grade, post secondary and advanced) and personal improvement;**
 - (d) web-based video content used for everything from selling automobiles to on-line classified advertising;**
 - (e) video attachments to personal and corporate messages (including “instant messaging”); and**
 - (f) video telephony which has a high approval rating from upscale demographic segments born after 1970.**

 - Video compression techniques will continue to improve, which will reduce transmission bandwidth for a given task. However, the net effect of compression techniques versus application growth will still require substantial low-cost bandwidth. Such bandwidth will come from “lighting” the unlit fiber-based systems now in excess supply. These fiber systems have been, or will be, sold to carriers that will buy and book them at a cost basis that will provide a positive ROI.**

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7. Video as the “killer application” (Continued)

- **The increasing prevalence of video-based content constitute a technology and market-driven discontinuity that facilitates entry by non-traditional companies, such as AOL and Microsoft, into the communications business. In a video world, the traditional carriers are disadvantaged relative to new entrants. To the extent the embedded network infrastructure is not video-capable, then it becomes transformed from an asset to a liability.**
- **Transport technologies will include wired and wireless systems, the latter being both terrestrial and satellite-based. Carriers such as ILECs that are not video-capable will operate at a competitive disadvantage.**

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8. The U.S. adoption curve for wireless data services will be much slower than the experience with DoCoMo's wireless Internet service in Japan.

- **The situation in the U.S. is complicated by extreme uncertainty as to the value and availability of wireless data spectrum.**
- **Desirable spectrum is occupied currently by a combination of: (1) television broadcasters; (2) federal government agencies (including the Department of Defense); and (3) local school districts. All three present difficult technical and political issues that must be resolved prior to spectrum becoming available.¹²**
- **Adoption and implementation of wireless data applications by businesses are accelerating. Business use of wireless data lacks the visibility it deserves due to media focus on consumer applications. However, over the long term, business data applications will be limited unless additional spectrum becomes available.**

¹² The September 11 attack and the current war-on-terrorism make DOD spectrum untouchable in the near-term. Potentially some spectrum may become available through one or more of the following: (1) early migration by broadcasters out of channels 60-69; (2) agreement on the use of NextWave's spectrum; and/or (3) agreement on mobile use of MMDS spectrum.

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8. The U.S. adoption curve for wireless data services (Continued)

- **Carriers must choose between alternative wireless data business models: (a) *Traditional Model*: carriers provide an open platform and receive revenue primarily from traffic carried and some value added services (e.g., billing); or (b) *Transactions Model*: carriers share in the revenue stream of content providers (i.e., the equivalent of an LEC sharing the revenue of Yahoo or AOL on the wired network).**

- **The risk of the Traditional Model is that the revenue stream, gross margin, and EBITDA may not generate a sufficiently robust ROI to justify the use of scarce capital. The risk of the Transactions Model is that carrier revenue demands and proprietary requirements will delay or stifle the development of the applications necessary to drive the wireless data business.**

- **Wireless carriers may elect to share network facilities. This will reduce up-front capital requirements but restrict downstream competition to price (rather than technical features or coverage).**

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9. The “surge era”¹³ in carrier network construction has ended.

- The “network” in the U.S. (as completed or funded *and* under construction currently) is more than adequate to meet demand forecasts through the middle of this decade. Capital expenditures will be curtailed back to approximate pre-1996 levels (on an inflation-adjusted basis). ‘Build it and they will come’ has gone.
- The drop is most obvious in inter-city networks which are overbuilt. Construction will continue for intra-city fiber networks but only for customer-specific builds with assured demand under signed contract.
- The focus now will be on achieving the carrier’s return on investment (ROI) that was contained in the business plans that justified the original network investment. (This may not be easy since many of these business plans relied upon excessively optimistic scenarios and associated financial forecasts.)
- The deployment of next generation carrier network technology will be delayed until the existing surplus of current generation technology is absorbed.¹⁴

¹³ The surge era refers to the excess of aggregate capital spending on network construction and retrofit that occurred in the 1996-2000 period over the baseline 1991-1995 period in the U.S.

¹⁴ For example, carriers with embedded circuit switched networks are disinclined to procure unproven softswitch technology when Class 5 switches have sold recently at less than twenty cents on the dollar.

SUMMARY OF STRATEGIC TRENDS

9. The “surge era” (Continued)

- **There will be substantial emphasis in the 2003-2005 period on rolling out “home networks” that are essentially local area networks for upper income households.¹⁵ Such networks will be video-capable and are expected to increase demand for “last mile” high-speed access service from cable and/or telephone companies.**

¹⁵ Such home networks may be wired or wireless hopefully using one standard agreed-to by participating companies so as to not confuse consumers with incompatible subsystems that cannot be interconnected. Home network applications include: (1) security; (2) entertainment; (3) home automation; (4) PC networking; and (5) intra-home communications with outside-home connectivity.

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- 10. *Prices* for transport and switching will continue to move towards the *cost* of the most efficient provider.**
- Public policy will support this price movement despite the economic stress on many carriers with high embedded costs.
 - Extreme uncertainty exists currently as to baseline/equilibrium prices for telecommunications services. Short-term contracts tend to be the rule currently since large buyers are avoiding long-term commitments. The short-term (next six to twelve months) combination of: (1) excess supply; and (2) repressed/tentative demand reinforces mid-2003 as the earliest recovery possible.
 - Consequently, carriers will emphasize efficient, low cost operations and scale economies that, in combination, will generate high margins and positive EBITDA.
- 11. In pursuit of even higher returns on invested capital, carriers will stress diversification and “strategic partnerships” outside their core businesses.**
- Carriers will continue to experiment with diversification into content and e-commerce applications.
 - Some will be very successful; most will fail. This is a high risk strategy principally because the distinctive competencies associated with the content and e-commerce businesses are so different from the skill set that make carriers successful.

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12. Economics dictate migration onto a single packet network for voice, data, image, and video.

- **In the long-term, maintaining two parallel networks, circuit-switched for voice and packet-switched for data, is excessively expensive.**
- **IP telephony is more economical due to lower hardware/software costs and the greater efficiency of packet transmission. Combined capital and operating cost savings are estimated to be in the range of 30% to 50%. However, given the embedded network infrastructure, in the short run many carriers plan to use Class 5 circuit switches for voice and offload data to packet networks.**
- **Large businesses will build packet-based extranets and intranets in which voice will be integrated and quality of service (QoS) assured. In addition, corporate users believe increasingly that packetized voice connections are more likely to survive disasters like September 11.**
- **There is much less consensus on packetized voice for small- and medium-sized businesses and residences. Some industry sources argue that:**
 - (a) **Based on price advantage, small- and medium-sized businesses will purchase packetized voice and Internet access over DSL as a less expensive alternative to purchasing multiple voice and data lines.**
 - (b) **Residential customers will buy a package of video, Internet access and packet voice services from a cable TV company. As a competitive response to cable, LECs will sell a comparable package.**

SUMMARY OF STRATEGIC TRENDS

12. Economics dictate migration (Continued)

- **The lack of consensus on small- and medium-sized businesses and residential customers reflects the cost to migrate the embedded circuit-based network technology, the lack of agreement on QoS standards in public networks, and the absence of an RBOC champion for packetized voice.¹⁶**

¹⁶ In November 2001 the local Telecommunications Division of Sprint announced a contract with Nortel to transform its network to a packet voice network. The Division has eight million customers across 18 states. This is the first move by an LEC to transform its embedded network to packet-based technology.

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13. In order to conserve cash and survive, network technology companies (in particular) and the industry (in general) *decreased* R&D expenditures in 2001, will continue to do so in 2002, and may *not* increase such expenditures until 2003 or later.

- **This will affect adversely the commercialization pipeline for new products and services in the 2003-2005 period (and potentially beyond).**
- **The venture capital (VC) community's reluctance to fund the telecommunications-related technology sector reinforces the R&D shortfall effect. The VCs see: (1) a declining demand for the technology; and (2) no viable exit strategy once the capital is committed.¹⁷**
- **Radical innovations that on average take ten years between concept and market will be delayed or terminated prematurely. The full significance of this situation cannot be forecasted with precision, but its initial impact will occur in the last half of this decade.**
- **The cut back on R&D will affect disproportionately the future of small, independent technology companies that often combined seed money from established companies with other sources of capital.**

¹⁷ An IPO or acquisition constitutes an acceptable exit strategy. Neither option appears realistic currently.

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13. R&D (Continued)

- **The emphasis will shift from new technologies *per se* to making existing technologies work together as reliable, cost effective systems.**
- **Companies not involved currently in telecommunications directly (e.g., Microsoft) are *increasing* R&D expenditures. Such increases may provide competitive advantage in the event of entry.**

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- 14. The current situation could trigger a movement for more regulation, re-regulation, and/or legislative intervention. Such a movement will increase uncertainty and slow, if not stop, the industry’s recovery process.**
- **State and federal regulators tend to endorse “market-based solutions” in which regulators restrict their role to: (1) ensuring a level playing field; and (2) addressing areas where the market has failed. Given the current market situation, regulators have begun to identify “market failures” that potentially require some form of intervention. Examples of such alleged “failures” include:**
 - (a) **A perceived “lack” of local competition as demonstrated by the financial failures of many CLECs;**
 - (b) **The “low take rate” by small businesses and residences for “broadband” services;**
 - (c) **“Underserved” rural and/or low income areas that do not have parity pricing and/or service availability with urban areas;**
 - (d) **The apparent lack of spectrum for 3G services; and**
 - (e) **The “excessively long” rollout of broadcast digital television.**
 - **Regulators are not comfortable with the Schumpeterian concept that the current period is one of “creative destruction” in which the shakeout-consolidation process is natural and a prerequisite to moving the telecommunications industry from one growth cycle to another. In effect, the failure of many CLECs, structural consolidation, and “slow” adoption of “broadband” by consumers are interpreted by many regulators and legislators as the trigger for increased or re-regulation.¹⁸**

¹⁸ In the near-term, carriers that trust the market more than the regulatory/legislative process will put relatively more personnel and resources into regulatory reform/neutralization than was the case in the 1996-2000 period.

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15. The potential for further foreign carrier investment in the U.S. remains highly unlikely.

- **Success in the U.S. constitutes a prerequisite for a foreign carrier to be considered “global” and therefore credible to home country and U.S. corporate customers.**
- **However, major foreign carriers remain unable to adjust to home country competition and/or are crippled by the debt loads necessary to meet capital commitments (e.g., for 3G licenses and infrastructure construction). In addition, those that have tried U.S. entry strategies (e.g., BT) have made money on their stock purchases but failed to sustain presence in the U.S. market.**
- **A potentially viable strategy consists of portfolio investments in market segments (e.g, wireless or information services) in which the investing carrier has experience and can achieve effective control (e.g., DT in Voicestream).**
- **Experience to date shows that minority equity investments made in large U.S. carrier holding companies (e.g., DT in Sprint) do not meet the long-term business requirements of foreign carriers.**

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16. “Global carriers” that focus on serving multinational companies can be expected, at a minimum, to provide telecommunications services *between, among, and within* the countries of “The Triad” (North America, Japan, and Europe).

- Carriers have attempted one of two global strategies: (1) “on-net” emphasizing end-to-end services using owned-and-operated facilities (e.g., WorldCom); or (2) a “partner” arrangement between or among two or more carriers (e.g., AT&T and BT in Concert).¹⁹
- No carrier or carrier consortium can yet meet all the criteria for global service all of the time everywhere. However, some can meet many of the criteria most of the time somewhere.
- The critical differentiator is the ability of a carrier to provide price-competitive services *between, among, and within* the Triad countries. This may be accomplished by means of owned/leased facilities and/or the facilities of a partner and/or the facilities of a non-affiliated local carrier.²⁰

¹⁹ Neither strategy has proven to be superior. The “on-net” approach is very capital intensive while “partnering” requires constant management and refreshment of inter-company alliances.

²⁰ To be price competitive when requiring facilities from a non-affiliated local carrier, a carrier must negotiate substantial inter-carrier price discounts (i.e., a wholesale rate based usually on minimum volume commitments).

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16. “Global carriers” (Continued)

- **Given the abundance of competition and the over-capacity of network facilities throughout the “Triad,” it may be that the real value-add is the identification and selection of local/regional providers and the aggregation of those providers into a network of networks to meet the requirements of specific customers. Consolidation of carriers in Europe and North America will facilitate the network of networks approach. Large business customers may move to self-provision rather than outsource under this model.**
- **The France Telecom, Global One, and Equant combination is an example of the next generation global carrier that may just succeed.**
- **Supply exceeds demand for undersea fiber capacity. Excess capacity creates a buyer’s market on most undersea routes.**

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17. The difference between corporate success or failure will come down to the ability of management to lead their enterprises through the downturn and position them for renewed growth.

- **The telecommunications industry is critical to the U.S. economy and national productivity.²¹ Therefore, after the current workout period, telecommunications will grow at least as fast as the overall economy if not faster.**
- **The industry participants that contributed to *Strategic Trends* were asked to be descriptive not prescriptive. However, their comments often included clues and signals as to the strategies senior management would follow. The broad outline of these strategies is presented below.**
- **This is a period of triage in which the industry can be grouped into three tiers:**
 - (a) ***Tier I*: companies that are healthy fundamentally. These should seize the opportunity to gain market share and position themselves versus weakened competitors.**
 - (b) ***Tier II*: less-well-off companies that need to focus on survival and avoid risks. For example, in the short-run, a Tier II may focus regionally and forgo national expansion.**
 - (c) ***Tier III*: the dead and the dying that should sell out or fold up in such a way as to least injure their investors, employees, customers, and suppliers. To extend their lives at the cost of damaging the industry's reputation, wasting more capital, and providing an opportunity for re-regulation does the industry a disservice.**

²¹ In a speech to investment analysts (December 4, 2001), Sprint Chairman and CEO William Esrey commented that telecommunications “constitutes two percent of the \$10 trillion U.S. economy” and that he expected telecommunications revenues to increase at a seven percent compound annual growth rate between 2001 and 2005.

SUMMARY OF STRATEGIC TRENDS

17. “Corporate success or failure” (Continued)

- **At the Tier I companies, management is leading along two dimensions, *the operational and the strategic*.**

(a) *Operational*

- (1) On the *inside* these companies emphasize back-to-basics. Core processes are being reviewed to ensure that the metrics are correct and standards met (e.g., order entry time, first call customer problem resolution, MTTR). Personnel that cannot meet expectations are being terminated.**
- (2) On the *sell side*, Tier I companies are moving to increase share while focusing on churn reduction and customer loyalty programs for the embedded customer base. A few are even seeking out customers that are experiencing short turn recession-induced business effects to offer them extended payment terms and/or advantageous pricing in anticipation of a strong relationship in better times.**
- (3) On the *buy side*, the Tier I’s are renegotiating contracts and reviewing the number and performance of their sources of purchased goods and services. While not pushing suppliers to the wall, there are opportunities to drive costs out of the supply chain as well as lock down long-term supply relationships.**

(b) *Strategic*

- (1) This is the time to make *acquisitions* with asking prices low and going lower. Compared to 1999 and 2000, Tier I companies can acquire customers, assets, or new distribution channels at a fraction of the cost. However, acquisitions need to be planned carefully so as to truly add strategic value. The planning process needs to include post-acquisition implementation actions. Finally, given the over-capacity, poor management, and cashflow problems in the industry, acquisitions must be selective and limited, or the process could easily destroy value and take management’s attention away from the core business.**

SUMMARY OF STRATEGIC TRENDS

17. “Corporate success or failure” (Continued)

(b) *Strategic* (Continued)

(2) Tier I companies are leveraging their *internal competitive advantages* (e.g., scale economies to allow price reductions, access to capital to drive new technology deployment, increasing marketing to enhance brand and gain share when advertising prices are cheap). The key here is to use financial and commercial advantages to take advantage of temporary market aberrations and competitor distress.

- **After the Tier III companies and the weakest Tier II disappear, the industry will be better capitalized and more viable. Most importantly, after the shakeout, the telecommunications industry will be positioned to support a new era in wired and wireless communications. The era will be all digital, increasingly video-focused, have intriguing new entrants (e.g., AOL, Microsoft), and be focused on anywhere, any time connectivity supplied by a limited number of consolidated, well-financed major players.**

ABOUT THE EDITOR

Dr. Joseph S. Kraemer holds the title of Director at Law and Economics Consulting Group (LECG), a consulting firm with expertise in capital intensive industries undergoing structural change. He is an experienced management consultant who works across multiple industries, geographies, and client situations. He has assisted numerous companies to enter or exit a variety of technology-related markets.

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Recent publications and presentations include: “Competition Policy and the Local Telephone Industry” (June 2001); “Beyond the Network: The E-Commerce Opportunity for the U.S. Telecommunications Industry” (Summer 2001); and “Global Telecom Trends: A U.S. Perspective” (May 2001). His current project is an assessment of strategic trends in the telecommunications industry (2001-2005).

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