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BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of )  
)  
Computer III Further Remand )  
Proceedings: Bell Operating )  
Company Provision of Enhanced )  
Services )

CC Docket No. 95-20

TO: The Commission

COMMENTS OF SOUTHWESTERN BELL TELEPHONE COMPANY

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## SUMMARY\*

The Commission commenced this proceeding ten years ago under the following basic premise: "The major theme of this notice . . . is that sacrificing material efficiencies to achieve competitive parity is undesirable as a public policy, particularly if less inefficient alternatives are available." (Computer III NPRM, 50 Fed. Reg. 3381 at para. 116, August 16, 1985) Yet, the BOCs' enhanced service competitors continue their extraordinary efforts to keep the BOCs out of the enhanced service market altogether, under the guise of advocating structural separation for BOC enhanced service offerings. They know that reimposition of full structural separation would necessarily cause the BOCs to "sacrifice material efficiencies," thereby perhaps effectively precluding them from being able to compete in one or more enhanced service submarkets.

The Commission must see through this strategic ploy and look instead to the indisputable factual record in this case. The Commission has a most unique opportunity in this case of relying upon several years of first-hand industry experience under the current nonstructural safeguards and level of BOC unbundling to see how the market has actually performed under the rules that are now again in dispute due to the Ninth Circuit's ruling in California III. In examining this existing track record, the Commission will see that -- completely contrary to the hollow claims of the BOCs'

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\* All abbreviations used herein are referenced within the text.

competitors -- the overall enhanced service industry has experienced explosive growth under the current nonstructural safeguards and level of BOC unbundling. Further, the Commission will see that the benefits of BOC structurally integrated enhanced service offerings -- in the form of services for the first time made available to the mass market by BOCs -- greatly outweigh the efficiency-robbing costs of stifling structural separation.

The Commission should conclude, once again, that considering all the evidence of record, the benefits of structural relief far outweigh the costs of structural separation, and should allow the BOCs to continue offering all enhanced services under the current set of nonstructural safeguards and the current level of BOC unbundling.

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Southwestern Bell Telephone Company (SWBT), by its attorneys, respectfully files these Comments in response to the Commission's February 21, 1995 Notice of Proposed Rulemaking, FCC 95-48 (NPRM). If anything, the case for allowing integrated Bell Operating Company (BOC) enhanced services is even stronger today than it was the last two times the Commission decided to do so. The Commission should promptly issue an order concluding that BOCs can continue offering all enhanced services, on an integrated basis, pursuant to the same nonstructural safeguards that it promulgated in earlier proceedings, without first requiring any further unbundling of BOC networks or services.

## I. BACKGROUND AND INTRODUCTION

In the Computer III<sup>1</sup> proceeding, the Commission replaced the Computer II<sup>2</sup> requirement that BOCs offer enhanced services only through structurally separate affiliates with a set of nonstructural safeguards so that the BOCs could offer such services on an integrated basis. The nonstructural safeguards were designed to protect against interconnection arrangements that discriminated against unaffiliated enhanced service providers (ESPs), and against cross-subsidization of a BOC's unregulated enhanced services.

Under the Commission's Computer III Orders, the BOCs collectively filed and gained Commission approval of a total of 29 Comparably Efficient Interconnection (CEI) plans or CEI plan waiver requests (for conducting enhanced service trials) to gain permission to offer numerous enhanced services on an integrated basis. The BOCs have also commenced offering some additional such services pursuant to their FCC-approved, implemented Open Network

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<sup>1</sup> Amendment of Sections 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry), Report and Order, 104 FCC 2d 958 (1986) (Phase I Order), modified on reconsideration, 2 FCC Rcd 3035 (1987) (Phase I Reconsideration), further reconsideration, 3 FCC Rcd 1135 (1988) (Phase I Further Reconsideration), second further reconsideration, 4 FCC Rcd 5927 (1989) (Phase I Second Further Reconsideration); Report and Order, 2 FCC Rcd 3072 (Phase II Order), modified on reconsideration, 3 FCC Rcd 1150 (1988) (Phase II Reconsideration), further reconsideration, 4 FCC Rcd 5927 (1989) (Phase II Further Reconsideration); rev'd sub nom. California v. FCC, 905 F.2d 1217 (9th Cir. 1990) (California I).

<sup>2</sup> Amendment of Section 64.702 of the Commission's Rules and Regulations, (Computer II), 77 FCC 2d 384 (1980) (Final Decision), reconsideration 84 FCC 2d 50 (1981), further reconsideration, 88 FCC 2d 512 (1981), aff'd sub nom. Computer & Communications Industry association v. FCC, 693 F.2d 198 (D.C. Cir. 1982), cert. denied, 103 S. Ct. 2109 (1983).

Architecture (ONA) plans,<sup>3</sup> which subsumed and replaced the CEI plans. The BOCs collectively are today offering such services to approximately 6 million customers pursuant to the Commission's CEI/ONA requirements. These customers have grown to depend upon receipt of the enhanced services from the BOCs, both for personal and business use.

All of the above BOC CEI plans and ONA plans were filed and approved based in large part upon the Computer III Orders.<sup>4</sup> However, on June 6, 1990, the U.S. Court of Appeals for the Ninth Circuit issued a decision vacating three of those Orders and remanding to the Commission for further proceedings.<sup>5</sup> On July 3, 1990, the BOCs filed a Joint Contingency Petition for Interim

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<sup>3</sup> Filing and Review of Open Network Architecture Plans, CC Docket No. 88-2, Phase I, Memorandum Opinion and Order 4 FCC Rcd 1 (1988) (BOC ONA Order); Memorandum Opinion and Order, 5 FCC Rcd 3103 (1990) (BOC ONA Amendment Order); Memorandum Opinion and Order on Reconsideration, 5 FCC Rcd 3084 (1990) (ONA Reconsideration Order); Memorandum Opinion and Order, 6 FCC Rcd 7646 (1991) (BOC ONA Further Amendment Order); In the Matter of Computer III Remand Proceedings, Notice of Proposed Rulemaking in CC Docket No. 90-368, 5 FCC Rcd 5242 (1990) (ONA Remand NPRM); Report and Order, 5 FCC Rcd 7719 (1990) (ONA Remand Order), aff'd sub nom. California v. FCC, 4 F.3d 1505 (9th Cir. 1993) (California II).

<sup>4</sup> They were also based in part upon the BOCs' filing and approval of Cost Allocation Manuals (CAMs) that were established in a separate proceeding not the subject of any appeal before the Ninth Circuit. See In the Matter of Separation of Costs of Regulated Telephone Service from Costs of Nonregulated Activities, Report and Order in CC Docket No. 86-111, 2 FCC Rcd 1298 (1987); modified on recon., 2 FCC Rcd 6283 (1987); modified on further recon. 3 FCC Rcd 6701 (1988), aff'd sub nom. Southwestern Bell Corp. v. FCC, 896 F.2d 1378 (D.C. Cir. 1990). A BOC's CAM prevents cross-subsidization of its enhanced offerings, as well as all its other nonregulated services/products.

<sup>5</sup> The three Orders that were vacated were the Phase I Order, the Phase I Recon Order, and the Phase II Report and Order.

Waiver of the Computer II rules. On July 23, 1990, the Common Carrier Bureau granted the waiver, pending receipt of public comment on whether to extend the waiver throughout the subsequent Commission remand proceeding.<sup>6</sup> On December 17, 1990, the Commission released an Order extending the interim waiver throughout the Commission's remand proceeding.<sup>7</sup>

On December 20, 1991, the Commission released its remand Order, again deciding to remove the structural separation requirement for all BOC enhanced services.<sup>8</sup> MCI again appealed, and on October 18, 1994, the Ninth Circuit issued its decision in California III vacating in part and remanding the Commission's BOC Safeguards Order.

Specifically, the Court remanded only on the narrow question of the adequacy of a single aspect of the cost/benefit analysis that the Commission had conducted on remand. 39 F.3d at 927-930. The Court concluded that, in between California I and California III, it had ruled in a different appeal that the Commission changed its Computer III policy of "fundamental" unbundling of BOC networks as a prerequisite for ONA plan approval, requiring something less than "fundamental" unbundling.<sup>9</sup> Although

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<sup>6</sup> Memorandum Opinion and Order, 5 FCC Rcd 4714 (1990).

<sup>7</sup> Notice of Proposed Rulemaking and Order, 6 FCC Rcd 174 (1990), paras. 59-66.

<sup>8</sup> Report and Order, 6 FCC Rcd 7571 (1991) (BOC Safeguards Order).

<sup>9</sup> Id., at 928, citing California v. FCC, 4 F.3d 1505, 1511 (9th Cir. 1993) (California II).

the Court found in California II that the Commission had adequately explained this perceived policy shift for purposes of approving the BOCs' ONA plans (Id., at 1513), in California III the Court noted that the Commission had not done so in the BOC Safeguards Order for purposes of granting BOCs enhanced service structural relief. 39 F.3d at 929-930.

Thus, at this point all the Commission need do on remand is explain why structural relief is still justified under its cost/benefits test, despite the policy shift that the Court in California II found to have occurred. Indeed, the Commission came close to doing precisely that in the Order that the California III Court reversed ("[w]e conclude that, given current network architecture and technical capabilities, the BOCs are generally meeting the basic service needs of the enhanced service industry. . . . We are not persuaded by the conclusory arguments of some commentators that we need to make fundamental changes in ONA in order to rely on it as a check against discrimination." BOC Safeguards Order at paras. 63-64).

Nevertheless, the Commission has issued a broad-sweeping NPRM, seeking comment on the full gamut of issues related to structural relief for BOC enhanced services. SWBT will endeavor to respond to the Commission's complete list of questions, but still urges the Commission to focus instead on the single, narrow issue that was remanded by the Ninth Circuit in California III, since all other facets of the Commission's Computer III/ONA regulatory regime have now been affirmed by the courts (cert. denied, April 3, 1995).

The Commission has a unique opportunity in this case since here, unlike most other policy dockets, the Commission can draw upon several years of actual industry experience under nonstructural safeguards and integrated BOC enhanced service offerings in determining whether the benefits outweigh the costs. SWBT is confident that a review of that actual experience will reveal clearly that the benefits of structural relief far outweigh the costs -- and without any need for adding to the current nonstructural safeguards or requiring further unbundling of BOC networks and services.

**II. CURRENT COMMISSION SAFEGUARDS HAVE PROVEN EFFECTIVE IN PREVENTING BOC DISCRIMINATION AGAINST OTHER ENHANCED SERVICE PROVIDERS.**

"Access discrimination," as defined by the Commission, occurs when a BOC provides ESPs with access to network services inferior to that provided to the BOCs' own enhanced services, or when BOCs otherwise refuse, as a means of exercising market power, to provide network services desired by the ESPs.<sup>10</sup> The theoretical reason BOCs might engage in access discrimination would be to disadvantage competing ESPs and to stifle their growth and success by creating a competitive advantage for the BOCs' own or affiliated operations in order to achieve greater growth and sales than would be possible absent the access discrimination. The result would be less vigorous growth in competing providers' sales and greater sales for the BOC than without access discrimination.

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<sup>10</sup> NPRM, n. 4.

An examination of the on-line information services market, however, finds no shred of evidence that any BOC has actually engaged in access discrimination under the Commission's nonstructural safeguards over the past four years. In SWBT's broad review of the literature covering on-line information services, SWBT did not find even a single article or news clipping that alleged or implied that competitive vendors in the on-line information services market have in any way been stifled or harmed by the BOCs. In fact, relatively few articles or studies mentioned or listed the BOCs at all, underscoring the fact that the BOCs remain a minor factor in the overall enhanced services market.

For example, the U.S. Industrial Outlook 1993 reports that "the market sector captured by private companies for value-added services, including electronic data interchange, business communications like electronic mail and enhanced facsimile, managed network services, and consumer services like database access, reached about \$8 billion in 1993. Data communications services provided by telephone carriers, in contrast, generated revenues of less than \$2.5 billion."<sup>11</sup> The \$2.5 billion reported here represents the combined revenues of long distance carriers, such as AT&T, Sprint, WilTel, etc., and all local telephone carriers, including the BOCs. All local and long distance carriers combined represent less than one fourth of this market. Thus, the BOCs'

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<sup>11</sup> U.S. Industrial Outlook 1993 at 28-9 (U.S. Government Printing Office).

share of the market is significantly lower. The published studies and articles all point to these conclusions:

- competition for on-line information services is extremely vigorous;
- there are many large, well-established and financially sound providers;
- BOCs are not major players in the information services market;
- there is no evidence to suggest that the BOCs preclude or hinder the provision of on-line information services by non-BOC providers.
- providers keep expanding the range of their service offerings;
- entry by new providers, strategic alliances, and joint ventures is very common;
- firms can and do freely enter and exit the market;
- providers are increasingly using multiple distribution media to more effectively tap into the developing mass market -- former market boundaries between on-line information services and other information services are no longer realistic.

The only segment of the enhanced voice and data marketplace in which the BOCs are a major force is public voice mail, where the BOCs compete with service bureaus, cellular carriers, CPE and Interexchange Carriers (IXCs). However, public voice mail represents only about 7% of the enhanced services marketplace.<sup>12</sup> Thus, BOCs have a significant presence only in a very small sub-segment of the enhanced services market. At the same time, this sub-segment is expected to grow significantly faster than the enhanced services market overall, with tremendous annual growth of 25.9% forecast by the Insight Research Corporation

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<sup>12</sup> The Insight Research Corporation, The Insight Reports: Report on the State of the Enhanced Voice & Data Marketplace 1994-1999, April 1994 (Insight), p. 85, Table V-1.

(Insight) through 1999, compared to strong annual growth of "only" 16.9% for the total market.<sup>13</sup>

The primary contributors fueling this tremendous growth in public voice mail services are continued penetration of the consumer market, which is primarily served by the BOCs, the added value from integrating Interactive Voice Response (IVR) and fax-on-demand with traditional messaging services by service bureaus, and call-completion services for the cellular market. Thus, strong growth is not only expected for BOC services, but also for services of all other voice mail providers, indicating a vigorous and healthy market. Clearly, such strong growth for all providers' services shows that non-BOC ESPs have not been harmed or stifled in any way by the BOCs under the current Commission rules. There is no indication of BOC access discrimination, even in the one small sub-market where BOCs have a significant presence.

Further, the ONA amendment requirements, the annual and semi-annual ONA reporting requirements, and the nondiscrimination reporting requirements imposed on the BOCs with structural relief require the BOCs to make publicly available a host of data that demonstrates that they are not engaging in access discrimination. As the Commission notes in para. 29 of its NPRM, the record to date has not shown any access discrimination by BOCs, and no ESP has filed even a single formal complaint with the Commission alleging BOC access discrimination. These are significant and compelling findings. The ESPs consist of large, established firms that

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<sup>13</sup> Id.

certainly would not hesitate to bring their complaints before the FCC, if they were experiencing access discrimination. The lack of any such complaints is clear evidence that the existing nonstructural safeguards are effective and adequate in preventing BOC abuse.

If the BOCs' operation of integrated enhanced service offerings were having some sort of inhibitive effect upon the ESP industry, surely that effect would be demonstrated in data concerning the overall health and growth rate of that industry. However, as shown conclusively in the following section, there has simply been no such inhibitive effect. In fact, data show that precisely the opposite has occurred, proving that there is no BOC discrimination under FCC nonstructural safeguards.

**III. THE ENHANCED SERVICES MARKET IS VIGOROUSLY COMPETITIVE UNDER THE EXISTING BOC ONA PLANS AS IMPLEMENTED TO DATE.**

By all accounts, on-line information services are highly competitive and exhibit continued strong growth. There is no evidence that would suggest a slow-down or dampening effect on the market since implementation of the Commission's existing nonstructural safeguards in 1992. To the contrary, market growth has remained vigorous, and the number of providers and the range of services has expanded by leaps and bounds. Both businesses and, increasingly, consumers use enhanced voice and data services, which range in price from a few cents for traditional consumer on-line services to hundreds of dollars for on-line legal information for a single on-line session. Providers are just as diverse as the

services they offer, from small local service bureaus to very large carriers. There is no evidence or support whatever for claims that the current nonstructural safeguards or the current level of BOC unbundling under ONA are impeding the growth of enhanced service competition in any way.

To the contrary, a number of different sources all confirm the inescapable conclusion that enhanced services are fully competitive and growing rapidly. For example, one source estimates total U.S. telecommunications services industry growth of 7.7% for 1994, with value-added network and information services growth twice as fast at 15%.<sup>14</sup>

The enhanced services market consists of a number of diverse subsegments with many large, well-established companies competing head-on for customers. A study published in April 1994 by Insight defines enhanced voice and data services to include: on-line information services, financial transactional services, enhanced facsimile, interactive voice response (IVR) services and audiotex, public voice and electronic-mail services, electronic data interchange (EDI), and value-added networks (VANs). This study analyzes industry trends and predicts enhanced services industry and segment growth. Unadjusted total market revenue is estimated at approximately \$19.1 billion in 1994; adjusted for the

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<sup>14</sup> U.S. Industrial Outlook 1994 at 29-1 (U.S. Government printing Office) (U.S. Industrial Outlook 1994).

overlap of market segments the total drops to \$17.1 billion.<sup>15</sup> This represents growth of approximately 15% in 1994. Over the next five years, this market is expected to more than double to \$41.7 million unadjusted or \$36 billion adjusted, reflecting continued strong growth of about 17% a year.<sup>16</sup> This vigorous growth is the result of today's globalization and decentralization of business, which makes enhanced services increasingly important to corporations as they improve communications within corporations, and between corporations and their suppliers and customers. As a result, many of the enhanced services submarkets can expect continued strong growth throughout the remainder of this decade, without the need for any changes to the Commission's nonstructural BOC safeguards or any further BOC unbundling. As clearly demonstrated by the enormous growth, expected continued healthy growth, and the financial strength of the information/enhanced services companies, this industry is in no way being harmed as a result of the BOC non-structural safeguards.

#### On-line Information Services

On-line information services comprise about one-third of the enhanced services market with \$6.29 billion in estimated revenue in 1994 and overall annual growth of 7.4% through 1999; annual growth of 31% is expected in the consumer subsegment of on-

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<sup>15</sup> Simply taking the sum of all the market segments to derive total enhanced service revenues overstates the market by about 10%. Insight, p. 86.

<sup>16</sup> Id., p.85, Table V-1.

line information services.<sup>17</sup> This significant growth is fueled by the increased use and importance of computers and indicates that a mass market is developing for on-line consumer information services. Consumers are increasingly exposed to information about the Electronic Frontier and are becoming increasingly familiar with its applications. Time Magazine, in its Spring 1995 Special Issue, dedicated to "Cyberspace", reports that a "Nexis search of newspapers, magazines and television transcripts turned up 1,205 mentions of cyber in the month of January, up from 464 the previous January and 167 in January 1993."<sup>18</sup> This developing mass market is confirmed by one report that consumer-oriented on-line services saw their biggest growth in several years during the fourth quarter of 1993 with an unprecedented 18.4% quarterly increase, bringing the 1993 year-end on-line audience to 4.59 million customers, up 31% from the 1992 year-end tally of 3.5 million.<sup>19</sup> According to this report, the four biggest consumer-oriented on-line operators (America On-line, CompuServe, GENie, and Prodigy) account for 80% of the on-line user base. A recent newcomer, computer giant Apple Computer, launched eWorld in the spring of 1994 and estimates

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<sup>17</sup> Insight, p. 85, Table V-1.

<sup>18</sup> Philip Elmer-DeWitt, "Welcome to Cyberspace," Time Magazine, Special Issue, Spring 1995, p. 6 (Time Magazine).

<sup>19</sup> Gary H. Arlen, "On-Line Audience Climbs to 4.59 Million; Revenues Could Top \$1 Billion in '94," Information & Interactive Services Report, BRP Publications, Vol. 15, No. 2, January 28, 1994.

potential industry revenues at \$20 billion by 1997.<sup>20</sup> By one account, an estimated 75% of consumer on-line traffic is carried over Value-Added Networks (VANs).<sup>21</sup>

Customer-oriented on-line services are characterized by high churn rates as customers try different on-line services. One source of subscriber levels is the Information & Interactive Services Report's (IISR's) quarterly Boxscore of selected on-line systems; data are sought from all system operators.<sup>22</sup> A comparison of April 1994 and October 1994 data shows, for example, that America On-line has experienced tremendous growth. Reported in January 1994 to have surpassed GENie for the first time, by April 1994, America On-line reported 700,000 subscribers while GENie reported only 400,000; by October 1994, America On-line had grown to 1,000,000 subscribers, while GENie reported only 100,000 subscribers. CompuServe, the largest provider, grew its subscriber base from 1,800,000 in April 1994 to 2,250,000 in October 1994. Prodigy reported 1,200,000 homes subscribing in both issues. The IISR's October Boxscore of selected providers showed nine new consumer-oriented services started in 1994, and six in 1993. Some of the new players, reported in January 1994 to have announced plans for new on-line services, are telephone and computer giants

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<sup>20</sup> As reported in "Apple seeks major slice of on-line pie -- Company enters high-stakes world of information services," San Diego Union-Tribune, January 4, 1994, p. C-1.

<sup>21</sup> Insight, p. 95.

<sup>22</sup> Information & Interactive Services Report, Vol. 15, No. 8, April 22, 1994, pp. 16-17 and Vol. 15, No. 20, October 7, 1994, pp. 16-17.

AT&T (announcing a consumer electronic mail service called "Personallink"), IBM (reportedly working on a consumer on-line service dubbed "Intouch"), and Microsoft.<sup>23</sup> Computer and software companies are attracted to this market because they expect higher profit margins from providing services than from selling hardware.

BOCs are conspicuously absent from the Boxscore list, as well as from other listings of on-line service providers. Clearly, the BOCs are only tiny players in the on-line information services market.

The primary factor contributing to the slower growth predicted by Insight for total on-line services is the emergence of CD-ROMs as a more economical delivery medium for certain information where timeliness is not critical<sup>24</sup> (not any need for further BOC unbundling). The growth in CD-ROM drives and databases has been phenomenal and will have a dampening impact on many on-line information services. On-line services for very time-sensitive information, such as financial and travel information, will be more insulated from CD-ROM's competitive threat.

Following is a list of seventeen on-line service providers as reported by Insight, including a brief description of the major types of services they offer.<sup>25</sup>

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<sup>23</sup> "Apple seeks major slice of on-line pie -- Company enters high-stakes world of information services," San Diego Union-Tribune, January 4, 1994, p. C-1.

<sup>24</sup> Insight, p. 87.

<sup>25</sup> Id., pp. 54-65.

- America On-line - offers a variety of features including e-mail, news, weather, sports, stock quotes, public-domain software, computing support, and on-line education services.
- Automatic Data Processing Inc. - supplies brokerages and financial companies with financial data over its FS Partner workstations with over 80,000 terminals at more than 6,500 sites.
- CompuServe - with over 1.5 million users offers a variety of features, including e-mail, news, sports, financial, weather, access to databases, home shopping, movie review, games and travel, and a number of premium services.
- Cox Newspapers - joint venture with Prodigy to provide newspapers on-line.
- Dialog Information Services - offers over 450 databases to more than 155,000 subscribers covering journals and publications, company financials, stock quotes and on-line purchase and sale of many stocks, and census information. Owned by Knight-Ridder.
- Disclosure Inc. - provides access to SEC filings and other information useful in analyzing corporate and industry performance.
- Dow Jones News/Retrieval - offers on-line information packages for the business user, on-line filings by regulatory bodies, and other services such as travel, weather, etc.
- Dun & Bradstreet Information Services - provides a variety of business services that provide information on businesses, including payment analysis reports, listings and profiles of companies, and financial records.
- Eaasy Sabre - provides access to American Airlines' reservation system.
- GEIS - is a VAN which offers information and database search capabilities tailored to various industries, including features such as electronic clipping services.
- Information America - offers data from public records, including real property, bankruptcy, SEC filings, partnerships, county and court records. Offers information on 111 million individuals in 92 million households.
- Mead Data Central - provides LEXIS (legal) and NEXIS (business) with more than 4,600 databases to over 350,000 subscribers. NEXIS offers full-text versions of over 1,000 periodicals and abstracts of more than 2,000 other publications, business news, stock quotes, newswires, patent and trademark, SEC filings, etc.
- Newsnet - positioned as the on-line news service for current and frequently updated information with access to over 600 newsletters, newswires, and newspaper business sections. Also acts as a gateway to other on-line services.

- Prodigy - consumer-oriented on-line service offering e-mail, financial, shopping, news, games, entertainment, and Eaasy Sabre travel system. Joint venture of IBM and Sears, serving 2 million subscribers. Offers Yellow Pages on-line for NYNEX.
- Reuters America Inc. - provides financial market information including forecasts and analysis.
- TRW - provides credit information on 170 million consumers and business credit information; also statistical modeling capabilities.
- West Publishing - publishes legal books and offers Westlaw, a legal research service with over 4,000 databases, and access to other non-legal on-line database services.

Clearly, the currently available forms of access to BOC networks for design and delivery of such enhanced services to end users have proven quite adequate to promote explosive growth in this industry.

#### Financial Transactional Services

The second largest enhanced services segment, with about 25.2% of the market or \$4.8 billion in revenues, consists of financial transactional services that transmit and process transactions from Automated Teller Machines (ATMs), credit and debit card purchases, and clearinghouse functions of banks.<sup>26</sup>

Insight estimates this subsegment will grow by 10.9% a year over the five year forecast period, driven by automated clearinghouse functions (20% growth) and debit card transactions (52% growth).<sup>27</sup>

Insight lists six transactional service providers:<sup>28</sup>

- BT Tymnet - provides point-of-sale programs for the financial and retail industries and processes over 300

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<sup>26</sup> Id., p. 85, Table V-1.

<sup>27</sup> Id.

<sup>28</sup> Id., pp. 65-67.

million transactions annually for more than 150,000 merchant locations and 600 banking institutions;

- Deluxe Data - provides ATM software and service modules;
- Internet Inc. - a consortium of 131 member banks, it runs the MOST ATM network (not affiliated with the global Internet);
- MasterCard International - a remote banking and electronic bill-paying service;
- Sprint - offers nationwide 950, 800, and local-number access to its TranXact transaction-processing network;
- Sprint/United Telephone - electronic bill-payment and home shopping service.

#### Value-Added Networks (VANS)

VANS allow communication among different hardware and software configurations through various conversion functions they offer. VANS also deliver enhanced services and carry transactions for processing companies. There are several information sources available that analyze the VAN market. These sources consistently expect continued strong growth for VAN providers. For example, Insight estimates VAN domestic revenues of \$2.2 billion for 1994 with expected compound annual growth of 15% through 1999.<sup>29</sup> According to these estimates, VANS represent approximately 11.5% of the enhanced services market.

Another major source of market information is Northern Business Information (NBI), estimating VAN domestic revenues of \$2.1 billion for 1993 and total VAN revenues of \$3.6 billion.<sup>30</sup> The top six firms account for 75% of VAN domestic revenues and 90%

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<sup>29</sup> Id., p. 85, Table V-1.

<sup>30</sup> Northern Business Information (NBI), VAN Markets: 1994 Edition, September 1994, p. 8, Exhibit 1-7. Northern Business Information annually publishes Dossier: U.S. Telecom Service Markets, which contains the VAN market study (NBI VAN Markets).

of VAN international revenues.<sup>31</sup> The total VAN market is dominated by network services (40.7%) and enhanced services (43.3%), while private network/other services account for 16% of the market.<sup>32</sup> Growth in the VAN Market was led by enhanced services which grew significantly by 18% in 1993, while basic networking grew only slightly by 2%.<sup>33</sup> Strong growth is expected to continue with NBI forecasting the total VAN market to grow by 13% through 1998.<sup>34</sup>

Table 1 shows VAN domestic and international revenues by Company for 1992 and 1993.<sup>35</sup>

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<sup>31</sup> The top six firms for VAN domestic revenues include GEIS, Advantis (IBM/Sears), BT/MCI, SprintNet, CompuServe, and INFONET. The top six firms for VAN international revenues include BT/MCI, AT&T, GEIS, Advantis, SprintNet, and INFONET. NBI VAN Markets, p. 8, Exhibit 1-7.

<sup>32</sup> NBI VAN Markets, p. 1.

<sup>33</sup> Id.

<sup>34</sup> Id., p. 10 of Attachment to Section 3.

<sup>35</sup> 1993 revenues from NBI, VAN Markets: 1994 Edition, p. 8, Exhibit 1-7; 1992 revenues from NBI, VAN Markets: 1993 Edition, p. 15, Exhibit 1-10.

Table 1						
1992 and 1993 VAN Domestic and International Revenues by						
Company - \$ Millions						
	Domestic Revenues		International Revenues		Total Revenues	
	1992	1993	1992	1993	1992	1993
AT&T EasyLink	165.91	39.00	65.00	191.20	230.91	230.20
AT&T Istel	NA	NA	225.00	111.30	225.00	111.30
CompuServe	214.13	240.23	12.00	25.00	226.31	265.23
INFONET	28.00	115.00	157.00	115.00	185.27	230.00
GEIS	286.96	366.00	286.96	244.00	573.91	610.00
Advantis	203.52	308.00	210.00	190.00	413.52	498.00
SprintNet	320.16	250.00	118.00	135.80	438.16	385.80
BT Tymnet/MCI	300.78	299.60	446.00	370.40	746.78	670.00
Other U.S. Carriers	418.35	500.05	115.70	118.49	534.05	618.54
Total	1,937.80	2,117.88	1,635.66	1,501.19	3,573.91	3,619.07

Interactive Voice Response and Audiotex

Another significant segment of the enhanced services market (10.2% share) is Interactive Voice Response (IVR) and

Audiotex, with combined revenues of \$1.95 billion in 1994 and annual growth of 30% estimated for the next five years.<sup>36</sup> This high growth is driven by the fact that IVR and Audiotex will continue to provide increasing amounts of information to the large percentage of the population that have no PCs and modems and, thus, have no access to on-line services. Insight lists four providers:<sup>37</sup>

- AT&T Co. - offers InfoWorx, a network-based IVR function;
- Call Interactive - handles large volumes of interactive calls (polls, contests, games, and promotions, etc.) for corporations, broadcast and cable TV networks, and governments;
- Database Network Services - franchises the InforMail service bureau, which provides a number of services to businesses, including fax and voice mail services;
- Sprint Telemedia - offers voice-response technology and enhanced facsimile combined with call routing.

The remaining enhanced service market consists of Public Voice Mail, Public E-mail, Electronic Data Interchange, and Enhanced Fax. Although these services collectively represent only about 20% of the market, they are expected to grow vigorously with annual growth rates ranging from 25% to 35% through 1999, except for enhanced fax.<sup>38</sup>

#### Public Voice Mail

Public Voice Mail (1994 revenues of \$1.4 billion), also referred to herein as "Voice Messaging Service" or "VMS," represents about 7% of the total enhanced services market and is

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<sup>36</sup> Insight, p. 85, Table V-1.

<sup>37</sup> Id., pp. 70-72.

<sup>38</sup> Id., p. 85, Table V-1.