

ATTACHMENT D

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Section 272(f)(1) Sunset of the
BOC Separate Affiliate and
Related Requirements

2000 Biennial Regulatory Review
Separate Affiliate Requirements of
Section 64.1903 of the Commission's
Rules

WC Docket No. 02-112

CC Docket No. 00-175

Ex Parte Declaration

of

LEE L. SELWYN

on behalf of

AT&T Corp.

June 8, 2004

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Attachments

- 1 Regression Output – Analysis of Verizon and SBC Long Distance market share (by state) by length of time since 271 approval

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1 **Introduction and Summary**

2

3 Lee L. Selwyn, of lawful age, declares and says as follows:

4

5 1. My name is Lee L. Selwyn; I am President of Economics and Technology, Inc. ("ETI"),
6 Two Center Plaza, Suite 400, Boston, Massachusetts 02108. I submitted a Declaration in this
7 matter on June 30, 2003, and a Reply Declaration on July 28, 2003, on behalf of AT&T Corp.
8 ("AT&T").

9

10 2. This *ex parte* declaration describes the service-by-service imputation requirements that
11 should be implemented to prevent cross-subsidization when BOCs provide in-region long

1 distance services on an integrated basis – irrespective of whether BOC-provided long distance is
2 regulated as dominant or nondominant. Sample text for an imputation and cost allocation rule
3 that is consistent with these requirements is provided in Appendix 1. My comments herein focus
4 upon two key aspects of an imputation requirement.

5
6 *First*, I explain why BOC integrated long distance services should be required to impute
7 BOC local service functionality and services at their *fair market value*. In an ideal world, all
8 access and tariff services required by nonaffiliated IXCs as inputs to their own long distance
9 offerings would be priced based upon forward looking economic cost, and all *non-tariff*
10 functionality and services that are being used by the BOCs when providing long distance
11 services on an integrated basis would be offered and available to nonaffiliated IXCs on a
12 nondiscriminatory basis *and* at rates based upon forward-looking economic cost. Since
13 none of these conditions apply, the use of a fair market value imputation standard will at
14 least assure that the BOCs derive no competitive advantages as a consequence of their
15 integrated provisioning of monopoly local and competitive long distance services that are
16 not also available to competing nonaffiliated carriers. BOCs are already required by section
17 272(e)(3) (which does not sunset along with other provisions of section 272) to comply with
18 a market value imputation standard with respect to access services (where “fair market
19 value” is, for this purpose, defined as the tariff rate). The same imputation standard should
20 also be applied to non-access tariff services and to any non-tariff BOC local service
21 functionality and services that are used by BOCs in providing long distance services on an
22 integrated basis. Anticompetitive cross-subsidization of integrated BOC long distance

1 services can be prevented only if those services are required to impute BOC local service
2 functionality and services at fair market value.

3
4 *Second*, I explain why adequate safeguards to prevent cross-subsidization require imputation
5 to be satisfied on *service by service* basis, and I outline the changes in the Commission's
6 Part 64 and cost allocation rules and other changes that are necessary to achieve this result.

7
8 *Finally*, I emphasize that dominant carrier regulation is also required of BOC long distance
9 services provided on an integrated basis, to ensure that BOC long distance prices are fully
10 supported by all imputed and actual costs.

11
12 **Integration of BOC in-region long distance operations with BOC ILEC entities requires**
13 **improved imputation safeguards supported by dominant carrier regulation.**
14

15 3. In an ideal world, rival firms in competitive markets should have equal and equivalent
16 access to all of the principal inputs to the production of their respective products and services; if
17 one such firm happens to wield monopoly control over one or more of these essential inputs, it
18 would have the ability to limit entry and competition in its downstream product market.
19 Sections 251 and 252 of the *Telecommunications Act of 1996* ("1996 Act") and the FCC's
20 implementation thereof seek to address this condition, specifically with respect to *local* telecom-
21 munications services, by requiring that CLECs be afforded nondiscriminatory access to ILEC
22 network resources at prices based upon forward-looking economic cost. In the case of *long*
23 *distance* services, if all tariff services required by nonaffiliated IXCs as inputs to their own long

1 distance offerings were priced based upon forward looking economic cost, and if all *non-tariff*
2 functionality and services that are being used by the BOCs when providing long distance
3 services on an integrated basis were also being offered and available to nonaffiliated IXC's on a
4 nondiscriminatory basis *and* at prices based upon forward looking economic cost, the BOCs'
5 opportunity and ability to engage in anticompetitive conduct would be severely constrained.
6 However, none of these conditions apply in the real world. As such, the use of a fair market
7 value imputation standard – codified at sections 272(b)(5), 272(c), and 272(e)(3) and as reflected
8 in the Commission's affiliate transaction rules (47 CFR §32.27) – were all aimed at assuring that
9 the BOCs derived no competitive advantages as a consequence of their partially integrated
10 provisioning of monopoly local and competitive long distance services that were not also
11 available to competing nonaffiliated carriers.

12

13 4. However, once the BOCs fully integrate their local and long distance services, Secs.
14 272(b)(5) and 272(c) will no longer apply. As a result, the costs associated with providing (the
15 now integrated) interLATA services will become more difficult to isolate and to quantify, and
16 thus become more prone to abuse. Moreover, if BOC-provided interLATA services are
17 classified as *non-dominant* such that the BOCs will not be required to file tariffs once the
18 separate interLATA affiliates are eliminated, there will be no proactive mechanism, other than
19 through an after-the-fact audit, to assure that the prices being charged for (the integrated)
20 interLATA services adequately compensate the BOC for the costs it incurs in producing them.
21 Although the Commission has decided to allow the Section 272 separate affiliate requirement to

1 sunset even though the BOC retains market power in the local market,¹ nothing in that decision
2 entails surrendering the Commission's authority to implement and to enforce stringent safe-
3 guards pertaining to the assignment of direct costs, the allocation of joint costs, and the sharing
4 of common overhead costs, as between local and long distance services.

5

6 5. If a BOC's access charges to competing IXCs are significantly greater than the economic
7 cost of comparable access functions that the BOC realizes *itself*, the BOC would have the ability
8 to impose a price squeeze upon its nonaffiliated rivals by setting its retail end user prices at
9 levels sufficient only to recover its own economic costs, while forcing competing providers to
10 incur considerably higher out-of-pocket access charges. Imputation of both tariff access charges
11 that an IXC would pay, and imputation of the costs that an IXC would incur to acquire (on a
12 stand-alone, i.e., non-integrated basis) any non-tariff services being provided by the BOC for the
13 benefit of its (affiliated or integrated) long distance business, can mitigate the potential for such
14 price squeezes *but only to the extent that the imputation requirement is properly specified and*
15 *effectively enforced.*

16

1. *AT&T Petition for Extension Of Section 272 Obligations Of Southwestern Bell Telephone Co. In The States Of Kansas and Oklahoma*, WC Docket No. 02-112, at 7-8 (Dec. 8, 2003) (SWBT market share in Oklahoma was 89% and in Kansas 83% at the end of 2002, and SBC told investors that in the second and third quarters of 2003 it had significantly *reversed* its access line losses); *AT&T Petition for Extension Of Section 272 Obligations Of Verizon In The State Of Massachusetts*, WC Docket No. 02-112, at 7-8 (Feb. 19, 2004) (Verizon market share in Massachusetts was 81% as of the end of June, 2003 and Verizon, in its January 29, 2004 investor briefing, reported that in the most recent two quarters it has *reversed* the rate of UNE-P net additions).

1 6. The BOCs contend that integrated operation enables them to produce local and long
2 distance services at a lower combined cost than would prevail under Sec. 272 structural
3 separation.² The imposition of strict imputation and cost allocation requirements would not
4 require that any of these economies of scope be sacrificed, but would help to assure that those
5 gains from integration are properly allocated and inure to both segments of their (integrated)
6 operations in a manner that does not afford an undue or unique competitive advantage to the
7 (competitive) long distance business. The entirety of all potential efficiencies would be realized,
8 but such gains would be apportioned in a fair and competitively neutral manner. Conversely,
9 conferring such integration benefits to the long distance business in a disproportionately and/or
10 discriminatory manner would constitute a cross-subsidization of long distance by local.

11

12 7. The best – and economically efficient – means for addressing this problem would be to
13 require that access charges and the prices of any non-tariffed services being provided to the
14 BOC’s long distance business unit (whether separated or integrated) be made available to non-
15 affiliated carriers at prices set at forward-looking economic cost. IXCs would then confront the
16 same costs for any tariff or non-tariff services they purchased from a BOC as the BOC itself
17 would confront. If the BOC elected to, in effect, “piggy-back” its long distance services onto its
18 core local services by imposing upon the former only the additional costs (over and above the
19 core services baseline), it would be required to offer those same “piggy-back” prices to non-

2. See, e.g., *Section 272(b)(1)’s “Operate Independently” Requirements for Section 272 Affiliates*, WC Docket 03-228, Comments of the Verizon Telephone and Long Distance Companies; Comments of SBC, Comments of BellSouth, filed December 10, 2003.

1 affiliated carriers. If access rates and any non-tariff LEC services used to provide BOC long
2 distance services were made available to non-affiliated carriers at prices set at forward looking
3 economic cost, cross-subsidization would be present only where the actual or effective intra-
4 corporate transfer price did not cover forward looking economic cost – or where no transfer price
5 was even being charged at all. This is sometimes referred to as the “ratepayer indifference”
6 standard – i.e., as long as the customers of core monopoly services are made no worse off by the
7 existence of the transfer, no cross-subsidization is present.

8

9 8. Where, as in the present circumstance, prices being charged to nonaffiliated carriers for
10 access and for non-tariff services such as billing and collection are set well in excess of forward
11 looking economic cost– and where some BOC functionality, such as joint marketing, is not even
12 available to nonaffiliated firms – a more comprehensive definition of “cross-subsidization”
13 becomes necessary. Generally, “cross-subsidization” occurs when telecommunications services
14 that are not subject to regulation by the Commission are priced below cost *either* (a) by using
15 revenues or profits being derived from services that are subject to the Commission’s jurisdiction
16 or that of another regulatory agency, or (b) by affording the deregulated or nonregulated services
17 access to assets, resources, facilities and functions of the integrated, regulated firm without
18 bearing a fair share of their costs, or when a provider's deregulated services derive benefits from
19 the regulated operations without the regulated operations receiving just and reasonable compen-
20 sation from the deregulated operations for the benefits derived. The Commission should adopt
21 this definition of cross-subsidization and should implement a cost allocation and imputation

1 standard that ensures that long distance prices reflect the fair value of the functionality provided
2 from the BOC.³

3

4 **Section 272 (e)(3) already sets the proper imputation standard for access.**

5

6 9. Where the BOC operates its in-region long distance business out of a separate affiliate,
7 the 1996 Act imposes two specific sets of requirements aimed precisely at achieving the out-
8 come described above – imputation of the full value of services undertaken on behalf of long
9 distance operations. Although the RBOC Sec. 272(a) long distance subsidiaries were envisioned
10 as being structurally separated from the BOC ILEC entities, they have nevertheless been
11 permitted to make extensive use of their affiliated BOCs’ tariffed and non-tariffed services.⁴
12 Section 272(e)(3) requires that the full access charges be imputed into and used to establish a
13 price floor for the BOC’s long distance services. For other (non-access) tariff services, as well
14 as for many (but not all) non-tariff services, Sec. 272(c) requires the BOC to make these

3. The full value of services undertaken by a BOC on behalf of its long distance operations should correspondingly be imputed as a revenue to be credited against the cost of providing the BOC’s regulated monopoly local exchange and access services.

4. See, e.g. affiliate agreements posted at:
<http://www.verizonld.com/regnotices/index.cfm?OrgID=1>;
http://bellsouthcorp.com/policy/transactions/?PROACTIVE_ID=cececececec6cecafc5cecfcfcf5cececbc9c7c9cbc6c6c6c5cf;
<http://www.qwest.com/about/policy/docs/QwestLD/overview.html>; <http://www.sbc.com/gen/public-affairs?pid=3078>

1 available to non-affiliated firms on the same basis as they are offered to its affiliate, and Section
2 272(b)(5) requires that the transfer price for such services be set at arm's length.

3

4 10. *Imputation of access charges and other tariffed services.* Sec. 272(e)(3), which remains
5 in full force and effect even after the separate affiliate requirement has been sunset, requires that
6 “a Bell operating company ... shall charge the affiliate described in subsection (a), or impute to
7 itself (if using the access for its provision of its own services), an amount for access to its tele-
8 phone exchange service and exchange access that is no less than the amount charged to any
9 unaffiliated interexchange carriers for such service.” Access charges applicable to interexchange
10 carriers remain set well in excess of cost – perhaps by a factor of at least ten times. By requiring
11 that the *price*, not the *cost*, of access be imputed into the BOC's cost of providing retail long
12 distance service, the Act places a BOC in the same position as a nonaffiliated IXC with respect
13 to the cost of obtaining access to the BOC's local customers.

14

15 11. The separated Sec. 272 affiliate is required to purchase and to utilize access and other
16 “telephone exchange services” in exactly the same way as any nonaffiliated IXC – i.e., to
17 purchase or provide dedicated transport to its Point of Presence (“POP”) where the access
18 connection is accomplished at a BOC end office, or to pay for common transport and tandem
19 switching where the access connection occurs at a BOC access tandem. The affiliate is also
20 required to pay for end office switching and for other miscellaneous access service rate elements,

1 as required. The affiliate must also purchase and pay for any other BOC telecommunications
2 services at full tariff rates. However, once integrated with the BOC, the BOC's interLATA long
3 distance services may be reconfigured so as to "ride" the BOC's network along with other BOC
4 local and intraLATA traffic *rather than to utilize discrete access and other telephone exchange*
5 *services per se*. Even where such reconfigurations produce efficiency gains, gains directly
6 attributable to integrated operations, *the BOC is still required by Sec. 272(e)(3) to impute into its*
7 *interLATA services the same access charges that it would have paid as a separate affiliate and*
8 *that its nonaffiliated competitors will continue to pay*, irrespective of the actual network facilities
9 arrangements that are being utilized. The elimination of the separate affiliate requirement may
10 enable the integrated local/long distance carrier to reconfigure its network and routing so as to
11 produce local and long distance services at a lower *combined* cost than would have been possible
12 under structural separation. In that event, Sec. 272(e)(3) operates to ensure that *all of these gains*
13 *from integrated operations inure to the benefit of the BOC's local services*. In addition to
14 furnishing access services to the separate Sec. 272 affiliate, the BOC also provides the affiliate
15 with a variety of *non-access* services, including joint marketing, customer service, billing and
16 collection, and various corporate overhead and management functions, such as human resources,
17 payroll, legal, accounting, procurement, and overall corporate governance. In its order issued
18 March 17, 2004, the Commission now also permits the BOC to provide the affiliate with a

1 variety of operations, installation and maintenance (“OI&M”) functions as well.⁵ The ability of
2 the affiliate to obtain access to BOC facilities and services enables the parent RBOC to realize
3 some, albeit less than all, of the potential gains from full integration.

4

5 12. Transactions between the BOC and its Section 272 affiliate with respect to non-access
6 tariff services and other non-tariff functions, resources and services are governed by Sec.
7 272(b)(5), Sec. 272(c), and by the Commission’s affiliate transaction rules, 47 C.F.R. §32.27.
8 These statutes and regulations operate to create a parallel transfer pricing and imputation
9 arrangement with respect to *non-access* transfers as applies in the case of access. Section 272(b)
10 requires that *all* transactions between the BOC and the Sec. 272 affiliate shall be conducted “on
11 an arm's length basis with any such transactions reduced to writing and available for public
12 inspection.” Sec. 272(c) requires that “In its dealings with its affiliate described in subsection
13 (a), a Bell operating company (1) may not discriminate between that company or affiliate and
14 any other entity in the provision or procurement of goods, services, facilities, and information, or
15 in the establishment of standards; and (2) shall account for all transactions with an affiliate
16 described in subsection (a) in accordance with accounting principles designated or approved by
17 the Commission.” Those “accounting principles” are set out at 47 C.F.R. §32.27 and require,
18 generally, that where the ILEC provides assets or services to an unregulated affiliate, the transfer

5. Section 272(b)(1)’s “Operate Independently” Requirements for Section 272 Affiliates, WC Docket 03-228, Report and Order, FCC 04-54, March 17, 2004.

1 price be set at the greater of fully distributed cost or fair market value, and that where an
2 unregulated affiliate furnishes services to the ILEC, such transfers be made at the *lesser* of fully
3 distributed cost or fair market value. The *effect* of these requirements is to accomplish with
4 respect to *non-access* transfers the same *economic* result as is accomplished through the
5 “imputation of full access rate” requirement – *viz.*, to facilitate realization of integration
6 efficiencies while assuring that the gains from such integration inure to benefit of the LEC’s
7 regulated services.

8

9 13. Prior to the sunset of the Section 272(b)(5) "arm's length" requirement, all costs of
10 RBOC provision of interLATA services were booked as expenses reflected on the interLATA
11 affiliate's books, facilitating the determination of a price floor for interLATA services and
12 further assuring that the BOC was being compensated for services being furnished by it to the
13 Sec. 272 affiliate. Thus, in addition to making costs transparent, Section 272(b)(5) served to
14 ensure that the benefits of economies of scope that are available to a BOC providing support
15 functions to its affiliate would remain with the BOC and inure to the benefit of the BOC’s
16 monopoly services. Since most of the relevant economies of scope stem directly from a BOC’s
17 legacy local service monopoly, allowing a BOC to pass those savings on to its affiliate com-
18 peting in an adjacent, and fully competitive, market would provide the affiliate with an unfair
19 cost advantage, one that was not available to any nonaffiliated IXC, and operate to divert

1 revenues that are being generated through the use (by the affiliate) of the BOC's assets and other
2 resources over to the affiliate.

3

4 14. Although the Section 272(e)(3) access charge imputation requirement remains in full
5 force and effect even after the sunset of the Section 272(a) separate affiliate requirement, the
6 Section 272(b) transaction rules and the Section 272(c) nondiscrimination requirement are
7 included within the provisions that are subject to the sunset. Without an equivalent replacement
8 regulation, which the Commission has full authority to require under sections 201-205, 215, 218
9 and 220, the potential for a price squeeze and similar anticompetitive conduct on the part of the
10 (now integrated) BOC becomes even greater than before, because a key set of safeguards will
11 have been eliminated.

12

13 **The same imputation standard is required for non-access services and functions under**
14 **local/long distance integration.**

15

16 15. In order to ensure that LEC long distance pricing reflects just and reasonable costs for
17 joint functions provided in conjunction with local services, ILECs should be required to impute
18 into long distance prices charges for all joint functions and the joint use of ILEC assets or
19 resources that would satisfy the requirements of Sec. 272(e)(3) with respect to access and, for
20 non-access services and functions, would satisfy the Commission's affiliate transaction rules as
21 codified at 47 C.F.R. §32.27. Although the ILEC's local and long distance operations will be

1 integrated, the use of affiliate transaction rules as a basis for cost assignment will help to ensure
2 that the gains from integrated provision of access and non-access services and functions are
3 treated on an entirely equivalent and parallel basis, and are not used by the ILEC to afford itself
4 an undue competitive advantage or to discriminate against and thereby to disadvantage the
5 ILEC's long distance rivals.

6

7 16. Non-access functions and services fall into two distinct categories, each of which
8 requires separate treatment for imputation purposes:

9

10 (1) Functions for which the gain from integration is directly attributable to the BOC's
11 status as the legacy local service monopoly. Such functions include access to the
12 BOC's legacy local service customer base (joint marketing of local and long distance
13 services, OI&M, and billing and collection). Access services also fall into this
14 category, and the Sec. 272(e)(3) imputation requirement recognized and accommodates
15 this fact.

16

17 (2) Functions and services of a general nature, where the integration efficiency is more one
18 of scale than of scope, arising from the size of the BOC rather than from its incumbency
19 in the local telephone service market. Such functions would include human resources,
20 payroll, legal, accounting, procurement and purchasing, real estate, and overall
21 corporate governance.

22

1 17. Integration gains in category (1) are uniquely available to the incumbent LEC, whereas
2 integration gains in category (2) would be available to any multi-product firm of comparable
3 size. Different imputation requirements for each category are appropriate.

4
5 (1) For functions for which the gain from integration is directly attributable to the BOC's
6 status as the legacy local service monopoly, BOCs should be required to identify the
7 portion of a given activity or resource that jointly benefits its provision of local and
8 long distance service. For the purposes of pricing long distance services, the BOC
9 would be required to apply the following procedures for imputing charges to its long
10 distance operations:

11
12 (a) Where 47 C.F.R. §32.27(d) would permit the use of prevailing company price
13 (PCP) for services that meet the Commission's PCP requirements (i.e., where at
14 least 25% of such services are being furnished to nonaffiliated entities), the
15 prevailing company price(s) being charged to nonaffiliated entities would be
16 imputed. (Note that with the sunset of the Section 272(c) nondiscrimination rules,
17 the 0% threshold for services provided to Section 272 affiliates is no longer
18 appropriate.) An example of such PCP-qualifying joint costs would be billing and
19 collection services.

20
21 (b) Where a service or activity does not qualify for PCP, the greater of fair market
22 value/estimated fair market value or fully distributed cost would be imputed into

1 the price floor for long distance services. As noted in the *Accounting Safeguards*
2 *Order*, fair market value, should be determined by “requiring carriers to use
3 methods that are routinely used by the general business community.”⁶ These
4 methods can include best use, appraisals, catalogs listing similar items, competitive
5 bids, replacement cost of an asset, and net realizable value of an asset.

6
7 (2) For functions and services where the integration efficiency arises from scale rather than
8 from scope, costs should be allocated between local and long distance services on the
9 basis of fully-distributed costs. In this manner, gains from integration are ratably
10 shared across all of the BOC products and services that are being supported by these
11 various overhead functions.

12
13 The distinction between these two types of activities corresponds with the distinction between
14 “joint” vs. “common” costs that is widely recognized by economists and accountants.

15
16 18. Integration gains associated with joint production of monopoly and competitive services
17 should inure to the monopoly service, because such gains are uniquely available solely to the
18 monopoly service provider. By contrast, integration gains associated with common overhead

6. *Implementation of the Telecommunications Act of 1996: Accounting Safeguards Under the Telecommunications Act of 1996*, CC Docket No. 96-150, *Report and Order*, FCC 96-490, 11 FCC Rcd 17539, 17610 (1996), at para. 154.

1 functions are available to any firm of comparable size, and should thus be spread equitably
2 across all of the products and services that such common overhead functions support.

3

4 **Satisfaction of the imputation requirement, and establishment of price floors, must be done**
5 **on a service-by-service basis so as to minimize the potential for cross-subsidization and**
6 **other anticompetitive pricing conduct.**

7

8 19. As part of their “joint marketing” of local and long distance services, the BOCs and
9 their Sec. 272(a) long distance affiliates have been introducing service “bundles” that include
10 regulated basic local exchange access, local and intraLATA toll calling, discretionary (and
11 sometimes flexibly priced under state PUC tariffs) vertical features, and nonregulated services
12 such as long distance, voice mail, and wireless services furnished by one or more BOC affiliates.
13 Because the individual components of these “bundles” confront widely varying competitive
14 conditions, it is essential that an imputation test with respect to each *competitive service*
15 component of the bundle be applied separately for each such component. The potential for
16 similar cross-subsidization also exists with respect to services furnished on an *a la carte* basis if
17 the RBOC is allowed to satisfy imputation on an aggregate, rather than service-by-service.

18

19 20. Bundling of local and long distance services enables the BOC to exploit its market
20 power with respect to local dial tone into the adjacent long distance market. And although local
21 exchange access rates are, for the most part, still subject to regulation, BOCs have been afforded
22 considerable pricing flexibility and, in some cases, outright de-tariffing, of a number of

1 discretionary service elements that are built on the basic local dial tone platform. These service
2 elements fall into two principal categories:

3

4 (1) *Services and features that can be provided by the BOC only to customers who also take*
5 *basic dial tone service from the BOC.* Examples of such services include local (non-
6 toll) calling, switched access to/from long distance carrier services, certain vertical and
7 CLASS features, such as call waiting, caller ID, voice mail with call waiting and/or
8 caller ID, selective ringing, call forwarding (all varieties), and *69 call return.

9

10 (2) *Services and features that utilize the dial tone line platform and that can be provided by*
11 *the BOC, but which are also available from other sources, albeit sometimes in a more*
12 *cumbersome manner.* Examples include speed dialing, 3-way calling, voice mail
13 (without call waiting or caller ID), and conference calling, in addition to intraLATA
14 and interLATA calling.

15

16 Because services in category (1) cannot be obtained from a carrier other than the one that
17 provides the customer's basic local dial tone access line, they provide the BOC with greater
18 profit opportunity than for services in category (2). Since the BOCs continue to control the
19 overwhelming share of the local dial tone market, their pricing discretion with respect to any
20 services in this category that are not subject to price regulation is constrained principally by
21 demand elasticities. Services in category (2) confront competition from alternative sources,
22 limiting the BOCs' pricing opportunities to competitive market conditions.

1 21. If the BOCs were permitted to use profits obtained from services in category (1) to
2 cross-subsidize the competitive services in category (2), the result would be to undermine com-
3 petition in these otherwise competitive services. If a service bundle combining category (1) and
4 category (2) services were required only to satisfy an imputation test *in the aggregate* – i.e.,
5 across all of the components of the bundle combined – there would be no means for detecting,
6 let alone preventing, precisely this type of cross-subsidization.

7
8 22. It is for this reason that the price floor including imputation needs to be satisfied
9 individually for each of a BOC's various long distance services and pricing options so as to
10 preclude the possibility of revenues/profits from any noncompetitive *a la carte* services, or from
11 one or more noncompetitive components of a service bundle, being used to cross-subsidize *a la*
12 *carte* or bundled long distance services. Additionally, any bundle consisting of basic local
13 exchange (dial tone) service, local calling, vertical features, intraLATA and interLATA toll, and
14 any other components or features must be priced, in the aggregate, at a level sufficient to recover
15 the aggregate of all tariff prices of all tariff services (or their functional equivalents) included
16 within the bundle (e.g., local dial tone, local calling, vertical features) together with all other
17 imputed and directly-assigned costs applicable to the bundled offering. A service-by-service
18 imputation requirement puts the BOC in essentially the same economic condition as its non-
19 affiliated rivals. The BOC should be required to demonstrate, for each identifiable long distance
20 service offering or long distance component of a service bundle, as well as for the bundle as a
21 whole, that the revenues being derived therefrom exceed the sum of the access charges and

1 other tariff rates that it would have had to pay were it a separate, nonaffiliated entity *plus* the
2 imputed and actual non-tariff costs it incurs in providing the service or bundle at retail.

3

4 23. Where a service offering consists of a bundle of multiple services (such as local dial
5 tone, vertical features, and long distance) under a single, unified pricing plan, the effective
6 additional charge for the long distance component in the bundle (i.e., the difference between the
7 price of the bundle with long distance and the price of the bundle without it) should similarly
8 exceed the sum of imputed access charge (or other underlying services being furnished by the
9 BOC) plus the additional non-access costs. For example, Verizon New England offers
10 customers in Eastern Massachusetts a bundle of local service, vertical features and intraLATA
11 toll at a monthly rate of \$39.95, but also offers an otherwise comparable bundle, but without any
12 toll, for \$37.95. Hence, Verizon New England's retail price for *unlimited intraLATA toll* is only
13 \$2 a month. Similarly, Verizon New York offers a New York Metro LATA bundle including
14 unlimited local and intraLATA calling, plus an array of vertical features, for \$44.95, but also
15 offers the same bundle but without intraLATA calling for \$42.95, also implying a \$2 per month
16 price for unlimited intraLATA usage. It is this \$2 price for unlimited intraLATA toll calling,
17 and not the full price of the bundle, that should be required to satisfy the imputation requirement,
18 i.e., to exceed an imputed price floor based upon the average volume of intraLATA calling that
19 customers of this service present.

20

21 24. Individual services differ both with respect to costs and revenues. Carriers will
22 typically incur higher customer acquisition costs with respect to high-value services, such as flat-

1 rated bundles of local, long distance, Internet access, and perhaps even wireless, than they would
2 to acquire, for example, a by-the-call long distance customer. Other costs, such as the fixed
3 components of billing and collection and customer service functions, may be somewhat lower
4 for customers with high calling volumes or who take multiple services in a package or bundle.
5 On the revenue side, competition will work to narrow the potential operating margin. While
6 there is a general requirement that the price of a bundle of services be profitable relative to the
7 cost of the entire bundle, there is a special imputation requirement where a portion of the bundle
8 consists of monopoly BOC local services and service features that are integrally linked to the
9 basic dial tone platform. In such an event, a BOC must not be permitted to use revenues from
10 the highly profitable vertical features that are included in a service bundle to cross-subsidize the
11 long distance components of that bundle. For such purposes, the “price” of the long distance
12 component may be determined as the difference between the price of the entire bundle including
13 long distance and the price of an equivalent bundle or collection of services *except for long*
14 *distance*.

15

16 25. Carriers frequently offer *promotional pricing* as an inducement to attract new
17 customers. Such promotions may consist of free or discounted service for a limited number of
18 months and/or an up-front cash (or other in-kind) payment to the customer for signing up for the
19 service. The service-specific imputation requirement should apply to such offerings, to be
20 satisfied over the average service retention period (up to twelve months) or contractual term,
21 whichever is greater. For example, if a BOC offers a competitive long distance service for \$25
22 with the first month free and no installation charges, and the average retention period for the

1 service is twelve months, the effective monthly price for the service would be computed as
2 $(11 \times \$25) / 12 = \22.92 , which would need to exceed the imputed charges, *including installation*
3 *costs*, applicable to the service.
4

5 26. If the promotional offer is linked to a bundle that includes any category (2) components,
6 for imputation and price floor purposes the promotional discount must be applied solely with
7 respect to the additional charge for the category (2) component(s). For example, supposing that
8 a BOC offers a bundle consisting of local dial tone, unlimited local calling, and a collection of
9 vertical features for \$40 but without any promotion or discount, and also offers a similar bundle
10 but including unlimited intraLATA and interLATA calling for \$55 per month with the first
11 month free. The differential price of the intraLATA/interLATA calling feature is \$15 per month
12 (i.e., \$180/year), but the \$55 value of the “free” month must be applied solely with respect to this
13 intraLATA/interLATA component, bringing its effective price to \$125 per year, or \$10.42 per
14 month. It is this \$10.42 that must satisfy the imputation test with respect to access charges and
15 any non-tariff services that are associated with the long distance component of the bundle.

16

17 **The existing processes for allocating costs between an ILEC’s regulated and nonregulated**
18 **operations, as set forth at 47 CFR §64.901 are not sufficient to properly address the vast**
19 **amount of joint costs present in the integrated provision of regulated local and**
20 **nonregulated long distance services.**

21

22 27. Under the Commission’s current Part 64 allocation rules, revenue, expense and
23 investment accounts are analyzed for the purpose of separating these items as between regulated

1 and nonregulated services. However, once placed in the “nonregulated” column, no further
2 disaggregation, e.g., on a service-by-service basis, is required. As explained in my July 28, 2003
3 Reply Declaration appended to AT&T’s Reply Comments in this proceeding, competitive
4 services such as long distance should continue to be treated as non-regulated under Part 64 such
5 that these costs and associated revenues may be isolated from those applicable to regulated
6 monopoly services.⁷ However, the Part 64 allocations do not identify revenues and costs
7 associated with long distance services for the purposes of imputation. Since the costs and
8 revenues for nonregulated services are typically aggregated for the purposes of Part 64, revenues
9 and expenses associated with long distance products are mixed in with many other nonregulated
10 services provided by the carrier, such as inside wire maintenance and DSL. This aggregation of
11 products serves to conceal the costs and revenues specifically associated with long distance
12 products, and makes any long distance imputation test that might be based upon Part 64 alloca-
13 tions impossible. Part 64 should be modified to require that nonregulated costs and revenues be
14 allocated according to the modifications I have recommend here, and be maintained on a dis-
15 aggregate basis, by product line.

16

17 28. Part 64 and the various RBOC cost allocation manuals that purport to implement them
18 generally separate expenses and investments as between regulated and nonregulated services on
19 the basis of fully-distributed costs, with the specific allocations typically driven *not* by cost-
20 causation factors, but instead by arbitrary allocators based upon, for example, relative usage or

7. Selwyn (AT&T) Reply, filed July 28, 2003, at para. 57.

1 other simple metrics. An RBOC's motivation for a particular plant acquisition or upgrade may
2 be for the purpose of furnishing a nonregulated service, but once acquired or upgraded the plant
3 may be used jointly to furnish regulated and nonregulated services. In such an event, the costs
4 associated with such newly acquired or upgraded plant would then be apportioned between these
5 two categories in some manner than would bear no economically rational relationship with the
6 cost drivers themselves.

7

8 29. For example, a BOC might replace perfectly serviceable copper loop plant with fiber for
9 the sole and express purpose of providing nonregulated broadband services. If, once in place,
10 the new fiber optic facility is also used to provide plain old telephone service (POTS), then a
11 potentially large portion of its cost would, under Part 64, be allocated to POTS and away from
12 the nonregulated broadband service. If the nonregulated broadband services are then co-mingled
13 with nonregulated long distance services, the "profits" available from broadband (due to the
14 underallocation of costs to broadband) could then be used to cross-subsidize long distance. Part
15 64 is not, as presently constituted, an effective tool either for detecting or for preventing such
16 cross-subsidization.

17

18 30. Part 64 should be modified so as to specifically address this concern. Absent a showing
19 to the contrary, all BOC investments in plant, facilities or equipment that will be jointly used for
20 the benefit of regulated and nonregulated services within five years of the date of acquisition and
21 installation of that plant should be presumed to have been acquired primarily for the benefit of
22 the nonregulated services. Based upon this (rebuttable) presumption, any increase in net invest-

1 ment for the replacement assets in excess of the remaining net book cost of the plant being
2 replaced should be allocated to and imputed into the price floor applicable to the nonregulated
3 service.

4

5 **Enforcement of any imputation standard – including the imputation of access charges and**
6 **other tariff services as required by Sec. 272(e)(3) – requires dominant carrier treatment of**
7 **integrated BOC long distance services.**

8

9 31. As a practical matter, the statutory requirement for access charge imputation at Sec.
10 272(e)(3) could neither be monitored nor enforced – except perhaps long after-the-fact – if BOC
11 long distance services are afforded non-dominant status. Non-dominant treatment by the FCC of
12 BOC long distance services would work to exempt the BOCs from filing interstate tariffs for
13 their long distance, private line, and other services, without which there would be no mechanism
14 for the Commission to review, let alone enforce, the statutory imputation requirement. After-
15 the-fact enforcement would necessarily involve protracted delays, during which time the BOC
16 would be able to violate the statutory requirement (along with any other regulatory imputation
17 requirements that the Commission may impose, such as those discussed above) and in so doing
18 impose an unlawful price squeeze upon nonaffiliated IXC.

19

20 32. Rapidly increasing RBOC in-region long distance market shares are *in and of*
21 *themselves* fully sufficient to justify subjecting the BOCs to dominant carrier regulation, *even*
22 *where the RBOCs continue to operate their long distance business through a separate affiliate.*

1 Figure 1 below is a reproduction of a chart that was provided by Verizon at its January 29, 2004
2 quarterly securities analyst briefing to present its fourth quarter 2003 results. In this chart,
3 Verizon provides its retail long distance market shares of local consumer service customers,
4 *state-by-state*. Only four years after gaining Section 271 in-region authority in New York,
5 Verizon had amassed an impressive 61% share; after only three and a half years in
6 Massachusetts, Verizon's share had reached 52%. Verizon is not alone in its ability to gain
7 overwhelming market share through its ability to exploit its preexisting dominance of the local
8 service market. As shown in Figure 2, SBC announced that it had achieved a nearly 60% market
9 share in Texas only 39 months after entry, with similar trends in Kansas, Oklahoma, Missouri,
10 Arkansas and California.⁸ Using the data contained on these two charts, I constructed a linear
11 regression analysis for the former Bell Atlantic and NYNEX Verizon states (those that were
12 subject to Section 271) and the six SBC states included in Figure 3, with the RBOCs' retail share
13 in each state as the dependent variable and the months since long distance entry as the principal
14 explanatory variable (see Figure 3 below). Attachment 1 provides the regression results and the
15 source data used. The model revealed a highly significant relationship between the months since
16 entry and market share, with a *t*-statistic of 19.65, indicating statistical significance in excess of
17 99.9%. The explanatory power of the model was also quite high, as indicated by an R^2 of .93,
18 i.e., that time since entry explains 93% of the variation in achieved market share. The model

8. SBC Analyst Conference 2003, at slide 10, available at: http://www.shareholder.com/sbc/downloads/AnalystPres_nov03.pdf.

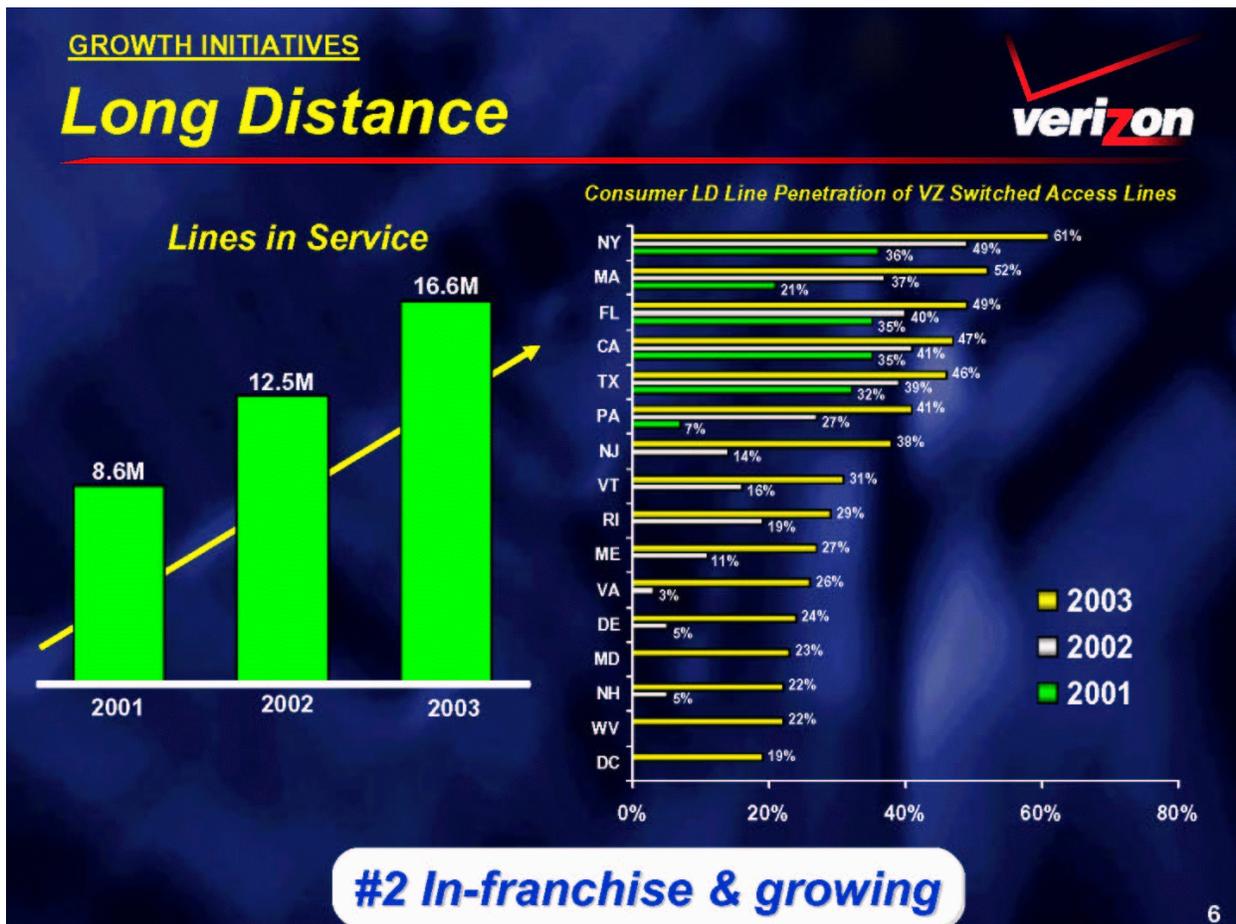


Figure 1. Verizon Long Distance Penetration.

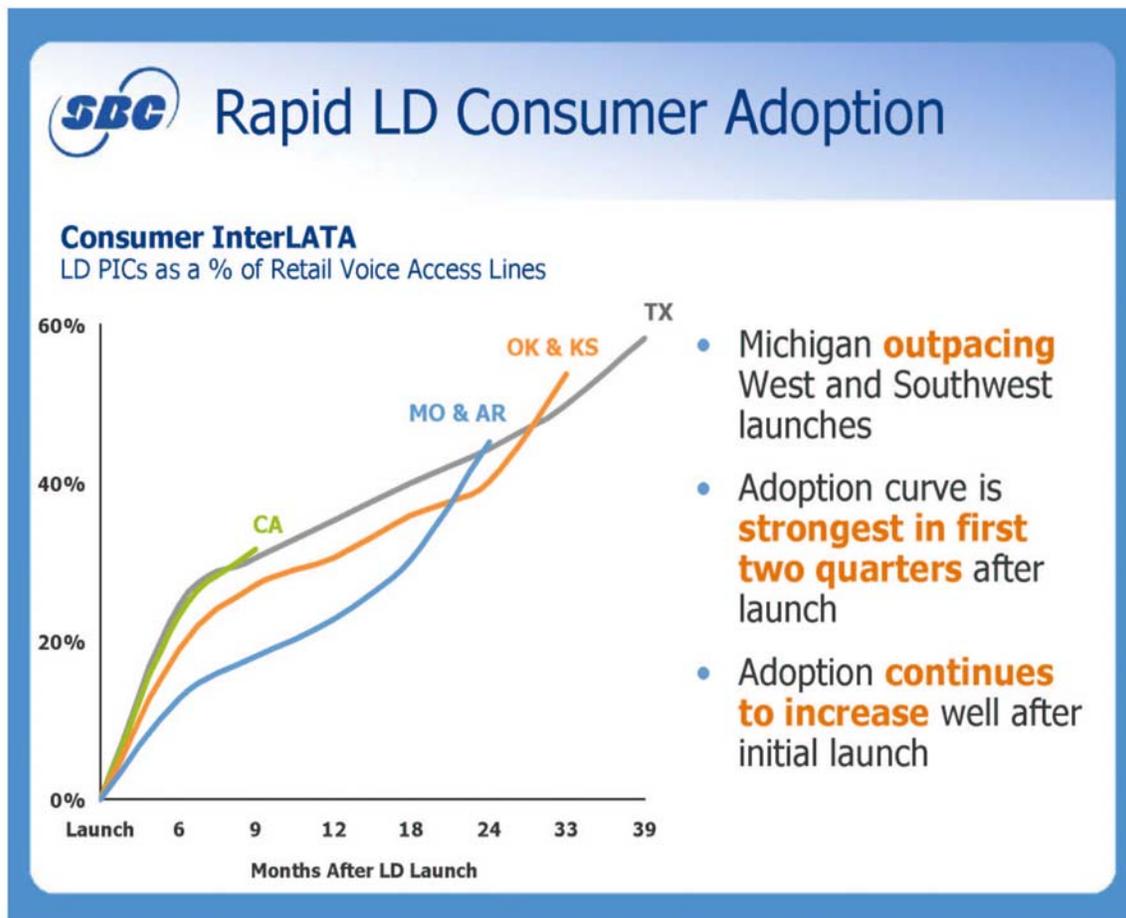


Figure 2. SBC Long Distance Shares

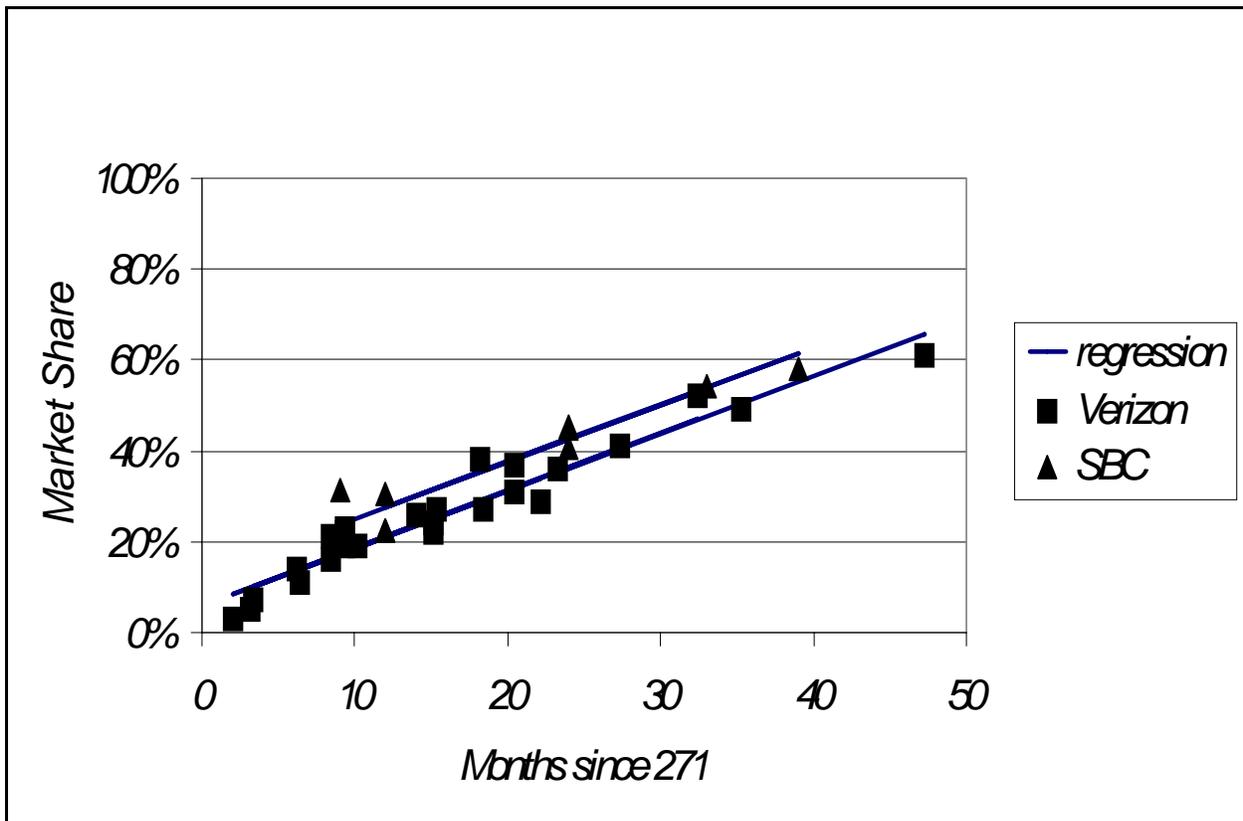


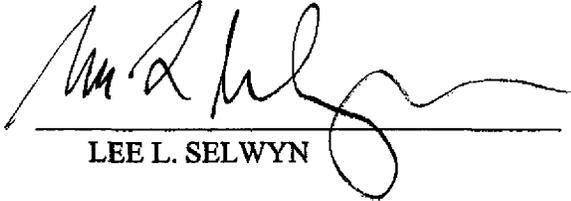
Figure 3. Regression output analysis of Verizon and SBC Long Distance market share (by stste) by length of time since 271 approval.

1 indicates that Verizon and SBC have been able consistently to acquire an additional 1.27%
2 market share per month since initial entry into a given jurisdiction. Even in the states with the
3 longest RBOC long distance presence, the rate of market share growth shows no sign of slowing.
4 Moreover, it appears that the RBOCs' rate of market share acquisition has actually improved as
5 they gained entry in successive states, suggesting that the companies are getting even better in
6 exploiting their legacy local service customer base as they gain additional experience in
7 marketing long distance service.⁹ These real-world market outcomes also demonstrate that the
8 separate affiliate and affiliate transactions requirements of Section 272 have certainly not
9 impaired the RBOCs' competitive effectiveness in capturing retail long distance market share.

9. I would note that in a Declaration I submitted on May 3, 2002 on behalf of AT&T in the Virginia State Corporation Commission's Section 271 consultative proceeding, Case No. PUC-2002-0046, I presented the results of a simulation model that I had developed for the purpose of predicting the growth in Verizon's long distance market share stemming, specifically, from its ability to exploit the "inbound channel" – incoming calls placed by customers to Verizon for the purpose of ordering new *local* telephone service. My model had predicted that after four full years of long distance entry, Verizon would have captured a 55.8% share. As it turns out, my prediction was conservative, since Verizon has achieved a 61% share after four years in New York. In a declaration I submitted to the California Public Utilities Commission on behalf of Pac-West Telecomm and Working Assets Long Distance, I provided the California results of the same model. Again, my model under-predicted California results, projecting less than 20% long distance market share in the first year, whereas SBC has announced a 31% market share after nine months. *Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Carrier Networks*, R.93-04-003, *Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks*, I.93-04-002, *Order Instituting Rulemaking on the Commission's Own Motion Into Competition for Local Exchange Service*, R.95-04-043, *Order Instituting Investigation on the Commission's Own Motion Into Competition for Local Exchange Service*, I.95-04-044, Declaration of Lee L. Selwyn, August 23, 2001.

- 1 33. Appendix 1 to this Declaration provides sample text for an imputation rule that is
- 2 intended to address the various issues I have discussed herein.

The foregoing statements are true and correct to the best of my knowledge, information and belief.



LEE L. SELWYN

APPENDIX

DRAFT IMPUTATION RULE

1. Applicability of Section 32.27 to integrated local/long distance operations

(a) Whenever a dominant provider of local exchange service that also provides long distance services has elected to offer long distance services through a separate affiliate, those transactions shall be subject to Section 32.27 of the Commission's rules.

(b) Whenever a dominant provider of local exchange service that also provides long distance services has elected to operate on an integrated basis, rather than providing its long distance services through a separate affiliate, then, for purposes of imputing costs to that provider's long distance services, the requirements of section 32.27 of the Commission's rules shall apply as though the long distance services were being provided through an affiliate.

(c) In no event shall the retail price of any long distance service being furnished by a dominant provider of local exchange service that also provides long distance services be set less than the sum of items 2(b)(1) through 2(b)(5) and 2(c) below, plus any incremental network or other costs required for the provision of long distance service.

2. Imputation cost standard applicable to each category of cost

(a) For purposes of imputation, a distinction is made among three types of costs – “direct costs,” “joint costs,” and “common overhead costs.”

(1) “Direct costs” are incurred for the production of a specific product or service and are avoided in their entirety if such service is not provided. “Direct costs” may include both fixed components as well as variable components that increase (although not necessarily in direct proportion to) the quantity of the product or service that is being produced.

(2) “Joint costs” are incurred for the production of two or more products or services and not avoided as long as at least one such product or service continues to be produced.

(3) “Common overhead costs” relate to functions of a general business nature not specifically associated with any product or group of products. “Common overhead costs”

may include both fixed components as well as variable components that increase (although not necessarily in direct proportion to) the overall scale of the enterprise.

Direct costs and Joint costs shall be imputed into the price of long distance services furnished by a dominant provider of local exchange service in accordance with 2(b) following; Common Overhead costs shall be imputed into the price of long distance services furnished by a dominant provider of local exchange service in accordance with 2(c) following.

(b) For purposes of imputation for any long distance service furnished by a dominant provider of local exchange service that also provides long distance services, the following shall apply:

(1) *Access services.* For purposes of imputation, the tariff prices of all switched and special access services that would ordinarily be utilized by a section 272(a) affiliate or by a non-affiliated provider of interexchange services shall be utilized, whether or not such services are actually being utilized by the integrated provider in the specific network architecture applicable to an integrated dominant provider of local exchange service that also provides long distance services.

(2) *Non-access tariff services.* For purposes of imputation, the tariff prices applicable to all non-access local exchange services that would ordinarily be utilized by a section 272(a) affiliate or by a nonaffiliated provider of interexchange services shall be utilized, whether or not such services are actually being utilized by the integrated provider in the specific network architecture applicable to an integrated dominant provider of local exchange service that also provides long distance services.

(3) *Non-tariff services or functionality satisfying the Prevailing Company Pricing threshold set out at 47 CFR 32.27(d).* For purposes of imputation, the prevailing company prices applicable to all non-tariff services of a type or providing a functionality that would be offered to and, in some cases, utilized by a section 272(a) affiliate or by a nonaffiliated provider of interexchange services, where the level of utilization by nonaffiliated entities is sufficient to satisfy the Prevailing Company Pricing threshold set out at 47 CFR 32.27(d), the Prevailing Company Price as it would be set in accordance with 47 CFR 32.27(d) shall be utilized, whether or not the precise manner in which the integrated provider furnishes such functionality to itself is the same as that which is being offered to nonaffiliated entities.

(4) *Non-tariff services, functionality, information or the beneficial transfer of assets not satisfying the Prevailing Company Pricing threshold set out at 47 CFR 32.27(d).* Where non-tariff services, information or the beneficial transfer of assets of a type or providing a functionality that would be provided to a section 272(a) affiliate but whose usage by one or

more nonaffiliated providers of interexchange services is not sufficient to satisfy the Prevailing Company Pricing threshold set out at 47 CFR 32.27(d), for purposes of imputation the fair market value or the fully-distributed cost, whichever is greater, shall be used. The fair market value of such services shall be determined by a survey of prices of comparable services being offered on a stand-alone basis by firms ordinarily in the business of providing such services,

(5) *Non-tariff functionality or the beneficial transfer of information or assets not offered or available to nonaffiliated entities.* Where the production of long distance services on an integrated basis by a dominant local exchange service provider involves the use of non-tariff services, functionality, information, or the beneficial transfer of assets of a type or providing a functionality that would be provided to a section 272(a) affiliate but which is not required to be offered to nonaffiliated providers of interexchange services, imputation shall be based upon the fair market value or the fully-distributed cost, whichever is greater, of such service, functionality, information, or the beneficial transfer of assets, including in particular the fair market value of any customer proprietary network information that is used or referenced during the course of marketing, selling, or furnishing the long distance service. The fair market value of such services or functionality, including any customer proprietary network information, shall be based upon the cost that a provider of interexchange services that is not affiliated with a dominant incumbent local exchange carrier would reasonably incur in order to obtain or to self-provide such services, functionality and/or information.

(c) Common Overhead costs shall be imputed to long distance services furnished by a dominant provider of local exchange service on the basis of fully distributed cost.

3. Service-specific imputation required

(a) A dominant provider of local exchange services that is required to impute costs to its long distance services pursuant to these rules must satisfy such imputation requirements separately with respect to each of its retail long distance services.

(b) Where such long distance service is included within any bundled offering that also includes any dominant local exchange services or service elements, the price of such long distance service to which the imputation requirement is to apply shall be determined by subtracting the retail price(s) of all component(s) of the bundle other than long distance from the total retail price of the bundle.

(c) Any bundle consisting of basic local exchange (dial tone) service, local calling, vertical features, intraLATA and interLATA toll, and any other components or features must be priced, in the aggregate, at a level sufficient to recover the aggregate of all tariff prices of all tariff services (or their functional equivalents) included within the bundle together with all other imputed and directly-assigned costs applicable to the bundled offering.

4. Allocation of costs for upgrades or replacements

(a) All investments in plant, facilities or equipment that will be jointly used by regulated and nonregulated services within five years of the date of acquisition and installation of that plant shall be presumed to be acquired primarily for the benefit of the nonregulated services, absent a showing to the contrary.

(b) At a minimum, any increase in net investment for the replacement assets over the remaining net book cost of the plant being replaced shall be allocated to and imputed into the price floor applicable to the nonregulated service.

5. Cross-subsidization prohibited

(a) In no event shall a dominant provider of local exchange service that also provides long distance services and that has elected to operate on an integrated basis rather than providing its competitive long distance services through a separate affiliate engage in actions that constitute a cross-subsidization of its competitive long distance services from its regulated services.

(b) For purposes of this rule, “cross-subsidization” shall be deemed to occur when in-region long distance services or nonregulated services, or telecommunications services that are treated as nonregulated services under these rules, are priced below cost by use of subsidization from customers of regulated services; or when a provider’s in-region long distance services or non-regulated services derive benefits from the regulated operations without the regulated operations receiving just and reasonable compensation from in-region long distance services or nonregulated operations for the benefits derived by such in-region long distance services or nonregulated operations.

Attachment 1

Regression Output

**Analysis of Verizon and SBC Long Distance Market Share
by State by Length of Time Since 271 Approval**

SHAZAM OUTPUT

```

-----7d430c14901dc
Content-Disposition: form-data; name="IX"; filename="\\Etinet\vol1\ETI\AT&T\NonDom\
FILE UPLOAD (120 CHARS MAX) FOR:regression(mktshr)2.csv
Content-Type: application/octet-stream
*****
Hello/Bonjour/Aloha/Howdy/G Day/Kia Ora/Konnichiwa/Buenos Dias/Nee Hau/Ciao
Welcome to SHAZAM - Version 9.0 - OCT 2003 SYSTEM=LINUX PAR= 781
|_SAMPLE 1 35,,,
|_READ state mktshr months comp,,,
  4 VARIABLES AND          35 OBSERVATIONS STARTING AT OBS          1

|_STAT state mktshr months comp / pcor pcov,,,
NAME          N      MEAN          ST. DEV          VARIANCE          MINIMUM          MAXIMUM
STATE          35      8.4571          5.4683          29.903            1.0000           17.000
MKTSHR         35      0.28985         0.15328         0.23495E-01      0.30000E-01     0.61000
MONTHS         35      16.956          11.014          121.32            2.0000           47.267
COMP           35      0.25714         0.44344         0.19664            0.0000           1.0000

CORRELATION MATRIX OF VARIABLES -          35 OBSERVATIONS

STATE          1.0000
MKTSHR         0.44149E-01    1.0000
MONTHS         -0.85538E-01    0.94997    1.0000
COMP           0.81127        0.38344    0.21916    1.00000
              STATE          MKTSHR          MONTHS          COMP

COVARIANCE MATRIX OF VARIABLES -          35 OBSERVATIONS

STATE          29.903
MKTSHR         0.37005E-01    0.23495E-01
MONTHS         -5.1519         1.6038         121.32
COMP           1.9672         0.26063E-01    1.0704         0.19664
              STATE          MKTSHR          MONTHS          COMP

|_OLS mktshr months / auxrsqr rstat dwpvalue,,,

REQUIRED MEMORY IS PAR=          13 CURRENT PAR=          781
OLS ESTIMATION
  35 OBSERVATIONS          DEPENDENT VARIABLE= MKTSHR
...NOTE..SAMPLE RANGE SET TO:          1,          35

DURBIN-WATSON STATISTIC = 1.38109
DURBIN-WATSON POSITIVE AUTOCORRELATION TEST P-VALUE = 0.023734
DURBIN-WATSON NEGATIVE AUTOCORRELATION TEST P-VALUE = 0.976266
R-SQUARE OF MONTHS ON OTHER INDEPENDENT VARIABLES = 0.0000
R-SQUARE OF CONSTANT ON OTHER INDEPENDENT VARIABLES = 0.0000

R-SQUARE = 0.9024          R-SQUARE ADJUSTED = 0.8995
VARIANCE OF THE ESTIMATE-SIGMA**2 = 0.23617E-02
STANDARD ERROR OF THE ESTIMATE-SIGMA = 0.48598E-01
SUM OF SQUARED ERRORS-SSE= 0.77937E-01
MEAN OF DEPENDENT VARIABLE = 0.28985
LOG OF THE LIKELIHOOD FUNCTION = 57.2132

MODEL SELECTION TESTS - SEE JUDGE ET AL. (1985,P.242)

```

AKAIKE (1969) FINAL PREDICTION ERROR - FPE = 0.24967E-02
 (FPE IS ALSO KNOWN AS AMEMIYA PREDICTION CRITERION - PC)
 AKAIKE (1973) INFORMATION CRITERION - LOG AIC = -5.9929
 SCHWARZ (1978) CRITERION - LOG SC = -5.9040
 MODEL SELECTION TESTS - SEE RAMANATHAN (1998,P.165)
 CRAVEN-WAHBA (1979)
 GENERALIZED CROSS VALIDATION - GCV = 0.25049E-02
 HANNAN AND QUINN (1979) CRITERION = 0.25742E-02
 RICE (1984) CRITERION = 0.25141E-02
 SHIBATA (1981) CRITERION = 0.24813E-02
 SCHWARZ (1978) CRITERION - SC = 0.27284E-02
 AKAIKE (1974) INFORMATION CRITERION - AIC = 0.24964E-02

ANALYSIS OF VARIANCE - FROM MEAN				
	SS	DF	MS	F
REGRESSION	0.72089	1.	0.72089	305.239
ERROR	0.77937E-01	33.	0.23617E-02	P-VALUE
TOTAL	0.79883	34.	0.23495E-01	0.000

ANALYSIS OF VARIANCE - FROM ZERO				
	SS	DF	MS	F
REGRESSION	3.6614	2.	1.8307	775.147
ERROR	0.77937E-01	33.	0.23617E-02	P-VALUE
TOTAL	3.7393	35.	0.10684	0.000

VARIABLE	ESTIMATED	STANDARD	T-RATIO	PARTIAL	STANDARDIZED	ELASTICITY
NAME	COEFFICIENT	ERROR	33 DF	P-VALUE	CORR. COEFFICIENT	AT MEANS
MONTHS	0.13220E-01	0.7567E-03	17.47	0.000	0.950	0.9500 0.7734
CONSTANT	0.65687E-01	0.1523E-01	4.312	0.000	0.600	0.0000 0.2266

DURBIN-WATSON = 1.3811 VON NEUMANN RATIO = 1.4217 RHO = 0.25466
 RESIDUAL SUM = -0.83267E-16 RESIDUAL VARIANCE = 0.23617E-02
 SUM OF ABSOLUTE ERRORS= 1.3070
 R-SQUARE BETWEEN OBSERVED AND PREDICTED = 0.9024
 RUNS TEST: 16 RUNS, 15 POS, 0 ZERO, 20 NEG NORMAL STATISTIC = -0.7511
 COEFFICIENT OF SKEWNESS = 0.5910 WITH STANDARD DEVIATION OF 0.3977
 COEFFICIENT OF EXCESS KURTOSIS = 0.1949 WITH STANDARD DEVIATION OF 0.7778

JARQUE-BERA NORMALITY TEST- CHI-SQUARE(2 DF)= 1.8644 P-VALUE= 0.394

GOODNESS OF FIT TEST FOR NORMALITY OF RESIDUALS - 6 GROUPS
 OBSERVED 0.0 5.0 15.0 10.0 4.0 1.0
 EXPECTED 0.8 4.8 11.9 11.9 4.8 0.8
 CHI-SQUARE = 2.0798 WITH 2 DEGREES OF FREEDOM, P-VALUE= 0.353

|_OLS mktshr months comp / auxrsqr rstat dwpvalue,,,

REQUIRED MEMORY IS PAR= 13 CURRENT PAR= 781
 OLS ESTIMATION
 35 OBSERVATIONS DEPENDENT VARIABLE= MKTSHR
 ...NOTE..SAMPLE RANGE SET TO: 1, 35

DURBIN-WATSON STATISTIC = 1.90484
 DURBIN-WATSON POSITIVE AUTOCORRELATION TEST P-VALUE = 0.301984
 NEGATIVE AUTOCORRELATION TEST P-VALUE = 0.698016
 R-SQUARE OF MONTHS ON OTHER INDEPENDENT VARIABLES = 0.0480
 R-SQUARE OF COMP ON OTHER INDEPENDENT VARIABLES = 0.0480
 R-SQUARE OF CONSTANT ON OTHER INDEPENDENT VARIABLES = 0.0000

R-SQUARE = 0.9347 R-SQUARE ADJUSTED = 0.9306
 VARIANCE OF THE ESTIMATE-SIGMA**2 = 0.16302E-02
 STANDARD ERROR OF THE ESTIMATE-SIGMA = 0.40376E-01
 SUM OF SQUARED ERRORS-SSE= 0.52166E-01
 MEAN OF DEPENDENT VARIABLE = 0.28985
 LOG OF THE LIKELIHOOD FUNCTION = 64.2390

MODEL SELECTION TESTS - SEE JUDGE ET AL. (1985,P.242)

AKAIKE (1969) FINAL PREDICTION ERROR - FPE = 0.17699E-02
 (FPE IS ALSO KNOWN AS AMEMIYA PREDICTION CRITERION - PC)
 AKAIKE (1973) INFORMATION CRITERION - LOG AIC = -6.3372
 SCHWARZ (1978) CRITERION - LOG SC = -6.2039

MODEL SELECTION TESTS - SEE RAMANATHAN (1998,P.165)

CRAVEN-WAHBA (1979)
 GENERALIZED CROSS VALIDATION - GCV = 0.17830E-02
 HANNAN AND QUINN (1979) CRITERION = 0.18525E-02
 RICE (1984) CRITERION = 0.17988E-02
 SHIBATA (1981) CRITERION = 0.17460E-02
 SCHWARZ (1978) CRITERION - SC = 0.20215E-02
 AKAIKE (1974) INFORMATION CRITERION - AIC = 0.17692E-02

ANALYSIS OF VARIANCE - FROM MEAN

	SS	DF	MS	F
REGRESSION	0.74666	2.	0.37333	229.012
ERROR	0.52166E-01	32.	0.16302E-02	P-VALUE
TOTAL	0.79883	34.	0.23495E-01	0.000

ANALYSIS OF VARIANCE - FROM ZERO

	SS	DF	MS	F
REGRESSION	3.6871	3.	1.2290	753.934
ERROR	0.52166E-01	32.	0.16302E-02	P-VALUE
TOTAL	3.7393	35.	0.10684	0.000

VARIABLE NAME	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO	PARTIAL P-VALUE	STANDARDIZED CORR.	ELASTICITY AT MEANS
MONTHS	0.12659E-01	0.6443E-03	19.65	0.000	0.961	0.9096
COMP	0.63633E-01	0.1600E-01	3.976	0.000	0.575	0.1841
CONSTANT	0.58845E-01	0.1277E-01	4.607	0.000	0.631	0.0000

DURBIN-WATSON = 1.9048 VON NEUMANN RATIO = 1.9609 RHO = 0.02208
 RESIDUAL SUM = 0.13878E-16 RESIDUAL VARIANCE = 0.16302E-02
 SUM OF ABSOLUTE ERRORS= 1.1193
 R-SQUARE BETWEEN OBSERVED AND PREDICTED = 0.9347
 RUNS TEST: 16 RUNS, 18 POS, 0 ZERO, 17 NEG NORMAL STATISTIC = -0.8537
 COEFFICIENT OF SKEWNESS = 0.4323 WITH STANDARD DEVIATION OF 0.3977
 COEFFICIENT OF EXCESS KURTOSIS = -0.5434 WITH STANDARD DEVIATION OF 0.7778

JARQUE-BERA NORMALITY TEST- CHI-SQUARE(2 DF)= 1.5863 P-VALUE= 0.452

GOODNESS OF FIT TEST FOR NORMALITY OF RESIDUALS - 6 GROUPS

OBSERVED	0.0	7.0	10.0	11.0	6.0	1.0
EXPECTED	0.8	4.8	11.9	11.9	4.8	0.8

CHI-SQUARE = 2.6241 WITH 1 DEGREES OF FREEDOM, P-VALUE= 0.105
 |_stop,,,