SUPRA TELECOMMUNICATIONS & INFORMATION SYSTEMS, INC.

DIRECT TESTIMONY OF DAVID A. NILSON

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET 00-1305

JULY 23, 2001

Q PLEASE STATE YOUR NAME AND ADDRESS

A. My name is David A. Nilson. My address is 2620 SW 27th Avenue, Miami, Florida 33133.

Q BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am the Chief Technology Officer of Supra Telecommunications and Information Systems, Inc. ("Supra").

Q PLEASE DESCRIBE YOUR BACKGROUND AND WORK EXPERIENCE.

A. I have been an electrical engineer for the past 27 years, with the last 23 years spent in management level positions in engineering, quality assurance, and regulatory departments. In 1976, I spent two years working in the microwave industry, producing next generation switching equipment for end customers such as AT&T Long Lines, ITT, and the U.S. Department of Defense. This job involved extensive work with various government agencies. I was part of a three-man design team that produced the world's first microwave integrated circuit. At

that time, our design was considered the "Holy Grail" of the microwave industry and was placed in production for AT&T within 30 days of its creation. This job also involved communications equipment design work with various government entities covered by United States Department of Defense security restrictions. I spent several years in quality control management, monitoring and trouble-shooting manufacturing process deviations, and serving as liaison and auditor to our regulatory dealings with the government. I spent 14 years in the aviation industry designing communications systems, both airborne and land-based, for various airlines and airframe manufacturers worldwide. This included ASIC and Integrated Circuit design, custom designed hardware originally designed for the Pan American Airlines call centers, and the H.F. long range communications system controllers used on Air Force One and Two and other government aircraft. I was responsible for the re-design of the Communications and Navigation systems' controllers installed in the fleet of aircraft(s) used by the Royal Family in England. I have also designed special purpose systems used by both the FAA and the FCC in monitoring and compliance testing. I was also responsible for validation design testing and FAA system conformance testing. Since 1992 I have been performing network and system design consulting for various industry and government agencies, including the Argonne National Laboratories. I joined Supra Telecom in the summer of 1997.

I am the architect of Supra's ATM backbone network, designer of our central office deployments to provide products and services designed for the consumer market. This includes capacity and traffic analysis to define equipment capacity

from market projections for both voice services, Class 5 switch design and planning, data and Internet services, xDSL, voicemail and ILEC interconnection.

Q HAVE YOU EVER TESTIFIED BEFORE?

A. Yes, I testified before the Florida Public Service Commission (FPSC) in numerous generic dockets and in various disputes between Supra Telecom and BellSouth regarding central office space availability, rates, requirements, and specifications for Collocation, Unbundled Network Elements (UNEs), and UNE Combinations . I have participated in settlement procedures before the FPSC staff on matters relating to OSS and OSS performance against BellSouth. I have testified before the Texas Public Utilities Commission (TPUC) on matters of collocation regarding disputes with SWBT. I have made ex-parte presentations before the Federal Communications Commission (FCC) regarding the Bell Atlantic / GTE merger, and the Department of Agriculture (RUS) regarding Network Design and Expansion policies for CLECs. I have appeared before the FCC staff on several occasions in disputes against BellSouth regarding collocation. I have testified before regulatory arbitrators in Texas, and in Commercial arbitration against BellSouth. I have been deposed numerous times by BellSouth, and SWBT.

Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address the issues identified in this proceeding. Specifically I will address issues 7, 8, 10, 12, 13, 14, 19, 21, 22, 23, 24, 25, 27, 28, 29, 31, 32, 33, 34, 40, 49, and 53.

Issues 7 & 8: Should Supra be required to pay the end user line charges requested by BellSouth?

Q WHAT IS THE FCC RECOGNIZED STATUS OF A COMPETITIVE LOCAL EXCHANGE CARRIER PROVIDING SERVICES VIA UNBUNDLED NETWORK ELEMENT COMBINATIONS?

A. The FCC recognizes an ALEC providing services via UNE Combinations to be a facilities-based provider. When purchasing a UNE alone or in combination, the ALEC becomes the owner of that circuit responsible for all costs, and entitled to exclusive use of the element including all features, functions, and revenues associated with that circuit. As this is repeated from various FCC orders, I cite from the *UNE Remand Order,* issued to be in compliance with the Supreme Court and Eighth Circuit rulings. First for the Loop, *UNE Remand Order CC Order 99-238 ¶ 167*

> **We modify the definition of the loop network element to include all features, functions, and capabilities of the transmission facilities, including dark fiber and attached electronics (except those used for the provision of advanced services, such as DSLAMs) owned by the incumbent LEC, between an incumbent LEC's central office and the loop**

> **demarcation point at the customer premises.**[1] In order to secure access to the loop's full functions and capabilities, we require incumbent LECs to condition loops. This broad approach accords with section 3(29) of the Act, which defines network elements to include their "features, functions and capabilities."[2] Our intention is to ensure that the loop definition will apply to new as well as current technologies, and to ensure that competitors will continue to be able to access loops as an unbundled network element as long as that access is required pursuant to section 251(d)(2) standards. (Emphasis added)

Second, for the Local Switching UNE, *UNE Remand Order CC Order 99-238* ¶ *244*

> 244. In the *Local Competition First Report and Order*, the Commission defined local circuit switching as including the basic function of connecting lines and trunks.[3] **In addition to line-side and trunk-side facilities, the definition of the local switching element encompasses all the features, functions and capabilities of the switch.**[4] With the exception of MCI

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[1] CC Order 99-238 footnote -- In other words, our revised definition retains the definition from the *Local Competition First Report and Order*, but replaces the phrase "network interface device" with "demarcation point," and makes explicit that dark fiber and loop conditioning are among the "features, functions and capabilities" of the loop. Issues regarding an incumbent LEC's obligation to afford access under section 251(c)(3) to facilities that it controls but does not own are being addressed in the *Competitive Networks Notice*.

[2] CC Order 99-238 footnote -- 47 U.S.C. 153(29).

[3] CC Order 99-238 footnote -- *See Local Competition First Report and Order*, 11 FCC Rcd. at 15706, para. 412. The line-side switch facilities include the connection between a loop termination at, for example, a main distribution frame (MDF), and a switch line card. Trunk-side facilities include the connection between trunk termination at a trunk-side cross-connect panel and a trunk card. The "features, functions, and capabilities" of the local switch include the basic switching function of connecting lines to lines, lines to trunks, trunks to lines and trunks to trunks.

[4] CC Order 99-238 footnote -- *Id.* The local switching element includes all vertical features that the switch is capable of providing, including customized routing functions, CLASS features, Centrex and any technically feasible customized routing functions. Custom calling features, such as call waiting, three-way calling, and call forwarding, are switch-based calling functions. CLASS features, such as caller ID, are number translation services that are based on the availability of interoffice signaling.

> WorldCom, no commenter proposes that we modify the current definition of local switching. **We disagree with MCI WorldCom, and find no reason to alter our current definition of local circuit switching.** (Emphasis added)

Finally for the Transport element the Shared Transport UNE, *UNE Remand Order CC Order 99-238 ¶ 372*

> 372. We reject Ameritech's arguments. The Supreme Court upheld the Commission's interpretation that the phrase "on an unbundled basis" in section 251(c) does not refer to physically separated elements but rather to separately priced elements.[5] Shared transport is an "unbundled" element because it consists of separately priced switching and transport network elements. The fact it is technically infeasible for a competitor to use shared transport with self-provisioned switching is irrelevant to whether an element is "unbundled" pursuant to section 251(c)(3). **In addition, the Eighth Circuit, in affirming our decision in the *Local Competition Third Reconsideration Order,* rejected Ameritech's argument when it held that shared transport meets the definition of an unbundled network element because it is a "feature, function, [or] capability," that is provided by facilities and equipment used in the provision of a telecommunications service.[6]** Accordingly, we conclude that shared transport meets the definition of an unbundled network element. (Emphasis added)

By law the ALEC pays for all UNEs at the ILEC's *cost*, and is entitled to all associated cost recovery. As such PIC, TIC, CCLC, and SCL / EUCL charges

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[5] CC Order 99-238 footnote -- *Iowa Utils. Bd.*, 119 S. Ct. at 737.

[6] CC Order 99-238 footnote -- *Southwestern Bell Tel. Co. v. Federal Communications Commission*, 153 F.3d 597, 603 (8th Cir. 1998).

are all due to the ALEC. The ILEC is already considered to have been compensated for all its costs by the arbitrated cost of the specific UNE. Based upon proceedings establishing UNE rates in Florida[7], the ILEC has been fully compensated for all costs and overheads. The ILEC is not due further cost recovery.

Further the ALECs rights to exclusive use of the network element are represented by *The First Report and Order on Local Competition* CC Order 96-325 at ¶ 357:

> 357. We also confirm our conclusion in the NPRM that, for the reasons discussed below in section V.J, **carriers purchase rights to exclusive use of unbundled loop elements, and thus, as the Department of Justice and Sprint observe, such carriers, as a practical matter, will have to provide whatever services are requested by the customers to whom those loops are dedicated.** This means, for example, that, if there is a single loop dedicated to the premises of a particular customer and that customer requests both local and long distance service, then any interexchange carrier purchasing access to that customer's loop will have to offer both local and long distance services. That is, interexchange carriers purchasing unbundled loops will most often not be able to provide solely interexchange services over those loops. (Emphasis added)

A carrier purchasing **"exclusive use of unbundled loop elements"** purchased at cost from the ILEC can have no further payment obligations to the ILEC as will be proven in testimony for the remaining issues I testify to.

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[7] Docket 99-0649, PSC-01-1181-FOF-TP

The FCC held in the *Intercarrier Compensation for ISP-Bound Traffic* CC Order 01-131 in Dockets 96-98[8] and 99-68[9]:

> Some CLECs take this argument one step further. Whatever the merits of bill and keep or other reforms to intercarrier compensation, they say, any such reform should be undertaken only in the context of a comprehensive review of *all* intercarrier compensation regimes, including the interstate access charge regime.[10] First, we reject the notion that it is inappropriate to remedy some troubling aspects of intercarrier compensation until we are ready to solve all such problems. In the most recent of our access charge reform orders, we recognized that it is "preferable and more reasonable to take several steps in the right direction, even if incomplete, than to remain frozen" pending "a perfect, ultimate solution."[11] **Moreover, it may make sense to begin reform by rationalizing intercarrier compensation between competing providers of telecommunications services, to encourage efficient entry and the development of robust competition, rather than waiting to complete reform of the interstate access charge regime that applies to incumbent LECs, which was created in a monopoly environment for quite different purposes.** Second, the interim compensation scheme we adopt here is fully consistent with the course the Commission has pursued with respect to access charge reform. **A primary feature of the *CALLS Order* is the phased elimination of the PICC and CCL, [12] two intercarrier payments we found to be inefficient, in favor of greater recovery from end-users through an increased SLC, an end-user charge.**[13] Finally, like the *CALLS Order*, the interim regime we adopt here "provides relative certainty in the marketplace" pending further Commission action, thereby allowing carriers to develop

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[8] *Implementation of Local Competition*

[9] *Intercarrier Compensation for ISP-Bound Traffic*

[10] CC order 01-131 footnote - *See, e.g.*, Letter from Karen L. Gulick, Harris, Wiltshire & Grannis, to Magalie Roman Salas, Secretary, FCC, at 1 (Dec. 22, 2000).

[11] CC order 01-131 footnote - *See CALLS Order*, 15 FCC Rcd at 12974.

[12] CC order 01-131 footnote - The PICC, or presubscribed interexchange carrier charge, and the CCLC, carrier common line charge, are charges levied by incumbent LECs upon IXCs to recover portions of the interstate-allocated cost of subscriber loops. *See* 47 C.F.R. §§ 69.153, 69.154.

[13] CC order 01-131 footnote - *CALLS Order*, 15 FCC Rcd at 12975 (permitting a greater proportion of the local loop costs of primary residential and single-line business customers to be recovered through the SLC).

business plans, attract capital, and make intelligent investments.[14],[15] (Emphasis Added)

Q WHAT SPECIFIC RELIEF IS SOUGHT BY SUPRA

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, if Supra is operating as a facilities based provider, and Supra **is** operating as a facilities-based provider via UNEs, Supra, not BellSouth, is entitled to collect reciprocal compensation, CCLC, TIC, SLC, EUCLs and access charges from any circuit served by UNE or UNE combination(s)

Supra requests that the Commission ensure that the full measure of the *UNE Remand Order* CC Order 99-238 is included in the text of the follow on agreement, that BellSouth is enjoined from illegally collecting both monthly and usage based charges correctly due to Supra Telecom

Supra requests this Commission ensures that the follow-on agreement include a liquidated damages provision in the parties' Follow On Agreement to provide incentives for BellSouth's compliance with these rules and orders.

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[14] CC order 01-131 footnote - *CALLS Order*, 15 FCC Rcd at 12977 (The CALLS proposal is aimed to " bring lower rates and less confusion to consumers; and create a more rational interstate rate structure. This, in turn, will support more efficient competition, more certainty for the industry, and permit more rational investment decisions.").

[15] CC order 01-131 § 94

Supra requests that this Commission ensures that the Follow On Agreement include a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 10: Should the rate for a loop be reduced when the loop utilizes Digitally Added Main Line (DAML) equipment?

Q **WHAT ARE THE ISSUES TO THIS QUESTION?**

A. BellSouth uses DAML to provide additional loops in areas where they have "run out of loops". In making this explanation BellSouth fails to add that BellSouth often adds DAML to the first line of a CLEC customer, with two perfectly good working telephone circuits, in order to provide a CLEC customer *two* DAML provisioned lines. This then frees up a loop for a new BellSouth customer. BellSouth never announces these changes to ALECs, and continues charging the ALEC for two loops. In essence, BellSouth is getting the newly

derived loop for free. However, this also increases the ALECs support costs as will be explained below.

Q WHAT IS WRONG WITH THIS APPROACH?

A. DAML is a digital technology that synthesizes the normal operation of two loops by digitizing each telephone circuit and passing the digitized information over a single loop. The digitized signals are extracted by corresponding central office based electronics and placed on separate two wire copper circuits and fed to the Class 5 switch. Much like DSL data, the two digitized voice channels are transmitted over the copper loop in two different frequency bandwidth carrier frequencies, higher than the established analog voice bands. While the technical details of modulation can be different than those of xDSL due to the limited bandwidth required, on the whole, the architecture of the solution is virtually identical to that of xDSL services.

Q SO WHY WOULD SUPRA OR ITS CUSTOMERS CARE THAT THIS APPROACH IS USED TO PROVIDE SERVICE?

A. Ever since modem speeds increased above 28.8 BPS, it has become essential that the loop serving a customer have, at most, a single analog to digital conversion. The compression algorithms inherent in 56K modems will tolerate no more, and indeed require non-standard implementations of the GR-303 to achieve full rated speed. GR-303 is the standard communication protocol between Digital Loop Carrier (DLC) equipment and the Class 5 switch that serves it. With a

standard GR-303 interface a 56K modem can easily be limited to 28.8K or less. With DAML added in such a loop communications can fall as low as 4.8K!

Q **HOW DOES THIS AFFECT COST?**

A. Typically the scenario is that a BellSouth customer converts to Supra. At some point in time, either at conversion or sometime after, with no prior warning to Supra, the Customer line is converted to DAML. Immediately the customer begins complaining about the drop in modem speed. Supra's costs are increased until Supra can get the DAML removed, or ultimately, the customer returns to BellSouth where it **can** get the DAML removed and full modem speed restored. Throughout this process, Supra's customer support costs increase due to increased call volume and the costs to identify and correct this problem, caused by a lack of notification / authorization prior to a BellSouth action. BellSouth gets a free loop paid for by Supra, and potentially reclaims the customer due to Supra's "bad service."

This final issue is most insidious to Supra as it represents hidden, undocumented, and often denied violations of the Telecommunications Act[16], all FCC orders in

[16] Telecommunications Act of 1996, 47 U.S.C.A. § 251(c)(3).

this regard[17], including orders that have been sustained by the Supreme Court of the United States[18].

Lest BellSouth argues, based upon a misreading of 251(c)(3) that there is no requirement upon them not to disconnect or otherwise disturb a functioning telecommunications circuit, the Supreme Court, at *AT&T v. Iowa Utilities Bd.*, 525 U.S. 366, 119 S.Ct 721 (Iowa Utilities Board II) at pg. Pg. 395 held:

> "The reality is that § 251(c)(3) is ambiguous on whether leased network elements may or must be separated, and the rule the Commission has prescribed is entirely rational, finding its basis in § 251(c)(3)'s nondiscrimination requirement. As the Commission explains, it is aimed at preventing incumbent LECs from disconnect[ing] previously connected elements, over the objection of the requesting carrier, not for any productive reason, but just to impose wasteful reconnection costs on new entrants" ... It is well within the bounds of the reasonable for the Commission to opt in favor of ensuring against an anticompetitive practice."

BellSouth's deployment of DAML equipment on the lines of Supras customers when those customers were not provisioned via DAML a) as BellSouth customers, or b) when initially converted to Supra is a violation of Federal law intended as an anticompetitive practice against ALEC customers. If this issue is truly as benign and insignificant as BellSouth represents, then there should be no problem with limiting use of this technology to ALEC customers. The Commission should take BellSouth's promises to heart and enjoin ILECs from

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[17] 47 C.F.R. § 51.315(b).

deploying DAML on an ALEC customer circuit, and subject the ILEC to fines for so doing.

Q WHAT SPECIFIC RELIEF IS SOUGHT BY SUPRA?

A. Supra believes that BellSouth should be enjoined from deploying this technology on ALEC subscriber circuits. The potential for abuse and "bad acts" is just too high, because it is an anti-competitive tool for ILECs. Should an agreement be reached to deploy such equipment on specific ALEC lines, the ALEC should not be charged for two loops, when it is in fact utilizing just one, or in some cases, just one half of a loop. In addition, BellSouth should be required to periodically disclose the use of such equipment on ALEC lines.

Supra requests that this Commission ensures that the Follow On Agreement include a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

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[18] *AT&T v. Iowa Utilities Bd* 525 U.S. 366, 119 S.Ct 721 (Iowa Utilities Board II) at pg. 368, and

Issue 12: Should BellSouth be required to provide transport to Supra Telecom if that transport crosses LATA boundaries?

Q **WHAT ARE THE ISSUES TO THIS QUESTION?**

A. BellSouth is very quick to quote from section 271 in denying Supra the its request for dedicated transport across LATA boundaries. However while Supra acknowledges that BellSouth is itself precluded from providing services to end users across LATA boundaries, that does not specifically preclude BellSouth from wholesaling such services to other carriers. The FCC, in its First Report and Order, addressed this issue as follows:

> We also disagree with MECA, GTE, and Ameritech that we should consider "pricing distortions" in adopting rules for unbundled interoffice facilities. Section, (sic) below, addresses the pricing of unbundled network elements identified pursuant to section 251(c)(3) as it relates to our current access charge rules. Nor are we are persuaded by MECA's argument that incumbent LECs not subject to the MFJ[19] should not be required to unbundle transport facilities because, according to MECA, such facilities are unnecessary for local competition. **As discussed above, the ability of a new entrant to obtain unbundled access to incumbent LECs' interoffice facilities, including those facilities that carry interLATA traffic, is essential to that competitor's ability to provide competing telephone service."**[20] (Emphasis Added)

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pg. 393-395

[19] MFJ -- Modified Final Judgement.

[20] CC Order 96-325 in Docket No. 96-98 -- Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 at ¶ 449.

Here, Congress and the FCC acknowledge what BellSouth already knows, that a competitor must have full access to both the local and long distance portions of an RBOC's network in order to be a successful competitor. Interoffice Transport was a hotly contested issue in the days after the Act was signed. However, a CLEC's right to unbundled interoffice transport has been fully upheld, and the intent of the Act is clearly explained to give a CLEC access to local, intraLATA and interLATA interoffice facilities. BellSouth has such facilities in place based on pre-divestiture information and as can be seen by the Agreement between BellSouth and its affiliate BellSouth Long Distance to test and trial just such a service.[21]

BellSouth terribly confuses its prohibition from offering interLATA services directly to end users, and leasing network facilities to another carrier. A BellSouth interLATA facility, once leased to Supra, is no longer BellSouth's property for the term of the lease. Any and all prohibitions regarding the use of the facility must now fall upon Supra, not BellSouth. Section 271 of the ACT does not prohibit Supra from offering long-distance service, as it does BellSouth. The FPSC, in CC Order 96-325 in Docket No. 96-98 -- Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 at ¶ 336, recognized this fact:

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[21] Supra Exhibit # DAN-2 -- BellSouth and BSLD agreement to "INTERLATA END TO END TEST AGREEMENT." Dated June 13, 2000.

> We note, moreover, that the 1996 Act does not prohibit all forms of joint marketing. For example, it does not prohibit carriers who own local exchange facilities from jointly marketing local and interexchange service. Nor does it prohibit joint marketing by carriers who provide local exchange service through a combination of local facilities which they own or possess, and unbundled elements. Because the 1996 Act does not prohibit all forms of joint marketing, we see no principled basis for reading into section 271(e)(1) a further limitation on the ability of carriers to jointly market local and long distance services without concluding that this section prohibits all forms of joint marketing. In other words, we see no basis upon which we could conclude that section 271(e)(1) restricts joint marketing of long distance services, and local services provided solely through the use of unbundled network elements, without also concluding that the section restricts the ability of carriers to jointly market long distance services and local services that are provided through a combination of a carriers' own facilities and unbundled network elements.[22] Moreover, we do not believe that we have the discretion to read into the 1996 Act a restriction on competition which is not required by the plain language of any of its sections. [23]

Thus, CLECs are not barred by 47 USC §271(e)(1) from providing local and long distance services, or, intraLATA and interLATA services. As such, BellSouth's reliance on Section 271 as a means to prevent Supra from being a long-distance carrier is nonsensical. Furthermore, 47 CFR §51.309 Use of unbundled network elements provides that:

> (b) A telecommunications carrier purchasing access to an unbundled network element may use such network element to provide exchange access services to itself in order to provide interexchange services to subscribers.

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[22] 96-325 Footnote -- *See also* AT&T reply at 14-15 (the added risk of unbundled elements also means that new entrants are not circumventing section 271's joint marketing restriction because the additional risk justifies allowing carriers more flexibility to jointly market services); LDDS reply at 28-30.

[23] CC Order 96-325 in Docket No. 96-98 -- Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 at ¶ 336

BellSouth argues that Section 271 of the Act prohibits BellSouth from providing interLATA service, be it retail or wholesale. However, should BellSouth provide interoffice transport across LATA boundaries via UNE(s), BellSouth would not be deemed to be providing the service. Furthermore, **BellSouth's only role would be providing wholesale elements to a carrier, not prohibited retail service to an end-user**. Supra, as the facilities-based provider, would be deemed to be the service provider, and the temporary owner of the facility, just as it is when Supra leases a switching port or local transport facility.

BellSouth may argue that an Order in favor of Supra on this point would be an Order creating new law. This is simply not the case. In paragraph 356 of the FCC's First Report and Order the FCC concluded that 47 USC §251(c)(3) permits all telecommunications carriers, including interexchange carriers, to purchase UNEs for the purpose of offering exchange access services or to provide exchange access services to themselves in order to provide interexchange services to consumers. In ¶ 440, the FCC concluded that ILECs must provide interoffice facilities between central offices, not limit facilities to which such interoffice facilities are connected, allow a competitor (ALEC) to use an interoffice facility to connect to an ILEC's switch, provide unbundled access to shared transmission facilities between end offices and the tandem switch, as well as transmission capabilities such as DS1. In ¶ 449, the FCC further added that the ability of a new entrant to obtain unbundled access to ILECs' interoffice facilities, **including those facilities that carry interLATA traffic**, is **essential** to that competitor's ability to

provide competing telephone service.

Interoffice transport is a UNE. Therefore, BellSouth's refusal to provide Supra with interoffice transport, is a refusal to provide Supra with the Services and Elements contained in the Agreement as well as required by the FCC's First Report and Order, ¶¶ 342 to 365. Yet, BellSouth has never sought any guidance from the FCC on this issue.

In BellSouth's view, BellSouth would provide the transport up to the LATA boundaries, then Supra must provide a link which actually takes it across the boundaries, whereinafter BellSouth would then provide another link on the other side. BellSouth would have this Commission believe that Supra must break up a single wire connection by inserting its own piece of wire, right where the two LATA boundaries meet, in order to provide long-distance service. Neither the ACT, nor any FCC order, supports BellSouth's position that Supra must provide this link which actually crosses the LATA boundary, particularly where Supra (as a facility-based provider) is already deemed to be the party responsible for taking the transport across the LATA boundary.

In fact, in *AT&T v. Iowa Utilities Bd.* 525 U.S. 366, 119 S.Ct 721 (Iowa Utilities Board II) the Supreme Court affirmed that facilities ownership **was not** a requirement that LECs may impose upon an ALEC for the use or combination of a UNE:

"But whether an requesting carrier can access the incumbents

network in whole or in part, we think that the Commission reasonably omitted a facilities ownership requirement. The 1996 Act imposes no such limitation; if anything it suggests the opposite, by requiring in § 251(c)(3) that incumbents provide access to "any" requesting carrier. We agree with the Court of Appeals that the Commissions refusal to impose a facilities-ownership requirement was proper." [24]

Yet that is exactly what BellSouth's "link -at-the-border" approach requires Supra owned facilities to join two lengths of Interoffice transport, and a Bona-Fide request process to even see if they will actually consider doing it at all, in violation of the Supreme Court ruling.

Q **WHAT RELIEF IS BEING REQUESTED BY SUPRA:**

A. Supra requests that following language be inserted in the Follow-On Agreement:

> BellSouth shall provision tandem switching, one or two-way trunk groups, inter-office transport, and all features, functions and capabilities therewith, across LATA boundaries, in the manner requested by Supra, where technically feasible.

Supra requests that this Commission ensures that the Follow On Agreement include a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete

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[24] *AT&T v. Iowa Utilities Bd.* 525 U.S. 366, 119 S.Ct 721 (Iowa Utilities Board II) at pg. 392.

response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 13: What should be the appropriate definition of "local traffic" for purposes of the parties' reciprocal compensation obligations under Section 251(b)(5) of the 1996 Act?

Q **IS THIS QUESTION STILL GERMANE TO THESE PROCEEDINGS?**

A. It should not be. On April 18, 2001 the FCC adopted order 01-131 in dockets 96-98[25] and 99-68[26]. This issue has become effectively moot since the filing of this arbitration. Supra would expect BellSouth to surrender its position and fall in line with current FCC rulings and Part 51, Subpart H of Title 47 of the Code of Federal Regulations (C.F.R.) as adopted on April 18, 2001. In that order the FCC amended the rules on reciprocal compensation to remove the word "local" and to provide for reciprocal compensation regulations in a clear and unambiguous fashion:

> "In this Order, we strive to balance the need to rationalize an intercarrier compensation scheme that has hindered the development of efficient competition in the local exchange and exchange access markets with the need to provide a fair and reasonable transition for CLECs that have come to depend on

[25] Implementation of the Local Competition Provisions in the Telecommunications Act of 1996
[26] Intercarrier Compensation for ISP-Bound Traffic

intercarrier compensation revenues. We believe that the interim compensation regime we adopt herein responds to both concerns. The regime should reduce carriers' reliance on carrier-to-carrier payments as they recover more of their costs from end-users, while avoiding a "flash cut" to bill and keep which might upset legitimate business expectations. The interim regime also provides certainty to the industry during the time that the Commission considers broader reform of intercarrier compensation mechanisms in the *NPRM* proceeding. **Finally, we hope this Order brings an end to the legal confusion resulting from the Commission's historical treatment of ISP-bound traffic, for purposes of jurisdiction and compensation, and the statutory obligations and classifications adopted by Congress in 1996 to promote the development of competition for all telecommunications services. We believe the analysis set forth above amply responds to the court's mandate that we explain how our conclusions regarding ISP-bound traffic fit within the governing statute.**[27],[28] (Emphasis added)

The FCC has amended the CFR in the following manner:

"Part 51, Subpart H, of Title 47 of the Code of Federal Regulations (C.F.R.) is amended as follows:

The title of part 51, Subpart H, is revised to read as follows:

Subpart H--Reciprocal Compensation for Transport and Termination of Telecommunications Traffic

2. Section 51.701(b) is revised to read as follows:

§ 51.701 Scope of transport and termination pricing rules.

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Telecommunications traffic. For purposes of this subpart, telecommunications traffic means:

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[27] CC order 01-131 footnote - *Bell Atlantic*, 206 F.3d at 8.

[28] CC order 01-131 § 95, Conclusion

Telecommunications traffic exchanged between a LEC and a telecommunications carrier other than a CMRS provider, except for telecommunications traffic that is interstate or intrastate exchange access, information access, or exchange services for such access (*see* FCC 01-131, paras. 34, 36, 39, 42-43); or Telecommunications traffic exchanged between a LEC and a CMRS provider that, at the beginning of the call, originates and terminates within the same Major Trading Area, as defined in § 24.202(a) of this chapter.

Sections 51.701(a), 51.701(c) through (e), 51.703, 51.705, 51.707, 51.709, 51.711, 51.713, 51.715, and 51.717 are each amended by striking "local" before "telecommunications traffic" each place such word appears."[29]

Q WHAT SPECIFIC RELIEF IS REQUESTED BY SUPRA?

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue in regard to reciprocal compensation for traffic to Internet Service providers be paid to Supra Telecom for all calls origination on BellSouth's network that terminate at ISP's on Supras network, and vice versa, regardless of the method used to provision service to the end user customer, as long as that method is not resale

Supra requests that this Commission ensure that the Follow On Agreement includes a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

[29] CC order 01-131 – Appendix B – Final Rules.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 14: Should BellSouth pay reciprocal compensation to Supra Telecom where Supra Telecom is utilizing UNE's to provide local service (i.e. unbundled switching and the unbundled local loop) for the termination of local traffic to Supra's end users?

Q SHOULD BELLSOUTH PAY RECIPROCAL COMPENSATION TO SUPRA TELECOM WHERE SUPRA TELECOM IS UTILIZING UNE'S TO PROVIDE LOCAL SERVICE

A. Yes.

Q ARE YOU SUPRISED THAT BELLSOUTH HAS TAKEN A CONTRADICTORY POSITION ON THIS SUBJECT?

A. Yes and no. No because they opposed this issue when the FCC was considering the *First Report and Order*. Yes, because as I will show below, the FCC did not adopt BellSouth's position in 1996, and has not since. Why this is still an issue remains a mystery. I consider this a bad faith attempt by BellSouth

to collect revenues it knows it is not entitled to, because the FCC ruled against BellSouth's position in 1996.

In one case, BellSouth incredibly claimed that its economies were poorer than a startup ALEC in *First Report and Order* CC Order 96-325 at ¶ 1074:

> "BellSouth contends that, because the costs of an incumbent LEC and new entrant are likely to be quite different, the Commission does not have the authority to contravene the mutual and reciprocal recovery language of section 252(d)(2) and require symmetry.[30],[31]

BellSouth argues against an "uncompensated taking", yet in this issue it would somehow have us believe that it is correct for BellSouth to do to an ALEC, what it is incorrect to do to BellSouth:

> BellSouth further asserts that bill and keep would lead to no compensation for use of incumbent LEC property and will therefore constitute an uncompensated taking in violation of the Constitution.[32] (Emphasis added)

Besides misusing the universally accepted definition of reciprocal compensation, this show BellSouth's lack of good faith. The position a corporation takes should not change to challenge each competitor that it faces unless said corporation stands ready to be accused of bad faith dealings.

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[30] 96-325 footnote -- BellSouth comments at 72-73.

[31] *First Report and Order* CC Order 96-325 at ¶ 1074:

[32] 96-325 footnote -- BellSouth comments at 74-75.

Q WHY ARE THERE ANY CHARGES FOR TELEPHONE CIRCUITS OTHER THAN A STRAIGHT MONTHLY RECURRING CHARGE, A CHARGE BASED ON USAGE AND TAXES.

A. This problem finds its roots in the fact that for much of the 20th century there was one predominant telephone company, AT&T, which provided long distance and local services to most of, but not the entire United states over the same network facilities. The issues with properly accounting for costs due to the various division of AT&T, which later became separate telephone companies is explained well by the FCC in the CALLS order CC order 00-193 at ¶ 5 writes:

> 5. For much of this century, most telephone subscribers obtained both local and long-distance services from the same company, the pre-divestiture Bell System, owned and operated by AT&T. Its provision of local and intrastate long-distance services through its wholly-owned operating companies, the Bell Operating Companies (BOCs), was regulated by state commissions. The Commission regulated AT&T's provision of interstate long-distance service. **Much of the telephone plant that is used to provide local telephone service, such as the local loop,[33] is also needed to originate and terminate interstate long-distance calls. Consequently, a portion of the costs of this common plant historically was assigned to the interstate jurisdiction and recovered through the rates that AT&T charged for interstate long-distance calls.** *The balance of the costs of the common plant was assigned to the intrastate jurisdiction and recovered through the charges for intrastate services regulated by the state commissions.* **The system of allocating costs between the interstate and intrastate jurisdictions is known as the separations process.** The difficulties inherent in allocating the costs of facilities that

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[33] 96-325 footnote -- A local loop is the connection between the telephone company's central office building and the customer's premises.

are used for multiple services between the two jurisdictions are discussed below. (Emphasis added).

Thus it forms the basis for recovering portions of the cost associated with the local loop, the local switch port, Transport and Tandem costs from those who benefit from those services proportional to their use of the element. In no case can the recovery of this cost exceed 100%. This is emphasized over and over in the FCC order citations that follow.

Q **WHAT IS THE LEGAL BASIS FOR THIS POSITION?**

A. In the *First Report and Order* CC Order 96-325 the FCC defines reciprocal compensation at ¶ 1034:

> 1034. We conclude that section 251(b)(5) reciprocal compensation obligations should apply only to traffic that originates and terminates within a local area, as defined in the following paragraph. We disagree with Frontier's contention that section 251(b)(5) entitles an IXC to receive reciprocal compensation from a LEC when a long-distance call is passed from the LEC serving the caller to the IXC. Access charges were developed to address a situation in which three carriers -- typically, the originating LEC, the IXC, and the terminating LEC -- collaborate to complete a long-distance call. As a general matter, in the access charge regime, the long-distance caller pays long-distance charges to the IXC, and the IXC must pay both LECs for originating and terminating access service.[34] **By contrast, reciprocal compensation for transport and termination of calls is intended for a situation in which two carriers collaborate to complete a local call. In this case, the local caller pays charges to the originating carrier, and the originating carrier must compensate the terminating carrier**

[34] 96-325 footnote -- In addition, both the caller and the party receiving the call pay a flat-rated interstate access charge -- the end-user common line charge -- to the respective incumbent LEC to whose network each of these parties is connected.

> **for completing the call. This reading of the statute is confirmed by section 252(d)(2)(A)(i), which establishes the pricing standards for section 251(b)(5). Section 251(d)(2)(A)(i) provides for "recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier."**[35] We note that our conclusion that long distance traffic is not subject to the transport and termination provisions of section 251 does not in any way disrupt the ability of IXCs to terminate their interstate long-distance traffic on LEC networks. Pursuant to section 251(g), LECs must continue to offer tariffed interstate access services just as they did prior to enactment of the 1996 Act. We find that the reciprocal compensation provisions of section 251(b)(5) for transport and termination of traffic do not apply to the transport or termination of interstate or intrastate interexchange traffic. (Emphasis added)

Further, while the FCC retained sole jurisdiction over the definitions of local exchange areas for wireless carriers, it ceded that jurisdiction over wireline carriers to the state commissions *First Report and Order* CC Order 96-325 the FCC defines reciprocal compensation at ¶ 1035:

> 1035. With the exception of traffic to or from a CMRS network, state commissions have the authority to determine what geographic areas should be considered "local areas" for the purpose of applying reciprocal compensation obligations under section 251(b)(5), consistent with the state commissions' historical practice of defining local service areas for wireline LECs. Traffic originating or terminating outside of the applicable local area would be subject to interstate and intrastate access charges. We expect the states to determine whether intrastate transport and termination of traffic between competing LECs, where a portion of their local service areas are not the same, should be governed by section 251(b)(5)'s reciprocal compensation obligations or whether intrastate

[35] 96-325 footnote -- 47 U.S.C. § 252(d)(2)(A)(i).

> access charges should apply to the portions of their local service areas that are different. This approach is consistent with a recently negotiated interconnection agreement between Ameritech and ICG that restricted reciprocal compensation arrangements to the local traffic area as defined by the state commission.36 Continental Cablevision, in an ex parte letter, states that many incumbent LECs offer optional expanded local area calling plans, in which customers may pay an additional flat rate charge for calls within a wider area than that deemed as local, but that terminating intrastate access charges typically apply to calls that originate from competing carriers in the same wider area.37 Continental Cablevision argues that local transport and termination rates should apply to these calls. We lack sufficient record information to address the issue of expanded local area calling plans; we expect that this issue will be considered, in the first instance, by state commissions. In addition, we expect the states to decide whether section 251(b)(5) reciprocal compensation provisions apply to the exchange of traffic between incumbent LECs that serve adjacent service areas. (Emphasis added)

In defining the responsibility of the ILEC to pay reciprocal compensation charges to offset the costs incurred by other carriers in completing calls to or from ILEC customers the commission wrote first about corporate responsibility between carriers, not about the methods the opposing carrier chose to implement its circuits:

> 358. Section 251(b)(5) obligates LECs to establish reciprocal compensation arrangements for the transport and termination of telecommunications traffic. **Although section 252(b)(5) does not explicitly state to whom the LEC's obligation runs, we**

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[36] 96-325 footnote -- *See* letter from Albert H. Kramer, Dickstein, Shapiro, Morin & Oshinsky LLP to John Nakahata, Senior Legal Advisor to the Chairman, FCC, July 11, 1996.

[37] 96-325 footnote -- Letter from Brenda L. Fox, Vice President, Federal Relations, Continental Cablevision, to Robert Pepper, Chief, Office of Plans and Policy, FCC, July 22, 1996, attached to Letter from Donna N. Lampert, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., to William F. Caton, Acting Secretary, FCC, July 22, 1996.

> **find that LECs have a duty to establish reciprocal compensation arrangements with respect to local traffic originated by or terminating to any telecommunications carriers.** CMRS providers are telecommunications carriers and, thus, LECs' reciprocal compensation obligations under section 251(b)(5) apply to all local traffic transmitted between LECs and CMRS providers. (Emphasis added)
>
> 359. We conclude that, pursuant to section 251(b)(5), a LEC may not charge a CMRS provider **or other carrier for terminating LEC-originated traffic.** Section 251(b)(5) specifies that LECs and interconnecting carriers shall compensate one another for termination of traffic on a reciprocal basis. This section does not address charges payable to a carrier that originates traffic. We therefore conclude that section 251(b)(5) prohibits charges such as those some incumbent LECs currently impose on CMRS providers for LEC-originated traffic. As of the effective date of this order, a LEC must cease charging a CMRS provider or other carrier for terminating LEC-originated traffic and must provide that traffic to the CMRS provider or other carrier without charge. (Emphasis added)

Within the Statutory Standard Section of the *First Report and order* (CC Order 96-325) the FCC deals with the payment of reciprocal compensation charges for UNE elements clearly in ¶ 4.

> 360. We conclude that the pricing standards established by section 252(d)(1) for interconnection and unbundled elements, and by section 252(d)(2) for transport and termination of traffic, are sufficiently similar to permit the use of the same general methodologies for establishing rates under both statutory provisions. *Section 252(d)(2) states that reciprocal compensation rates for transport and termination shall be based on "a reasonable approximation of the additional costs of terminating such calls."*[38] Moreover, there is some substitutability between the new entrant's use of unbundled network elements for transporting traffic and its use of transport under section 252(d)(2). Depending on the interconnection

[38] 96-325 footnote -- 47 U.S.C. § 252(d)(2)(A)(ii).

> arrangements, carriers may transport traffic to the competing carriers' end offices or hand traffic off to competing carriers at meet points for termination on the competing carriers' networks. Transport of traffic for termination on a competing carrier's network is, therefore, largely indistinguishable from transport for termination of calls on a carrier's own network. Thus, we conclude that transport of traffic should be priced based on the same cost-based standard, whether it is transport using unbundled elements or transport of traffic that originated on a competing carrier's network. We, therefore, find that the "additional cost" standard permits the use of the forward-looking, economic cost-based pricing standard that we are establishing for interconnection and unbundled elements.[39] (Emphasis added)

Here the FCC clearly represents the use of unbundled elements to deploy service as being every bit as entitled to cost recovery by collecting reciprocal compensation as the corresponding method or network buildout by the competitive LEC. Further the FCC clearly equates reciprocal compensation to be a cost recovery mechanism, and in the instant issue it is undisputed that all of the **costs** for the UNE circuit under consideration have been born by Supra Telecom. This mechanism is the method by which the FCC compensates Supra for performing work on behalf of BellSouth, since BellSouth has charged Supra for all costs incurred in providing service via loop and port, now BellSouth must pay some of that cost back to Supra to terminate calls on behalf of BellSouth .

Q WHAT SPECIFIC RELIEF IS REQUESTED BY SUPRA?

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[39] 96-325 footnote -- *See supra,* Section VII.B.

Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, if Supra is operating as a facilities based provider, and Supra **is** operating as a facilities-based provider via UNEs, Supra, not BellSouth, is entitled to collect reciprocal compensation, CCLC, TIC, SLC, EUCLs and access charges from any circuit served by UNE or UNE combination(s)

Supra requests that this Commission ensures that the Follow On Agreement include a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 19: Should calls to Internet Service Providers be treated as local traffic for the purposes of reciprocal compensation?

Q WHAT IS THE CURRENT STATE OF THE LAW ON THIS ISSUE?

A. This issue has become effectively moot since the filing of this arbitration. I cannot understand why BellSouth has continued to make it an open issue since the FCC order on this matter, unless they are trying to shirk their responsibility for payment throughout a prolonged appeal. Delay only harms Supra. Supra would expect BellSouth to surrender its position and fall in line with current FCC rulings and Part 51, Subpart H of Title 47 of the Code of Federal Regulations (C.F.R.) as adopted on April 18, 2001. In that order the FCC amended the rules on reciprocal compensation to remove the word "local" and to provide for reciprocal compensation regulations in a clear and unambiguous fashion:

> "... Finally, we hope this Order brings an end to the legal confusion resulting from the Commission's historical treatment of ISP-bound traffic, for purposes of jurisdiction and compensation, and the statutory obligations and classifications adopted by Congress in 1996 to promote the development of competition for all telecommunications services. We believe the analysis set forth above amply responds to the court's mandate that we explain how our conclusions regarding ISP-bound traffic fit within the governing statute.[40],[41]

Q **WHAT SPECIFIC RELIEF IS REQUESTED BY SUPRA?**

Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, if Supra terminates calls from Bellsouth customers to ISP's who are Supra customers, and to pay BellSouth if it is vice-versa.

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[40] CC order 01-131 footnote - *Bell Atlantic*, 206 F.3d at 8.
[41] CC order 01-131 § 95, Conclusion

Supra requests that this Commission ensures that the follow-on agreement include a liquidated damages provision in the parties' Follow On Agreement to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 21: What does "currently combines" mean as that phrase is used in 57 C.F.R. § 51.315(b)(Network Elements and Combinations, Attachment 2, Section 2.7.1)?

Q **DOES BELLSOUTH ACHIEVE A COMPETITIVE ADVANTAGE OVER AN ALEC IF IT PREVAILS ON THIS ISSUE?**

A. Of course. It means that BellSouth gets first shot at any and all new telephone circuits installed in an area -- they cannot be provisioned by a UNE combination provider. It is not sufficient to merely say "Well the customer can be provisioned as resale." The simple fact is that not all telecommunications carriers possess the ability to order circuits both as UNE Combination, or as Resale.

Issues such as not having an agreement that covers both, employees training, and the complex and costly methods needed to achieve electronic bonding with BellSouth's CLEC OSS's. In this particular case I can affirmatively state that the products one must buy from OSS middleware vendors (at price tags exceeding 1 million dollars) support one regime or the other. Even in the rare occasions today where a vendor is finally able to offer both, the costs are doubled and may prove prohibitive to a startup like Supra. In the best of circumstances, BellSouth's own CLEC OSS - LENS, requires different procedures and training; there are limitations placed upon the ALEC related to existing customer xDSL services, and other issues.

Q **WHAT DOES "CURRENTLY COMBINES" MEAN?**

A. To start with, there is a world of difference between the term "Currently Combines" and "Currently Combined". In Florida docket 00-731, the recent arbitration between AT&T and BellSouth, much was written on this issue in an attempt to make a case that the two terms were identical. With all due respect, the English language does not allow for that leap of faith. "Currently Combined" uses the past tense of the verb "combine", and since currently does not modify that term in any way, it clearly indicates that two or more items are, at the very present time, already combined. "Currently Combines" is the uses the present and future tenses of "combine", a form of the word that covers in the recent context of "Currently" present and future activities. In other words, the ability and

likelihood that BellSouth will in the near future, combine these elements as they would for a tariffed product.

Had Congress intended to restrict the UNE entry strategy so that it could **not** accomplish circuits possible over resale and collocation, (i.e. the connection of new service at a customers premises), it could have done so by the simple expedient of using the past tense of the word "combine", i.e. "combine**d**." That Congress did not choose that form, and instead used "Currently Combines", implicitly gives broader meaning to the term than what BellSouth seeks to have ordered in this case.

Q **WHAT SPECIFIC RELIEF IS REQUESTED BY SUPRA?**

Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, recognize the difference between "Currently Combines" and previous attempts to have the FPSC rule that it means "Currently Combined" . Supra requests a fining that "Currently Combines" is found to be representative of normal, expected, and possible future work done to establish a BellSouth tariffed telecommunications service and that Supra be granted full rights to effect the same via UNE combinations in such clear language that further litigation will not be necessary.

Supra requests that this Commission ensures that the Follow On Agreement include a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 23: Should BellSouth be directed to perform, upon request, the functions necessary to combine unbundled network elements that are ordinarily combined in its network? If so, what charges, if any, should apply?

---------- And ----------

Issue 24: Should BellSouth be required to combine network elements that are not ordinarily combined in its network? If so, what charges, if any, should apply?

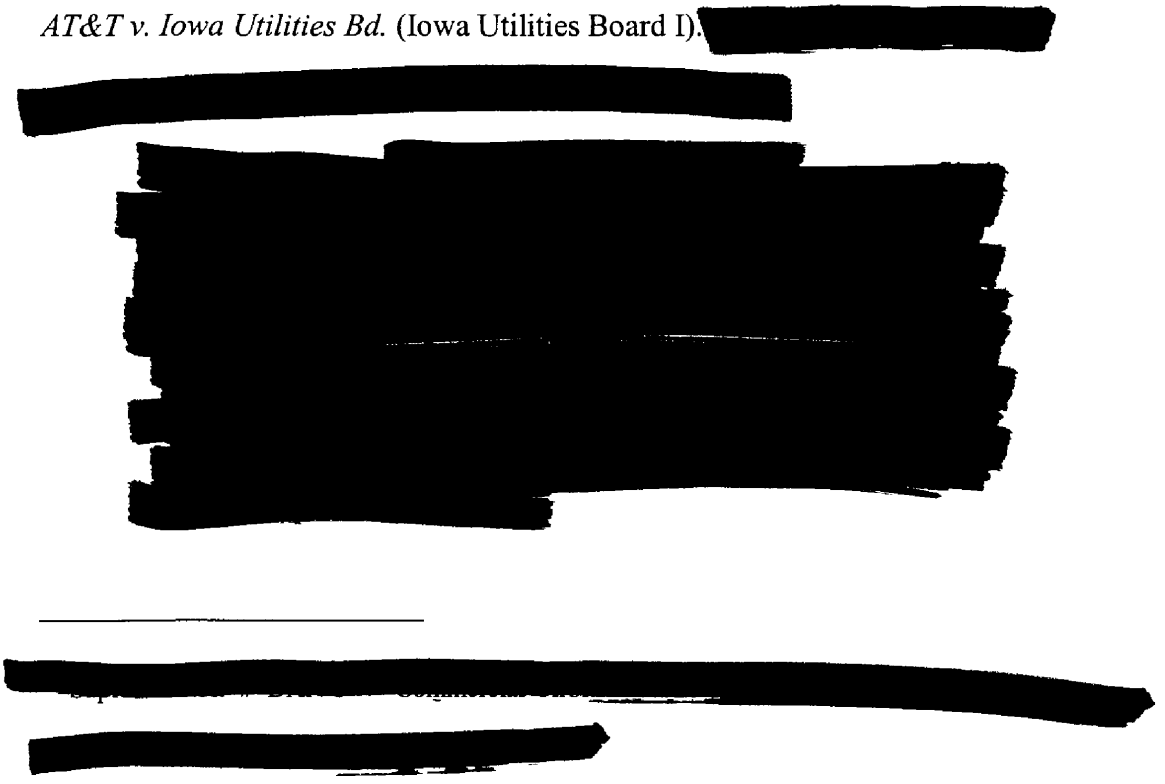
Q **ARE THERE ANY DIFFERENCES BETWEEN ISSUE 23 AND ISSUE 24?**

A. In seeking to escape its requirement to combine UNE(s) by arguing that BellSouth is only obligated to offer UNE combinations for circuits that are already combined, BellSouth has caused these two issues to be identical. Supra does not agree that BellSouth's position is sustainable given the current state of

the law, however in the interests of avoiding duplicative arguments, I will address these two issues simultaneously.

Q HAVE THE PARTIES ESTABLISHED ANY HISTORY REGARDING THE ORDERING OF UNE COMBINATIONS?

A. Yes. BellSouth, after having contracted with Supra Telecom to combine UNEs in not one, but two Interconnection Agreements, steadfastly refused to honor its contractual obligations. In fact, the first interconnection agreement between the parties contained provisions for cost based UNE combinations on the day it was signed by Supra Telecom. By the time it was filed with the FPSC, the Eighth Circuit Court made its ill-advised and subsequently overturned decision in *AT&T v. Iowa Utilities Bd.* (Iowa Utilities Board I).



Despite Supra's repeated attempts to order UNE combinations from this agreement, despite the fact that the altered Agreement was subsequently replaced with the correct version in Florida and the other 8 states where BellSouth filed altered agreements, BellSouth never provided a single UNE combination, ordering instructions of any kind, or even an OSS that was capable of ordering UNE combinations under that agreement.

To overcome BellSouth's refusal, Supra adopted the already arbitrated AT&T/BellSouth Agreement in Florida on October 5, 1999. Despite this Commission's unambiguous order that BellSouth was obligated under the Agreement to combine UNE(s) for [Supra] at cost based rates, and combine any UNE to any other UNE(s)[43], BellSouth still refused to accept orders, or provide OSS and / or effective ordering instructions, or to modify Supra's OSS profile to allow ordering of UNE combinations until June 18, 2001.

For its own reasons, BellSouth is willing to violate contractual and FPSC orders requiring it to provide UNE combinations at cost based rates, despite the specter of potential legal and financial penalties. (Thus proving to this Commission that the inclusion of a limitation of liability provision or inclusion of same without Supra's suggested exceptions, is not a viable incentive for BellSouth to comply with the terms of the Agreement nor state or federal law.) This should be

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[43] FPSC Order PSC-98-0810-FOF-TP

considered when listening to any BellSouth argument on this subject.

In an illustration of BellSouth's bad faith towards Supra in this regard the

In considering any of BellSouth's claims regarding UNE combinations, it is imperative to at all times view such claims in the light of BellSouth's proven record of refusal to comply with this Commission's orders, its contractual obligations, its "tortious intent to harm". It is BellSouth's policy to avoid providing cost based UNE combinations to competitors that forms the basis of their position on this issue. That policy is anti-competitive and designed to appear to regulatory bodies as " to give the impression of responding to Supra in a substantive manner, without actually doing so."

Q SHOULD BELLSOUTH BE DIRECTED TO PERFORM, UPON REQUEST, THE FUNCTIONS NECESSARY TO COMBINE

UNBUNDLED NETWORK ELEMENTS THAT ARE ORDINARILY COMBINED IN ITS NETWORK?

A. Yes.

Q WHAT IS THE LEGAL BASIS FOR THIS POSITION?

A. Despite the fact that BellSouth and Supra have had in continuous effect, since June of 1997, an agreement requiring that BellSouth provision recombined Network Elements for Supra at Cost based rates, Supra's current agreement expired without Supra ever being allowed to enjoy the benefits of ordering and receiving UNE combinations. It would not be improper to require BellSouth provide UNE combinations for no other reason than to compensate Supra for the deceitful denial of the contracted services since 1997.

Beyond that, the law is very clear on this issue despite the RBOCs attempts to avoid their responsibility by arguing otherwise for the past 5 years. C.F.R. 47 §51.309 states that BellSouth must provide without

> "limitations, restrictions, or requirements on request for, or the use of, unbundled network elements that that would impair the ability of a requesting telecommunications carrier to offer a telecommunications **service in the manner the requesting telecommunications carrier intends**." (Emphasis added)

The law clearly states **"in the manner the requesting telecommunications carrier intends."**[47] It does NOT state in the manner that BellSouth intends, nor does the Act make any provision for the ILEC to determine, limit, coerce, or

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[47] Id.

mandate an ALEC to limit the uses it has for a UNE to anything other than **"a telecommunications service"**[48]. The definition of a Telecommunications Service is as set forth in the Communications Act of 1934, as amended, by the Telecommunications Act of 1996:

> (46) TELECOMMUNICATIONS SERVICE. – The term telecommunications service means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.[49]

So as long as Supra is providing a telecommunications service, and not interfering with other users, BellSouth cannot dictate uses of UNEs, and they cannot require collocation as a method to combine the UNEs into services.

> "But whether an requesting carrier can access the incumbents network in whole or in part, we think that the Commission reasonably omitted a facilities ownership requirement. The 1996 Act imposes no such limitation; if anything it suggests the opposite, by requiring in § 251(c)(3) that incumbents provide access to "any" requesting carrier. **We agree with the Court of Appeals that the Commissions refusal to impose a facilities-ownership requirement was proper."** [50] (Emphasis added)

Yet BellSouth offers no information as to HOW such UNEs might be combined by an ALEC, given that the Supreme Court has ruled there can be no collocation requirement placed upon an ALEC for this purpose.

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[48] Id.
[49] The Communications Act of 1934, as amended, SEC 3(46) [47 U.S.C. 153] Definitions,
[50] **Error! Reference source not found.** *AT&T v. Iowa Utilities Bd.* 525 U.S. 366, 119 S.Ct 721 (Iowa Utilities Board II) at pg. 392.

Nor does BellSouth address how its arguments true up with the three prongs of the entry strategy as defined by the Act.

> 12. The Act contemplates three paths of entry into the local market -- the **construction of new networks, the use of unbundled elements of the incumbent's network, and resale.** The 1996 Act requires us to implement rules that eliminate statutory and regulatory barriers and remove economic impediments to each. We anticipate that some new entrants will follow multiple paths of entry as market conditions and access to capital permit. **Some may enter by relying at first entirely on resale of the incumbent's services and then gradually deploying their own facilities.** This strategy was employed successfully by MCI and Sprint in the interexchange market during the 1970's and 1980's. **Others may use a combination of entry strategies simultaneously -- whether in the same geographic market or in different ones. Some competitors may use unbundled network elements in combination with their own facilities to serve densely populated sections of an incumbent LEC's service territory, while using resold services to reach customers in less densely populated areas. Still other new entrants may pursue a single entry strategy that does not vary by geographic region or over time.** *Section 251 neither explicitly nor implicitly expresses a preference for one particular entry strategy. Moreover, given the likelihood that entrants will combine or alter entry strategies over time, an attempt to indicate such a preference in our section 251 rules may have unintended and undesirable results.* Rather, our obligation in this proceeding is to establish rules that will ensure that all pro-competitive entry strategies may be explored. **As to success or failure, we look to the market, not to regulation, for the answer** [51] (Emphasis Added)

BellSouth would have us believe that there is legal basis that allows UNE Combinations to be less effective, less pervasive, to offer fewer circuit variations,

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[51] 96-325 para 12 where the FCC defines the three pronged entry strategy provided for competitors under the Act. The FCC goes to great lengths to identify that the three prongs were equal and that they steadfastly avoided any distortions between the three prongs.

or to be provided to a smaller group of customers than resale or an ALECs own network. To subscribe to this would violate one of the most important tenant of the Act, so important it is documented in ¶ 12 of an order containing 1441 paragraphs. BellSouth cannot prevail on this issue without violating this section of the *First Report and Order.*

Q WHAT IS THE PREVAILING LAW ON THIS ISSUE?

A. UNE Combinations as an equal and effective means of providing Telecommunications services (in lieu of Resale or Collocation) is an issue that RBOCs in general and BellSouth in particular has vigorously fought since the Telecom Act was promulgated. After reviewing dozens of citations to prove this point, I feel nothing can illustrate this point as simply as the FCC's own words in *The UNE Remand Order* CC Order 99-238 at ¶ 12:

> **12. Only recently have incumbent LECs provided access to combinations of unbundled loops, switches, and transport elements,** often referred to as "the platform." Since these combinations of unbundled network elements have become available in certain areas, competitive LECs have started offering service in the residential mass market in those areas. For example, in January of this year, Bell Atlantic, as part of an agreement with the New York Public Service Commission, began offering the unbundled network element platform out of particular end offices in New York City. As a result, MCI WorldCom had acquired upwards of 60,000 new local residential customers in New York as of June 1999.[52] AT&T

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[52] CC Order 99-238 Footnote -- *Id.* at para. 17.

also plans to serve local residential customers over the platform in Texas.[53] (Emphasis Added)

Here the FCC Acknowledges that ALECs have been denied UNE combinations nationwide from the creation of the Act until limited deployment began in 1999. Supras own access to order UNE combinations is today extremely poor and was non-existent before June 18, 2001.[54]

As part of its grudging acceptance of its statutory obligation to provide UNE Combinations to ALECs in general and Supra in particular, BellSouth is still trying to limit its exposure by trying to limit the telecommunications circuits that can be provisioned by UNE combinations. Why? They know as we all do, that , only because the margins on Resale are so thin as to be non profitable for ALECs, and the startup costs for a collocated facilities based provider are so high (and the recent failure rate so obvious to us all), that if BellSouth can prevail on limiting the types of circuits that can be provided as UNE Combinations or UNE-P, then in effect, BellSouth will win the battle for local competition. Let us be very clear on this fact.

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[53] CC Order 99-238 Footnote -- Letter from Frank S. Simone, Government Affairs Director, AT&T, to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 96-98, Attachment at 4-5 (filed June 25, 1999).

To be perfectly clear, 47 CFR § 51.311 imposes a duty upon ILECs to provide unbundled network elements, as well as the quality of the access to such, at least at the level of quality equal or superior to that the ILEC provides to itself. At issue is who should be responsible for combining such network elements. Should the Commission impose the obligation upon Supra to combine such, Supra requests some guidance as to how the Commission proposes to allow Supra access to the requested network elements so as to be able to combine them.

1. There are two unanswered questions in BellSouth's view of this issue: Must an ALEC be allowed to combine UNE(s) without restriction.
2. If BellSouth is allowed to be relieved of its obligation to combine UNE(s) on behalf of the ALEC, how exactly will that be handled without violating other provisions of law.

Frankly this issue is so heavily intertwined with other law, that BellSouth's position is unsustainable.

First regarding the availability of network elements and combinations to ALECs, C.F.R. 47 §51.309 states that BellSouth must provide without

> "limitations, restrictions, or requirements on request for, or the use of, unbundled network elements that that would impair the ability of a requesting telecommunications carrier to offer a telecommunications service **in the manner the requesting telecommunications carrier intends.**" (Emphasis added)

Combinations of UNEs were upheld by the Supreme Court in *AT&T v. Iowa Utilities Bd.* 525 U.S. 366, 368(1999)(Iowa Utilities Board II):

> (d) Rule 315(b), which forbids incumbents to separate already-combined network elements before leasing them to competitors, reasonably interprets § 251(c)(3), which establishes the duty to provide access to network elements on **nondiscriminatory rates, terms, and conditions and in a manner that allows requesting carriers to combine such elements that** *are* **provided in discrete pieces, but it does not say, or even remotely imply, that elements** *must* **be provided in that fashion**. Pp 736-738. (Bold emphasis added, Italics by the Supreme Court)

Here it could not be clearer -- UNE(s) Sold by the ILEC must be provided in a form that allows them to be combined at the ALECs request. It does not necessarily say that the ALEC must perform the work themselves. In fact, the final thought is that ILEC may provide the combinations themselves to avoid having to allow the ALEC to effect the combination. It also deals with "nondiscriminatory ... terms". If the ILEC is providing a tariffed telecommunications service, the ALEC must have the right to duplicate that service using UNEs. Said UNEs must be provided combined as requested or in a manner that allows recombination. No BFR process or other anti-competitive barrier must be allowed to bar an ALEC's ability to compete with the ILEC for business on tariffed communications services. Here again we look to *AT&T v. Iowa Utilities Bd.* 525 U.S. 366, 736 (1999) for guidance:

> TELRIC allows an entrant to lease network elements based on forward looking costs, Rule 319 subjects virtually all network elements to the unbundling requirement, and the all-elements rule allows requesting carriers to rely only on the incumbents network in provising service. When rule 315(b) is added to these, a competitor can lease a complete, preassembled network at (allegedly very low) cost based rates. (Emphasis added)

The Supreme Court reaffirms that all network elements, up to and including the **entire** BellSouth network may be leased from BellSouth at cost based rates. Such language defies any attempt to limit the scope of these issues.

The final Agreement language presented must be very clear in terms that all UNE equivalents of all tariffed communications are covered in the base agreement and that the ALEC may combine any UNE with any other UNE(s) at their request.

Second on the issue of who will combine UNE(s), the Supreme Court has already ruled that collocation cannot be a requirement placed upon an ALEC for this purpose. In fact, in *AT&T v. Iowa Utilities Bd.* 525 U.S. 366, 392 (1999), the Supreme Court held that facilities ownership **was not** a requirement that LECs may impose upon an ALEC for the use or combination of a UNE:

> "But whether an requesting carrier can access the incumbents network in whole or in part, we think that the Commission reasonably omitted a facilities ownership requirement. The 1996 Act imposes no such limitation; if anything it suggests the opposite, by requiring in § 251(c)(3) that incumbents provide access to "any" requesting carrier. **We agree with the Court of Appeals that the Commissions refusal to impose a facilities-ownership requirement was proper."** [55] (Emphasis added)

So if BellSouth is not allowed to require Supra to collocate in order to effect recombination of UNE(s), how then will the combination be effected? BellSouth

seeks an anti-competitive advantage in shirking its responsibility to combine network elements while simultaneously seeking to avoid providing a means for competitive LECs to do so for themselves. The **only** way BellSouth's positions could be sustained on this issue is if **all** competitors had the unbridled right to enter any and all BellSouth central offices for the purpose of effecting their own crossconnects, facilities assignments and switch translations. Such ALECs would need to be provided full access to all BellSouth OSS's including PREDICTOR, LFACS, COSMOS, ERMA and all other facilities and provisioning interface that are currently restricted from ALEC access. This is not a revolutionary idea. In 1996, AT&T got BellSouth to agree to this access by AT&T personnel if BellSouth refused to combine any UNE to any other UNE at AT&T's request. Since we are negotiating a follow-on agreement to that very agreement, this language is necessary to protect Supra and other ALECs from BellSouth's anti-competitive tactics. Short of providing that relief to all ALECs, BellSouth must not be allowed to prevail on this issue.

Q **IS THERE ANY OTHER TESTIMONY YOU WISH TO OFFER?**

A. Yes. I wish to adopt the Direct Testimony of Gregory R. Follensbee, formerly of AT&T now the lead contract negotiator at BellSouth for Supra's Interconnection agreement with BellSouth. This testimony was filed in Florida

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[55] -- *AT&T v. Iowa Utilities Bd.* 525 U.S. 366, 119 S.Ct 721 (Iowa Utilities Board II) at pg. 392.

Docket 00-731, AT&T's Interconnection Agreement arbitration against BellSouth.[56]

In this context I will be adopting his testimony in regard to AT&T issue numbers 23 and 24 as related to the cost issues Mr. Follensbee testified to in AT&T issue 6, which resides on pages 5-9 of his testimony. The only exception I take to Mr. Follensbee is that Supra is not requesting this Commission to make a finding on the cancellation charges for tariffed services. Supra does request that this Commission order language allowing combination of network elements as ordered by Supra, regardless of whether or not they re-create Tariffed services.

Q **ARE THERE ANY OTHER ISSUES REGARDING THIS QUESTION?**

A. In the recent AT&T v. BellSouth arbitration (Docket 00-731-TP) the staff recommendation contains the following quotation:

> Though framed in a different manner, this issue is similar to an issue in the recent arbitration in Docket No. 000828-TP, the Sprint/BellSouth arbitration. In **this** case, however, the specific issue considers whether the aggregation **of** lines provided to multiple locations **of** a single customer is allowable in determining whether BellSouth must offer unbundled local switching as a UNE.

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[56] Supra Exhibit # DAN-5-- Direct Testimony of Gregory R. Follensbee, formerly of AT&T now the lead contract negotiator at BellSouth for Supra's Interconnection agreement with BellSouth. This testimony was filed in Florida Docket 00-731, AT&T's Interconnection Agreement arbitration against BellSouth.

> As in the Sprint/BellSouth arbitration, an underlying assumption is that alternative switching providers are likely to be located in the Density Zone 1 areas in Florida, which include the Miami, Orlando, and Ft. Lauderdale Metropolitan Statistical Areas (MSAs) .

It is not merely enough to **assume** that there is local switching available to meet the FCC requirement, because there really isn't such a supply. Look at the record. Bot AT&T and Sprint, arguably the 1st and 3rd largest CLEC organizations in the country **both** petitioned the FPSC to require BellSouth to sell Unbundled Local Switching. If these two behemoths cant

1. Supply their own switching in the top 50 MSA's
2. Have enough clout in the industry to identify suppliers of unbundled switching that can provide same to customers of BellSouth's UNEs,

then frankly, the supply doesn't actually exist. Supra maintains that the availability of Unbundled Local Switching in the Top 50 MSA's is an illusory issue. It should exist, but it doesn't.

BellSouth bears the burden of proof in this case and should be required to prove to this Commission that a supply of Unbundled Local Switching exists to allow customers of its EEL UNE to obtain local switching without the need for facilities ownership by the ALEC, which would be prohibited by *AT&T v. Iowa Utilities Bd.* (Iowa Utilities Board II).

This Commission should order BellSouth to prove that a discontinuation of the unbundled Local Switching Product will not affect the telephone subscribers of Florida. Supra has over 70,000 customer lines served by UNE combinations. Is the Commission clear on what will happen to these customers is BellSouth is allowed to discontinue Local Switching UNE, or raise its rate from $1.62 to $14.00 (or more) per port? The potential for BellSouth to exercise anti-competitive behavior is too great for the FPSC not to regulate this issue further.

Q **WHAT SPECIFIC RELIEF IS SOUGHT BY SUPRA?**

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, BellSouth should be directed to perform, upon request, the functions necessary to combine unbundled network elements that are ordinarily combined in its network. Further BellSouth should be required to combine network elements that are not ordinarily combined in its network.

In the abundance of caution, should this Commission rule against this specific relief, Supra would request that BellSouth be ordered to provide all UNEs to Supra Telecom in a manner that allows Supra Telecom to effect their own crossconnects, facilities assignments and switch translations and any other tasks required to combine UNE(s). Such ALECs would need to be provided full access to all BellSouth OSS functions supported by an BellSouth's databases and information, including PREDICTOR, LFACS, COSMOS, ERMA and all other

facilities and provisioning interfaces and OSS functions that are currently restricted from ALEC access. This language should be inserted in the language as a contract defined alternate requirement on BellSouth if for **any** reason (manpower shortage, strike, Act of God, anti-competitive behavior on BellSouth's part, etc.) This provision should be invoked automatically anytime BellSouth refuses to perform combination of one or more Unbundled Network Elements where the equivalent circuit could and would be provisioned by BellSouth as a Retail or other tariffed service.

The labor to effect such combinations should be performed by BellSouth at TELRIC cost. This should be reflected as a one time, non recurring cost, constant with the manner in which it is performed and the number of carriers that will benefit (Supra alone).

There shall be no monthly recurring costs charged for elements that do not have a physical representation (i.e. they don't exist). All elements shall be charged to Supra at TELRIC cost.

Supra shall have rights to exclusive use of unbundled loop elements, regardless if the UNE is used alone, or in combination with other network elements provided by BellSouth or any other carrier.

This Commission should order BellSouth to prove that a discontinuation of the unbundled Local Switching Product will not affect the telephone subscribers of Florida.

Supra requests that this Commission ensures that the Follow On Agreement include a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 25 B: Should UNEs ordered and used by Supra Telecom be considered part of its network for reciprocal compensation, switched access charges and inter/intra LATA services?

Q SHOULD UNES ORDERED AND USED BY SUPRA TELECOM BE CONSIDERED PART OF ITS NETWORK FOR RECIPROCAL COMPENSATION, SWITCHED ACCESS CHARGES INTER/INTRA

LATA SERVICE, COMMON CARRIER IN TRANSPORT / TANDEM CHARGES AND SUBSCRIBER LINE CHARGES (EUCL).

A. Yes.

Q CAN YOU EXPLAIN THE ISSUES REGARDING THE MONTHLY RECURRING CHARGES COLLECTED FROM OTHER CARRIERS AS IT PERTAINS TO THIS QUESTION?

A. Certainly. I explained the issues related to reciprocal compensation in my answer to issue 14 and will adopt that answer fully in partial answer to this question. Specifically the cite I presented there to the FCC CALLS order (00-193) at ¶ 5 bears repeating:

> 5. For much of this century, most telephone subscribers obtained both local and long-distance services from the same company, the pre-divestiture Bell System, owned and operated by AT&T. Its provision of local and intrastate long-distance services through its wholly-owned operating companies, the Bell Operating Companies (BOCs), was regulated by state commissions. The Commission regulated AT&T's provision of interstate long-distance service. **Much of the telephone plant that is used to provide local telephone service, such as the local loop,[57] is also needed to originate and terminate interstate long-distance calls. Consequently, a portion of the costs of this common plant historically was assigned to the interstate jurisdiction and recovered through the rates that AT&T charged for interstate long-distance calls.** *The balance of the costs of the common plant was assigned to the intrastate jurisdiction and recovered through the charges for intrastate services regulated by the state commissions.* **The system of allocating costs between the interstate and intrastate jurisdictions is known as the separations process.**

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[57] 96-325 footnote -- A local loop is the connection between the telephone company's central office building and the customer's premises.

> The difficulties inherent in allocating the costs of facilities that are used for multiple services between the two jurisdictions are discussed below. (Emphasis added).

This issue, like issue 14, is related to the recovery of costs for services provided under one jurisdiction where some or all of the circuit facilities are provided by a service provider providing services under another jurisdiction. In this rather than the carrier to carrier cost recovery exclusively discussed in issue 14, where are here also discussing the recovery of costs that must be properly and separately allocated to intraLATA, intrastate, and interstate jurisdictions. Again a reminder that cost recovery cannot exceed 100% of cost. To better understand these charges I refer to the FCC's *First Report and Order* at ¶ 718 for the cost recovery a LEC (ILEC or ALEC) is entitled to recover from other telecommunications carriers:

> 718. The access charge system includes non-cost-based components and elements that at least in part may represent subsidies, such as the carrier common line charge (CCLC) and the transport interconnection charge (TIC). **The CCLC recovers part of the allocated interstate costs for incumbent LECs to provide local loops to end users.** In the universal service NPRM, we observed that the CCLC may result in higher-volume toll users paying rates that exceed cost, and some customers paying rates that are below cost. We sought comment on whether that subsidy should be continued, and on whether and how it should be restructured.[58] **The nature of most of the revenues recovered through the TIC is unclear and subject to dispute, although a portion of the TIC is associated with certain costs related to particular transport facilities. Although the TIC was not created to subsidize local rates, some parties have argued in the *Transport***

[58] 96-325 footnote -- *Universal Service* NPRM at paras. 113-14.

> **proceeding and elsewhere that some portion of the revenues now recovered through the TIC may be misallocated local loop or intrastate costs that operate to support universal service.**[59] In the forthcoming access reform proceeding, we intend to consider the appropriate disposition of the TIC, including the development of cost-based transport rates as directed by the United States Court of Appeals for the District of Columbia Circuit in *Competitive Telecommunications Association v. FCC* (*CompTel v. FCC*).[60] (Emphasis added)

Such is the nature of the cost recovery from other telecommunications in support of the costs of supplying local service utilized by long distance carriers on a monthly recurring basis. I would note that as citations are presented from 96-325 the TIC charge is alternately referred to as Transport and/or Tandem Interconnection charge. This is one combined charge.

Q PLEASE EXPLAIN THE MONTHLY RECURRING CHARGES COLLECTED FROM END USER SUBSCRIBERS IN SUPPORT OF UNIVERSAL SERVICE.

A. The Subscriber Line Charge (SLC) has many names. It is often known as EUCL (End User Common Line Charge or even the FCC charge for network

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[59] 96-325 footnote -- *Transport Rate Structure and Pricing*, CC Docket No. 91-213, Report and Order and Further Notice of Proposed Rulemaking, 7 FCC Rcd 7006, 7065-7066 (1992) (*First Transport Order*). *Cf.* Letter from Bruce K. Cox, Government Affairs Director, AT&T, to William F. Caton, Acting Secretary, FCC, September 7, 1995 (filed in CC Docket No. 91-213) (suggesting that TIC revenues not allocable to specific transport facilities may represent misallocated common line costs).

[60] 96-325 footnote -- *Competitive Telecommunications Association v. FCC*, No. 96-1168 (D.C. Cir. July 5, 1996).

access on BellSouth's retail bills.) The FCC provides a definition of this charge in the *First Report and Order* at ¶ 364:

> 364. We further conclude that when a carrier purchases a local loop for the purpose of providing interexchange services or exchange access services,[61] **incumbent LECs may not recover the subscriber line charge (SLC) now paid by end users. The SLC recovers the portion of loop costs allocated to the interstate jurisdiction,** but as discussed in Section II.C, *supra*, **we conclude that the 1996 Act creates a new jurisdictional regime outside of the current separations process.** The **unbundled loop charges paid by new entrants under section 251(c)(3) will therefore recover the unseparated cost of the loop, including the interstate component now recovered through the SLC. If end users or carriers purchasing access to local loops were required to pay the SLC in this situation, LECs would enjoy double recovery, and the effective price of unbundled loops would exceed the cost-based levels required under section 251(d)(1).** (Emphasis added)

This section quite shows that if BellSouth were to collect SLC (a.k.a. EUCL) from Supra Telecom, BellSouth would inherently enjoy double recovery of this money, which of course is improper. SLC being a pass through charge is rightfully collected by Supra from the end user and retained, as Supra has already paid BellSouth its portion of this subsidy through the purchase of the specific unbundled elements under which BellSouth is entitled to such subsidy.

Q ARE THERE ADDITIONAL CHARGES INVOLVED?

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[61] 96-325 footnote -- As discussed at *infra*, Section VIII, a different result will occur when interconnecting carriers purchase LEC retail services at wholesale rates under section 251(c)(4).

A. Absolutely, CCLC and SLC are fixed monthly recurring charges in support of universal service. Reciprocal compensation is cost recovery that any LEC is entitled to recover for termination **local** calls originated on another carrier network. By the same token, the same LEC is responsible for paying the equivalent reciprocal compensations charges for calls originated on his network.

Access charges recover the same costs for originating an terminating Long Distance calls on a carriers network. Since there is both a local long distance provider (intraLATA LPIC) in addition to an intra/interstate provider (PIC) these charges are further separated into intraLATA and intra/interstate separations

In the background section of the Access charges section of *First Report and Order* at ¶ 344 the FCC documented:

> 344. Finally, in the NPRM, we tentatively concluded that, if carriers purchase unbundled elements to provide exchange access services to themselves, irrespective of whether they provide such services alone or in connection with local exchange services, **incumbent LECs cannot assess Part 69 access charges in addition to charges for the cost of the unbundled elements.** We based this tentative conclusion on the view that the imposition of access charges in addition to cost-based charges for unbundled elements would depart from the statutory mandate of cost-based pricing of elements.[62] (Emphasis added)

[62] 96-325 footnote -- NPRM at para. 165.

Lest there be any argument that this finding was tentative at the point it was made, the FCC re-affirmed its position on access charges once again in its conclusion *First Report and Order* at ¶ 356

> 356. **We confirm our tentative conclusion in the NPRM** that section 251(c)(3) permits interexchange carriers and all other requesting telecommunications carriers, to purchase unbundled elements for the purpose of offering exchange access services, or for the purpose of providing exchange access services to themselves in order to provide interexchange services to consumers.[63] Although we conclude below that we have discretion under the 1934 Act, as amended by the 1996 Act, to adopt a limited, transitional plan to address public policy concerns raised by the bypass of access charges via unbundled elements, **we believe that our interpretation of section 251(c)(3) in the NPRM is compelled by the plain language of the 1996 Act. As we observed in the NPRM, section 251(c)(3) provides that requesting telecommunications carriers may seek access to unbundled elements to provide a "telecommunications service," and exchange access and interexchange services are telecommunications services. Moreover, section 251(c)(3) does not impose restrictions on the ability of requesting carriers "to combine such elements in order to provide such telecommunications service[s]."[64] Thus, we find that there is no statutory basis upon which we could reach a different conclusion for the long term.** (Emphasis added).

> 357. We also confirm our conclusion in the NPRM that, for the reasons discussed below in section V.J, **carriers purchase rights to exclusive use of unbundled loop elements,** and thus, as the Department of Justice and Sprint observe, such carriers, as a practical matter, will have to provide whatever services are requested by the customers to whom those loops are dedicated. **This means, for example, that, if there is a single loop dedicated to the premises of a particular customer and that**

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[63] 96-325 footnote -- *See* NPRM at paras. 159-65.

[64] 96-325 footnote -- 47 U.S.C. § 251(c)(3).

customer requests both local and long distance service, then any interexchange carrier purchasing access to that customer's loop will have to offer both local and long distance services. That is, interexchange carriers purchasing unbundled loops will most often not be able to provide solely interexchange services over those loops.

358. We reject the argument advanced by a number of incumbent LECs that section 251(i) demonstrates that requesting carriers using unbundled elements must continue to pay access charges. Section 251(i) provides that nothing in section 251 "shall be construed to limit or otherwise affect the Commission's authority under section 201."[65] We conclude, however, that our authority to set rates for these services is not limited or affected by the ability of carriers to obtain unbundled elements for the purpose of providing interexchange services. Our authority to regulate interstate access charges remains unchanged by the 1996 Act. What has potentially changed is the volume of access services, in contrast to the number of unbundled elements, interexchange carriers are likely to demand and incumbent LECs are likely to provide. When interexchange carriers purchase unbundled elements from incumbents, they are not purchasing exchange access "services." They are purchasing a different product, and that product is the right to exclusive access or use of an entire element. Along this same line of reasoning, we reject the argument that our conclusion would place the administration of interstate access charges under the authority of the states. When states set prices for unbundled elements, they will be setting prices for a different product than "interstate exchange access services." Our exchange access rules remain in effect and will still apply where incumbent LECs retain local customers and continue to offer exchange access services to interexchange carriers who do not purchase unbundled elements, and also where new entrants resell local service.[66] (Emphasis added)

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[65] 96-325 footnote -- 47 U.S.C. § 251(i).

[66] 96-325 footnote -- The application of our exchange access rules in the circumstances described will continue beyond the transition period described at *infra,* Section VII.

Here the FCC clearly rejects BellSouth's position that they are entitled to collect usage based access charges for traffic exchanged over unbundled loops sold to ALECs by BellSouth. The FCC limits BellSouth's ability to collect Part 69 access charges to **"interexchange carriers who do not purchase unbundled elements, and also where new entrants resell local service."** Thus is a carrier purchase tariffed access products, rather than UNE(s), or for an ALEC under resale are the only tow conditions where BellSouth is entitled to this revenue.

Lest there be any further disagreement, the FCC is quite clear on this issue in the *First Report and Order* at ¶ 717:

> 359. Specifically, as we conclude above, the 1996 Act permits telecommunications carriers that purchase access to unbundled network elements from incumbent LECs to use those elements to provide telecommunications services, including the origination and termination of interstate calls. **Without further action on our part, section 251 would allow entrants to use those unbundled network facilities to provide access services to customers they win from incumbent LECs, without having to pay access charges to the incumbent LECs.** This result would be consistent with the long term outcome in a competitive market. In the short term, however, while other aspects of our regulatory regime are in the process of being reformed, such a change may have detrimental consequences. (Emphasis added)

Q DOES BELLSOUTH'S POSITION SUPRISE YOU?

A. Not at all. BellSouth has consistently and repeatedly violated this rule by exercising its monopoly powers. BellSouth controls the billing records for all calls generated on its switch(es). Despite arbitration before the Florida Public Service Commission, the original Interconnection agreement between AT&T and

BellSouth only specified a limited set of billing records to be submitted to AT&T. Despite arbitration orders PSC-98-0604-FOF-TP and PSC-98-0810-FOF-TP, BellSouth continues to keep billing records it contracted to provide, that it was ordered to provide by the FPSC, and that which would be necessary to fulfill its legal obligations to Supra as defined above. Lacking a serious penalty for failure in this matter, Supra believes that BellSouth will continue to defy the Florida and Federal Commissions in this regard.

Q **WHY IS THAT?**

A. There is a lot of money involved. Take for example a long distance provider providing service for a telephone call between a BellSouth customer in Jacksonville and a BellSouth customer in Miami. Assume that the long distance company is charging its customer five (5) cents per minute. BellSouth collects an origination fee from the long distance company of 2.1[67] cents per minute for its originating customers. BellSouth also collects another 2.1 cents per minute for its terminating customers. So out of the long distance companies 5 cent per minute rate, 4.2 cents flows directly to BellSouth **without BellSouth ever getting 271 approval!** The long distance company must suffer competition with the remaining 0.8 cents per minute as its only revenue. Because in this example they are keeping 84% of every dollar spent on long distance between two BellSouth

[67] Data based upon MCI/ Worldcom database of LEC origination and termination charges nationwide. BellSouth's rates in this regard are among the highest ILEC in the nation.

customers, and 42% of every other long distance dollar spent calling to or from a BellSouth customer in Florida, BellSouth is collecting more revenue than most IXC operating in Florida without ever having to obtain 271 approval. Since that is the one issue that is most often quoted as the reason regulators expect BellSouth's compliance with their laws and orders, I submit that BellSouth has no motivation whatsoever for compliance with any regulatory order that is not backed up with sufficiently large financial penalties that can be brought to bear on the ILEC immediately without significant legal recourse for the ILEC to effect a delay. Substantial dollars flow into BellSouth's war chest for every day they illegally collect revenue due other carriers. Only a fraction is ever collected back from BellSouth by ALECs.

BellSouth is financially motivated to ignore laws, orders and regulations on this matter and only when there are binding penalties will ALECs in the BellSouth region achieve what Congress intended in passing the Act.

Q **WHAT SPECIFIC RELIEF DOES SUPRA SEEK?**

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue. The law allows supra to collect CCLC, TIC, SLC, reciprocal compensation, and access charges as proscribed by law. Supra has a responsibility to turn none of this revenue to BellSouth. BellSouth is prohibited from collecting CCLC, TIC, SLC, and access charges from any circuit served by UNE or UNE combination(s). BellSouth is

entitled to collect reciprocal compensation for calls originated by Supra customer terminated to a BellSouth customer.

BellSouth must be ordered to provide **all** detail records, not a filtered subset thereof. BellSouth must be enjoined from attempting to collect CCLC, TIC, SLC, and access charges for any line served by a UNE or UNE Combinations. This restriction MUST be supported by sufficient financial penalties immediately collectable as to discourage BellSouth willful and intentional violations of the law.

Supra shall have rights to exclusive use of unbundled loop elements, regardless if the UNE is used alone, or in combination with other network elements provided by BellSouth or any other carrier. Supra requests that this Commission ensure that the Follow On Agreement include a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 27: Should there be a single point of entry within each LATA for the mutual exchange of traffic? If so, how should the single point be established determined?

Q **WHAT IS THIS ISSUE ABOUT?**

A. Supra wishes to designate a technically feasible single point of interconnection (POI) in each LATA of its choosing for the interconnection of its network with BellSouth's network. Many LATAs in the BellSouth region are served by more than one, physically separated tandem switch. Of particular example in Florida alone the South Florida (Miami, Ft Lauderdale, West Palm) market is served by three tandem switches, Orlando and Jacksonville by two. Supra believes that traffic brought to BellSouth or from BellSouth at one point in the LATA is all that should be required for interconnection. This is exactly what BellSouth promised Supra at our first network planning meeting held on June 4, 1998, and at the inter company meeting held in Birmingham on March 28 2000. I was never notified that BellSouth held a different position until this arbitration.

Frankly, I don't understand why BellSouth has changed its mind. Supra understands that the law requires each carrier to maintain its own costs of transportation to the interconnection point. Thus, under BellSouth's proposal, Supra would be responsible for carrying the traffic of BellSouth customers calling Supra customers in West Palm, and then **also** be required to carry the traffic of Supra customers calling BellSouth customers. This is inherently unfair, and it

would place a larger percent of the burden on Supra rather than an arrangement that is equal.

Since BellSouth is Supra's transport vendor of choice in the LATA, they would also be reaping the benefit of supplying the transport! Clearly BellSouth cannot be allowed to prevail on this issue.

Q WHAT IS SUPRA'S POSITION?

A. The FCC's Local Competition Order is unambiguous when it states at paragraph 172 that "The interconnection obligation of section 251(c)(2), discussed in this section, allows competing carriers to choose the most efficient points at which to exchange traffic with incumbent LECs, thereby lowering the competing carriers' cost of, among other things, transport and termination of traffic." Subsequently, at paragraph 176 of the Local Competition Order, FCC 96-325, the FCC states that "we conclude the term "interconnection" under section 251 (c)(2) refers only to the physical linking of two networks for the mutual exchange of traffic." As such, it is Supra, not BellSouth, who is entitled to select the POIs for the mutual exchange of traffic.

Q **WHAT SPECIFIC RELIEF DOES SUPRA SEEK?**

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, Supra requests

that this Commission include language that BellSouth **shall not require** Supra to effect interconnection with more than one point of interconnection per LATA.

Both parties shall bear their own respective costs for transport of traffic to the Point of Interconnection.

Nothing in this issue relieves BellSouth of its responsibility to provide interconnection at more than one technically feasible Point of Interconnection if so requested by Supra.

Supra requests that this Commission ensure that the Follow On Agreement include a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 28: What terms and conditions and what separate rates if any should apply for Supra Telecom to gain access to and use BellSouth facilities to serve multitenant environments?

Q **WHAT ARE THE ISSUES SURROUNDING THIS QUESTION?**

A. This issue of access to facilities to serve multitenant environments is largely an issue surrounding recent law regarding subloop unbundling. If not, it should be. Why it remains an issue in this docket is beyond my understanding. In the *UNE Remand Order* (CC order 99-238), the FCC addressed this issue head-on. First the FCC defines the nature of the problem and assigns a portion of the responsibility to state commissions to resolve specific technical issues regarding the location of the demarc point that vary by state due to differences in the outside plant design:

> 224. Our approach to subloop unbundling permits evaluation of the technical feasibility of subloop unbundling on a case-by-case basis, and takes into account the different loop plant that has been deployed in different states. We find that the questions of technical feasibility, including the question of whether or not sufficient space exists to make interconnection feasible at assorted huts, vaults, and terminals, and whether such interconnection would pose a significant threat to the operation of the network, are fact specific. **Such issues of technical feasibility are best determined by state commissions, because state commissions can examine the incumbent's specific architecture and the particular technology used over the loop, and thus determine whether, in reality, it is technically feasible to unbundle the subloop where a competing carrier requests.** [68] We also note we are

[68] CC order 99-238 Footnote --*See, e.g.*, Florida PSC Comments at 8; Iowa Comments at 9; Ohio PUC Comments at 18. *See also* Kentucky PSC Comments at para. 1; New York DPS Comments at 6.

considering legal issues regarding access to premises in the *Access to Competitive Networks* proceeding.[69] (Emphasis added)

The FCC goes on to deal with issues that could arise when an ever increasing number of carriers all want access to a specific premises for the purposes of providing service. Supra endorses the approach offered by SBC that was ultimately documented as law in § 51.319(a)(2)(E) -- the single point of interconnection shared by all carriers and established by the ILEC. *UNE Remand Order* (CC order 99-238) ¶ 225:

225. We further note that SBC proposes to avoid difficulties associated with competing carriers serving multi-unit premises by eliminating multiple demarcation points in favor of a single demarcation point, which, according to SBC, would remedy competitive LECs' concerns.[70] OpTel similarly suggests that the incumbent should provide a single point of interconnection at or near the property line of multi-unit premises.[71] OpTel further maintains that the cost of any network reconfiguration required to create a point of interconnection that would be accessible to multiple carriers should be shared by all the carriers concerned.[72] (Emphasis added)

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69 CC order 99-238 Footnote --See Competitive Networks Notice at para. 28 et seq.

70 CC order 99-238 Footnote --SBC Reply Comments at 9 (citing OpTel Comments at 10; Teligent Comments at 3).

71 CC order 99-238 Footnote --OpTel Comments at 10.

72 CC order 99-238 Footnote --*Id.*

Then the FCC states its own conclusion after hearing testimony and reading comments of those who responded to the NPRM *UNE Remand Order* (CC order 99-238) ¶ 226:

> 226. Although we do not amend our rules governing the demarcation point in the context of this proceeding, **we agree that the availability of a single point of interconnection will promote competition.**[73] To the extent there is not currently a single point of interconnection that can be feasibly accessed by a requesting carrier, we encourage parties to cooperate in any reconfiguration of the network necessary to create one. If parties are unable to negotiate a reconfigured single point of interconnection at multi-unit premises, we require the incumbent to construct a single point of interconnection that will be fully accessible and suitable for use by multiple carriers.[74] Any disputes regarding the implementation of this requirement, including the provision of compensation to the incumbent LEC under forward-looking pricing principles, shall be subject to the usual dispute resolution process under section 252.[75] We emphasize that this principle in no way diminishes a carrier's right to access the loop at any technically feasible point, including other points at or near the customer premises. We also note that unbundling inside wire, and access to premises facilities in general, present specific technical issues, and that we have sought additional comment on these issues in our *Access to Competitive Networks* proceeding.[76] If the record developed in that proceeding demonstrates the need for additional federal guidance on legal or technical feasibility issues related to subloop unbundling, we will provide such additional guidance, consistent with the policies established in this Order.[77] (Emphasis added)

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[73] CC order 99-238 Footnote --*See* 47 C.F.R. § 68.3.

[74] CC order 99-238 Footnote --The incumbent is obligated to construct the single point of interconnection whether or not it controls the wiring on the customer premises.

[75] CC order 99-238 Footnote --*See* 47 U.S.C. § 252

[76] CC order 99-238 Footnote --*See generally Competitive Networks Notice* at paras. 49-51 and 65-67.

[77] CC Order 99-238 in Docket No. 96-98 -- Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 at ¶ 224-226.

The FCC goes on in CC Order 99-238 to document the changes to 47 C.F.R. §51.317, 51.319 and 51.5 in Appendix C. There, §51.319(a)(1 and 2) define the demarcation point for loop and subloop regardless of whether they serve multitenant or not, and defines Inside Wire as network element and specifies its demarc subject to further examination in the *Network Access* docket. It then goes on to define the specific requirements for multi-unit premises in 51.319(a)(2)(E), discussed above. The version of Rule 319 as modified by CC Order 99-238 appears below. Supra expects only that its rights as represented by this rule be ordered by this Commission in answer to this issue and all others in this arbitration: *UNE Remand Order* (CC order 99-238) Appendix C:

§ 51.319 Specific unbundling requirements.

(a) *Local Loop and Subloop.* An incumbent LEC shall provide nondiscriminatory access, in accordance with § 51.311 and section 251(c)(3) of the Act, to the local loop and subloop, including inside wiring owned by the incumbent LEC, on an unbundled basis to any requesting telecommunications carrier for the provision of a telecommunications service.

(1) *Local Loop.* **The local loop network element is defined as a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and the loop demarcation point at an end-user customer premises, including inside wire owned by the incumbent LEC.** The local loop network element includes all features, functions, and capabilities of such transmission facility. Those features, functions, and capabilities include, but are not limited to, **dark fiber, attached electronics (except those electronics used for the provision of advanced services, such as Digital Subscriber Line Access Multiplexers), and line conditioning. The local loop includes, but is not limited to, DS1, DS3, fiber, and other high capacity loops.**

(2) *Subloop.* The subloop network element is defined as **any portion of the loop that is technically feasible to access at terminals in the incumbent LEC's outside plant, including inside wire.** An accessible terminal is any point on the loop

where technicians can access the wire or fiber within the cable without removing a splice case to reach the wire or fiber within. **Such points may include, but are not limited to, the pole or pedestal, the network interface device, the minimum point of entry, the single point of interconnection, the main distribution frame, the remote terminal, and the feeder/distribution interface.**

(A) *Inside Wire.* Inside wire is defined as all loop plant owned by the incumbent LEC on end-user customer premises as far as the point of demarcation as defined in § 68.3, including the loop plant near the end-user customer premises. **Carriers may access the inside wire subloop at any technically feasible point including, but not limited to, the network interface device, the minimum point of entry, the single point of interconnection, the pedestal, or the pole.**

(B) *Technical feasibility.* If parties are unable to reach agreement, pursuant to voluntary negotiations, as to whether it is technically feasible, or whether sufficient space is available, to unbundle the subloop at the point where a carrier requests, **the incumbent LEC shall have the burden of demonstrating to the state, pursuant to state arbitration proceedings under section 252 of the Act, that there is not sufficient space available, or that it is not technically feasible, to unbundle the subloop at the point requested.**

(C) *Best practices.* **Once one state has determined that it is technically feasible to unbundle subloops at a designated point, an incumbent LEC in any state shall have the burden of demonstrating, pursuant to state arbitration proceedings under section 252 of the Act, that it is not technically feasible, or that sufficient space is not available, to unbundle its own loops at such a point.**

(D) *Rules for collocation.* Access to the subloop is subject to the Commission's collocation rules at §§ 51.321-323.

(E) *Single point of interconnection.* **The incumbent LEC shall provide a single point of interconnection at multi-unit premises that is suitable for use by multiple carriers. This obligation is in addition to the incumbent LEC's obligation to provide nondiscriminatory access to subloops at any technically feasible point.** If parties are unable to negotiate terms and conditions regarding a single point of interconnection, issues in dispute, including compensation of the incumbent LEC under forward-looking pricing principles, shall be resolved under the dispute resolution processes in section 252 of the Act.

(3) Line conditioning. **The incumbent LEC shall condition lines required to be unbundled under this section wherever a competitor requests, whether or not the incumbent LEC offers advanced services to the end-user customer on that loop.**

(A) Line conditioning is defined as the removal from the loop of any devices that may diminish the capability of the loop to deliver high-speed switched wireline telecommunications capability, including xDSL service. Such devices include, but are not limited to, bridge taps, low pass filters, and range extenders.

(B) Incumbent LECs shall recover the cost of line conditioning from the requesting telecommunications carrier in accordance with the Commission's forward-looking pricing principles promulgated pursuant to section 252(d)(1) of the Act.

(C) Incumbent LECs shall recover the cost of line conditioning from the requesting telecommunications carrier in compliance with rules governing nonrecurring costs in § 51.507(e).

(D) In so far as it is technically feasible, the incumbent LEC shall test and report trouble for all the features, functions, and capabilities of conditioned lines, and may not restrict testing to voice-transmission only.

(b) *Network Interface Device.* An incumbent LEC shall provide nondiscriminatory access, in accordance with § 51.311 and section 251(c)(3) of the Act, to the network interface device on an unbundled basis to any requesting telecommunications carrier for the provision of a telecommunications service. **The network interface device network element is defined as any means of interconnection of end-user customer premises wiring to the incumbent LEC's distribution plant, such as a cross connect device used for that purpose. An incumbent LEC shall permit a requesting telecommunications carrier to connect its own loop facilities to on-premises wiring through the incumbent LEC's network interface device, or at any other technically feasible point.**

(c) *Switching Capability.* **An incumbent LEC shall provide nondiscriminatory access, in accordance with § 51.311 and section 251(c)(3) of the Act, to local circuit switching capability and local tandem switching capability on an unbundled basis, except as set forth in § 51.319(c)(1)(B), to any requesting telecommunications carrier for the provision of a telecommunications service. An incumbent LEC shall be required to provide nondiscriminatory access in accordance with § 51.311 and section 251(c)(3) of the Act to packet switching capability on an unbundled basis to any**

requesting telecommunications carrier for the provision of a telecommunications service only in the limited circumstance described in § 51.319(c)(3)(B).

(1)(A) *Local Circuit Switching Capability, including Tandem Switching Capability.* The local circuit switching capability network element is defined as:

(i) Line-side facilities, which include, but are not limited to, the connection between a loop termination at a main distribution frame and a switch line card;

(ii) Trunk-side facilities, which include, but are not limited to, the connection between trunk termination at a trunk-side cross-connect panel and a switch trunk card; and

(iii) All features, functions and capabilities of the switch, which include, but are not limited to:

(1) The basic switching function of connecting lines to lines, lines to trunks, trunks to lines, and trunks to trunks, as well as the same basic capabilities made available to the incumbent LEC's customers, such as a telephone number, white page listing and dial tone, and

(2) **All other features that the switch is capable of providing, including but not limited to, customer calling, customer local area signaling service features, and Centrex, as well as any technically feasible customized routing functions provided by the switch.**

(B) Notwithstanding the incumbent LEC's general duty to unbundle local circuit switching, an incumbent LEC shall not be required to unbundle local circuit switching for requesting telecommunications carriers when the requesting telecommunications carrier serves end-users with four or more voice grade (DS0) equivalents or lines, and the incumbent LEC's local circuit switches are located in:

(i) The top 50 Metropolitan Statistical Areas as set forth in Appendix B of the *Third Report and Order and Fourth Further Notice of Proposed Rulemaking* in CC Docket No. 96-98, and

(ii) In Density Zone 1, as defined in § 69.123 on January 1, 1999.

(2) *Local Tandem Switching Capability.* The tandem switching capability network element is defined as:

(A) **Trunk-connect facilities, which include, but are not limited to, the connection between trunk termination at a cross connect panel and switch trunk card;**

(B) The basic switch trunk function of connecting trunks to trunks; and

(C) The functions that are centralized in tandem switches (as distinguished from separate end office switches), including but not limited, to call recording, the routing of calls to operator services, and signaling conversion features.

(3) *Packet Switching Capability.* (A) The packet switching capability network element is defined as **the basic packet switching function of routing or forwarding packets, frames, cells or other data units based on address or other routing information contained in the packets, frames, cells or other data units, and the functions that are performed by Digital Subscriber Line Access Multiplexers, including but not limited to:**

(i) The ability to terminate copper customer loops (which includes both a low band voice channel and a high-band data channel, or solely a data channel);

(ii) The ability to forward the voice channels, if present, to a circuit switch or multiple circuit switches;

(iii) The ability to extract data units from the data channels on the loops, and

(iv) The ability to combine data units from multiple loops onto one or more trunks connecting to a packet switch or packet switches.

(B) An incumbent LEC shall be required to provide nondiscriminatory access to unbundled packet switching capability only where each of the following conditions are satisfied:

(i) **The incumbent LEC has deployed digital loop carrier systems, including but not limited to, integrated digital loop carrier or universal digital loop carrier systems; or has deployed any other system in which fiber optic facilities replace copper facilities in the distribution section (*e.g.*, end office to remote terminal, pedestal or environmentally controlled vault);**

(ii) **There are no spare copper loops capable of supporting the xDSL services the requesting carrier seeks to offer;**

(iii) The incumbent LEC has not permitted a requesting carrier to deploy a Digital Subscriber Line Access Multiplexer at the remote terminal, pedestal or environmentally controlled vault or other interconnection point, nor has the requesting carrier obtained a virtual collocation arrangement at these subloop interconnection points as defined by § 51.319(b); and

(iv) The incumbent LEC has deployed packet switching capability for its own use.

(d) *Interoffice Transmission Facilities.* An incumbent LEC shall provide nondiscriminatory access, in accordance with § 51.311 and section 251(c)(3) of the Act, to interoffice transmission facilities on an unbundled basis to any requesting telecommunications carrier for the provision of a telecommunications service.

(1) Interoffice transmission facility network elements include:

(A) Dedicated transport, defined as incumbent LEC transmission facilities, including all technically feasible capacity-related services including, but not limited to, DS1, DS3 and OCn levels, dedicated to a particular customer or carrier, that provide telecommunications between wire centers owned by incumbent LECs or requesting telecommunications carriers, or between switches owned by incumbent LECs or requesting telecommunications carriers;

(B) **Dark fiber transport, defined as incumbent LEC optical transmission facilities without attached multiplexing, aggregation or other electronics;**

(C) Shared transport, defined as transmission facilities shared by more than one carrier, including the incumbent LEC, between end office switches, between end office switches and tandem switches, and between tandem switches, in the incumbent LEC network.

(2) The incumbent LEC shall:

(A) Provide a requesting telecommunications carrier exclusive use of interoffice transmission facilities dedicated to a particular customer or carrier, or use the features, functions, and capabilities of interoffice transmission facilities shared by more than one customer or carrier.

(B) **Provide all technically feasible transmission facilities, features, functions, and capabilities that the requesting telecommunications carrier could use to provide telecommunications services;**

(C) Permit, to the extent technically feasible, a requesting telecommunications carrier to connect such interoffice facilities to equipment designated by the requesting telecommunications carrier, including but not limited to, the requesting telecommunications carrier's collocated facilities; and

(D) **Permit, to the extent technically feasible, a requesting telecommunications carrier to obtain the functionality provided by the incumbent LEC's digital cross-connect systems in the same manner that the incumbent LEC provides such functionality to interexchange carriers.**

(e) *Signaling Networks and Call-Related Databases.* An incumbent LEC shall provide nondiscriminatory access, in accordance with § 51.311 and section 251(c)(3) of the Act, to signaling networks, call-related databases, and service

management systems on an unbundled basis to any requesting telecommunications carrier for the provision of a telecommunications service.

(1) *Signaling Networks*: Signaling networks include, but are not limited to, signaling links and signaling transfer points.

(A) When a requesting telecommunications carrier purchases unbundled switching capability from an incumbent LEC, the incumbent LEC shall provide access from that switch in the same manner in which it obtains such access itself.

(B) An incumbent LEC shall provide a requesting telecommunications carrier with its own switching facilities access to the incumbent LEC's signaling network for each of the requesting telecommunications carrier's switches. This connection shall be made in the same manner as an incumbent LEC connects one of its own switches to a signaling transfer point.

(2) *Call-Related Databases*: Call-related databases are defined as databases, other than operations support systems, that are used in signaling networks for billing and collection, or the transmission, routing, or other provision of a telecommunications service.

(A) For purposes of switch query and database response through a signaling network, an incumbent LEC shall provide access to its call-related databases, including but not limited to, the Calling Name Database, 911 Database, E911 Database, Line Information Database, Toll Free Calling Database, Advanced Intelligent Network Databases, and downstream number portability databases by means of physical access at the signaling transfer point linked to the unbundled databases.

(B) Notwithstanding the incumbent LEC's general duty to unbundle call-related databases, an incumbent LEC shall not be required to unbundle the services created in the AIN platform and architecture that qualify for proprietary treatment.

(C) An incumbent LEC shall allow a requesting telecommunications carrier that has purchased an incumbent LEC's local switching capability to use the incumbent LEC's service control point element in the same manner, and via the same signaling links, as the incumbent LEC itself.

(D) An incumbent LEC shall allow a requesting telecommunications carrier that has deployed its own switch, and has linked that switch to an incumbent LEC's signaling system, to gain access to the incumbent LEC's service control point in a manner that allows the requesting carrier to provide any call-related database-supported services to customers served by the requesting telecommunications carrier's switch.

(E) An incumbent LEC shall provide a requesting telecommunications carrier with access to call-related databases in a manner that complies with section 222 of the Act.

(3) *Service Management Systems*:

(A) A service management system is defined as a computer database or system not part of the public switched network that, among other things:

(1) Interconnects to the service control point and sends to that service control point the information and call processing instructions needed for a network switch to process and complete a telephone call; and

(2) Provides telecommunications carriers with the capability of entering and storing data regarding the processing and completing of a telephone call.

(B) An incumbent LEC shall provide a requesting telecommunications carrier with the information necessary to enter correctly, or format for entry, the information relevant for input into the incumbent LEC's service management system.

(C) An incumbent LEC shall provide a requesting telecommunications carrier the same access to design, create, test, and deploy Advanced Intelligent Network-based services at the service management system, through a service creation environment, that the incumbent LEC provides to itself.

(D) An incumbent LEC shall provide a requesting telecommunications carrier access to service management systems in a manner that complies with section 222 of the Act.

(f) *Operator Services and Directory Assistance.* An incumbent LEC shall provide nondiscriminatory access in accordance with § 51.311 and section 251(c)(3) of the Act to operator services and directory assistance on an unbundled basis to any requesting telecommunications carrier for the provision of a telecommunications service only where the incumbent LEC does not provide the requesting telecommunications carrier with customized routing or a compatible signaling protocol. Operator services are any automatic or live assistance to a consumer to arrange for billing or completion, or both, of a telephone call. Directory assistance is a service that allows subscribers to retrieve telephone numbers of other subscribers.

(g) *Operations Support Systems*: **An incumbent LEC shall provide nondiscriminatory access in accordance with § 51.311 and section 251(c)(3) of the Act to operations support systems on an unbundled basis to any requesting telecommunications carrier for the provision of a telecommunications service. Operations support system functions consist of pre-ordering, ordering, provisioning, maintenance and repair, and billing functions supported by an incumbent LEC's databases and information. An incumbent LEC, as part of its duty to provide access to the pre-ordering**

function, must provide the requesting carrier with nondiscriminatory access to the same detailed information about the loop that is available to the incumbent LEC. (Emphasis Added)

Q **WHAT SPECIFIC RELIEF IS SUPRA REQUESTING?**

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, Supra would request that this commission pay particular attention to the implementation of all issues emphasized above in bold. These sections of the newly re-constituted Rule 319 represent issues that were either:

1. Poorly represented or missing from the previous Interconnection Agreement with BellSouth.
2. Subject of arbitration hearings between AT&T and BellSouth regarding the Previous agreement.
3. Issues disputed by BellSouth since Supra adopted the Interconnection agreement between AT&T and BellSouth.
4. Issues which were resolved against BellSouth, for which BellSouth received an effective order from the Florida Public Service Commission to implement, which it steadfastly refused to do.
5. [redacted]

Supra seeks the inclusion of specific language in the Follow On Agreement that BellSouth will comply with all sections of Rule 319. Supra requests this

Commission to include a liquidated damages provision in the parties' Follow On Agreement to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 29: Is BellSouth obligated to provide local circuit switching at UNE rates to allow Supra Telecom to serve (a) the first three lines provided to a customer located in Density Zone 1 as defined and / or determined in the UNE docket and (b) 4 lines or more?

Q **FIRST, HAS BELLSOUTH MET THE REQUIREMENT FOR PROVIDING THE EEL UNE AT TELRIC RATES IN THE TOP 50 MSA'S WITHIN ITS SERVING AREA.**

A. No. There is nothing in the record, and I am aware of no evidence to support any other conclusion. As shown in the recent Supra / BellSouth commercial arbitration, BellSouth's word, particularly in issues of UNEs and UNE Combinations is worthless:

> "The evidence shows that BellSouth breached the Interconnection Agreement in material ways and did so with the tortious intent to harm Supra, an upstart and litigious competitor. The evidence of such tortious intent was extensive, including BellSouth's deliberate delay and lack of cooperation regarding UNE Combos, switching Attachment 2 to the Interconnection Agreement before it was filed with the FPSC, denying access to BellSouth's OSS and related databases, refusals to collocate any Supra equipment, and deliberately cutting-off LENS for three days in May 2000."[78]

BellSouth has a proven track record of lying to Supra, ignoring its obligations under the Interconnection Agreement between the parties, and ignoring FPSC orders[79].

BellSouth has the burden of proof on this issue. This Commission should establish whether BellSouth has **really** complied with the FCC's order to make EELs UNE available at TELRIC rates before BellSouth is allowed to limit Supra from purchasing unbundled Local Switching.

Q **ARE THERE ANY OTHER ISSUES REGARDING THIS QUESTION?**

A. In the recent AT&T v. BellSouth arbitration (Docket 00-731-TP) the staff recommendation contains the following quotation:

> Though framed in a different manner, this issue is

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[78] Id, pg. 40.

[79] As one example, the final order in Docket 98-0800 (PSC-99-0060-FOF-TP) remains unimplemented by BellSouth to this date. Only the [redacted] between Supra and BellSouth has gotten BellSouth moving on this project since 1999, despite these offices having been part of the infamous *Florida Exemption Docket* where BellSouth actually attempted to obtain FPSC collocation exemptions for the two offices involved. The Dockets were all closed by the FPSC when BellSouth agreed to provide collocation in all offices to all existing applicants in July of 1999. Supra has yet to be allowed to collocate despite these Dockets.

> similar to an issue in the recent arbitration in Docket No. 000828-TP, the Sprint/BellSouth arbitration. In **this** case, however, the specific issue considers whether the aggregation **of** lines provided to multiple locations **of** a single customer is allowable in determining whether BellSouth must offer unbundled local switching as a UNE.
>
> As in the Sprint/BellSouth arbitration, an underlying assumption is that alternative switching providers are likely to be located in the Density Zone **1** areas in Florida, which include the Miami, Orlando, and Ft. Lauderdale Metropolitan Statistical Areas (MSAs) .

It is not merely enough to **assume** that there is local switching available to meet the FCC requirement, because there really isn't such a supply. Look at the record. Bot AT&T and Sprint, arguably the 1st and 3rd largest CLEC organizations in the country **both** petitioned the FPSC to require BellSouth to sell Unbundled Local Switching. If these two behemoths are unable to (1) supply their own switching in the top 50 MSA's, and (2) have enough clout in the industry to identify suppliers of unbundled switching that can provide same to customers of BellSouth's UNEs, then frankly, the supply doesn't actually exist. Supra maintains that the availability of Unbundled Local Switching in the Top 50 MSA's is an illusory issue. It should exist, but it doesn't.

BellSouth bears the burden of proof in this case and should be required to prove to this Commission that a supply of Unbundled Local Switching exists to allow customers of its EEL UNE to obtain local switching without the need for facilities ownership by the ALEC, which would be prohibited by *AT&T v. Iowa Utilities Bd.* (Iowa Utilities Board II).

This Commission should order BellSouth to prove that a discontinuation of the unbundled Local Switching Product will not affect the telephone subscribers of Florida. Supra has tens of thousands of customer lines served by UNE combinations. Is the Commission clear on what will happen to these customers is BellSouth is allowed to discontinue Local Switching UNE, or raise its rate from $1.62 to $14.00 (or more) per port? The potential for BellSouth to exercise anti-competitive behavior is too great for the FPSC not to regulate this issue further.

Q **WHAT SPECIFIC RELIEF IS SUPRA REQUESTING?**

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, Supra would request that BellSouth be first ordered to prove to this Commission that a supply of Unbundled Local Switching exists to allow customers of its EEL UNE to obtain local switching, before relieving BellSouth of its obligation to provide Unbundled Local Switching at UNE rates. To do otherwise would allow BellSouth to damage the peace and livelihood of the telephone subscribers of Florida as BellSouth embarks upon a giant winback campaign empowered by this very provision.

This Commission should order BellSouth to prove that a discontinuation of the unbundled Local Switching Product will not adversely affect the telephone subscribers of Florida.

Supra requests this Commission to include a liquidated damages provision in the parties' Follow On Agreement to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 31: Should BellSouth be allowed to aggregate lines provided to multiple locations of a single customer to restrict Supra Telecom's ability to purchase local circuit switching at UNE rates to serve any of the lines of that customer?

Q **WHAT IS THE ISSUE HERE?**

BellSouth has taken the position that once it aggregates billing for a customer's convenience, such aggregated billing, covering multiple addresses, can be used to evade its requirement to sell Unbundled Local Switching in the top 50 MSA's. Such regulatory arbitrage was not envisioned by the FCC in its discussion of the reasoning behind exclusion of the requirement to sell local switching in the top 50 MSA's. BellSouth can evade their requirement to provide Unbundled Local Switching by combining the bills for just four residences together, each having a

single line. This is not what the FCC ordered. Indeed the FCC's exclusion is coupled with the obligation to provide the EEL (Enhanced Extended Loop) FIRST. The purpose of this is to transport that customer traffic to another central office location where it may be switched.

BellSouth's attempt here would be to create a situation where that customer's traffic could NEVER be switched by BellSouth, retaining the customer for BellSouth. This is most assuredly not what the FCC ordered.

Q IS THERE ANY OTHER TESTIMONY YOU WISH TO OFFER ON THIS ISSUE?

A. Yes. I wish to adopt the Direct Testimony of Gregory R. Follensbee, formerly of AT&T now the lead contract negotiator at BellSouth for Supra's Interconnection agreement with BellSouth. This testimony was filed in Florida Docket 00-731, AT&T's Interconnection Agreement arbitration against BellSouth.[80]

In this context I will be adopting his testimony in regard to AT&T issue number 11 which directly corresponds to Supra issue 31. The adopted testimony resides on pages 9-13 of his testimony. The only exception I take to Mr. Follensbee is

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[80] Supra Exhibit # DAN-5-- Direct Testimony of Gregory R. Follensbee, formerly of AT&T now the lead contract negotiator at BellSouth for Supra's Interconnection agreement with BellSouth.

that I do not agree with his or AT&T's position that the FCC erred in setting the economic cut-off for a customer at two lines rather than the FCC's 4 lines. Supra understands that for most carriers without AT&T's economies of scale, the FCC's figure of 4 is correct, or even a bit low so that usage charges for switching and transport are also factored into the equation. Supra is not seeking a change in the FCC four line limitation and agrees to that for the additional purposes of this arbitration.

Q **WHAT SPECIFIC RELIEF DOES SUPRA SEEK?**

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, Supra asks that this Commission order that any local line limitation that applies to the use of local switching in the three specific MSA's in Florida apply to **each** physical location where Supra orders local switching from BellSouth, and not to a specific customer with multiple locations on the same bill.

BellSouth has a poor record for signing Interconnection agreements, then refusing to comply. Supra maintains it is impossible to take BellSouth's word that they can and will ("Currently Combines") combine elements to form the EEL UNE and offer it at TELRIC rates. BellSouth must demonstrate to the FPSC a proliferation of EELS without ordering problems for **all** ALECs in Florida. It is not enough for

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This testimony was filed in Florida Docket 00-731, AT&T's Interconnection Agreement

BellSouth to simply say it is true. The Commission should order language placed into the Follow On Agreement that requires BellSouth to continue to provide Unbundled Local Switching to Supra at UNE rates until such time that the FPSC renders an effective order based upon a generic hearing, that BellSouth is actually supplying the EEL UNE ubiquitously throughout its region in Florida.

At the point which the FPSC order is released, all customers provisioned over UNE combination circuits should be grandfathered in place. Changes in features should still be allowed, but once the service is cancelled, it should not be re-instated.

Supra requests that this Commission ensure that the Follow On Agreement include a liquidated damages provision in the parties' Follow On Agreement to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

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arbitration against BellSouth.

Issue 32 A: Under what circumstances may Supra charge for Tandem rate switching?

Q **WHAT IS SUPRA'S POSITION?**

A. Supra must show only that its switches serve geographic areas comparable to those served by BellSouth in order to charge tandem rates. Supra is currently in the process of collocating a number of switches in BellSouth central offices throughout the State of Florida. Specific to this issue, Supra has been granted collocation of host or remote switches in each of the BellSouth Tandem offices in the state of Florida.

Issue 32 B : Does Supra meet the criteria based on Supras network of June 1, 2001?

Q **WHAT EVIDENCE DOES SUPRA HAVE TO SUPPORT THAT ITS SWITCHES SERVE GEOGRAPHIC AREAS COMPARABLE TO THOSE SERVED BY BELLSOUTH?**

A. Supra has been attempting to collocate its switches in BellSouth's central offices since as early as June, 1998. Only after receiving an Award in its commercial arbitration proceeding wherein BellSouth was ordered to provide

collocation, previously ordered by the FPSC in order PSC-99-0060-FOF-TP[81], has Supra received any hope that it may actually collocate its switches. Once Supra is able to achieve this collocation, its switches will be in the same location as BellSouth's switches. It is logical to assume that Supra's switches will serve geographic areas comparable to those served by BellSouth. In fact, this commission is already aware that Supras switches will cover the same geographic area as BellSouth in LATA 460 (Southeast Florida), as this commission ordered BellSouth to provide Supra space to collocate class 5 switches in the North Dade Golden Glades (NDADFLGG) and Palm Beach Gardens (WPBHFLGR) central offices. As these are the only two offices housing the three BellSouth tandem switches in LATA 460, ipso facto, Supra has the same geographic coverage in LATA 460 as does BellSouth. No limitation on this finding can be heard because Supra has access to every network element in these two office that BellSouth does. No refusal to provision the element can be heard because BellSouth has provisioned the element to itself, ipso facto, BellSouth can and must provision the same element to Supra.

Unfortunately, as Supra has been unduly delayed in collocating such switches, it is unable to provide any further evidence. However, once Supra's switches are collocated in BellSouth's central offices, Supra would then be in a position to present further evidence, if required, to show the geographic coverage to be

[81] in docket 99-0800-TP

identical to BellSouth's own. Supra believes no other CLEC is able to make such a precise claim, because no other CLEC has attempted to collocate a switch in a BellSouth Tandem office, much less all of BellSouth Tandem offices in Florida.

Given the fact that the term of this Follow On Agreement is to be three years, should the Commission find that the fact that Supra's switches are located in the same location as BellSouth's switches to be unpersuasive as to the geographic area which Supra serves, Supra seeks some clarification as to what additional evidence the Commission may require in order for Supra to receive tandem switching rates.

Q WHAT SPECIFIC RELIEF DOES SUPRA SEEK?

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, that when Supra collocates in a BellSouth Tandem Office, Supra is deemed to have satisfied the requirement to prove its geographic coverage requirement to entitle Supra to charge Tandem switching.

If necessary, Supra shall be deemed to have satisfied the requirement to demonstrate that the switch performs functions similar to BellSouth's tandem switch (typically a Nortel DMS 100, sometimes a Lucent 5ESS), by the collocation of a Lucent 5ESS, Nortel DMS 100, 250, or 500, or Siemens EWSD

Class 5 switches, or their associate remote switch module subtended off of one of the aforementioned hosts.

Supra requests that this Commission ensure that the Follow On agreement include a liquidated damages provision in the parties' Follow On Agreement to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 33: What are the appropriate means for BellSouth to provide unbundled local loops for provision of DSL service when such loops are provisioned on digital loop carrier facilities?

Q **IS THIS STILL AN ISSUE IN THIS PROCEEDING?**

A. It shouldn't be, since the release of *The UNE Remand Order* CC Order 99-238 created changes to 47 C.F.R. § 51.319. Specifically from 51.319

> (B) An incumbent LEC shall be required to provide nondiscriminatory access to unbundled packet switching

capability only where each of the following conditions are satisfied:

(i) The incumbent LEC has deployed digital loop carrier systems, including but not limited to, integrated digital loop carrier or universal digital loop carrier systems; or has deployed any other system in which fiber optic facilities replace copper facilities in the distribution section (*e.g.*, end office to remote terminal, pedestal or environmentally controlled vault);

(ii) There are no spare copper loops capable of supporting the xDSL services the requesting carrier seeks to offer;

(iii) The incumbent LEC has not permitted a requesting carrier to deploy a Digital Subscriber Line Access Multiplexer at the remote terminal, pedestal or environmentally controlled vault or other interconnection point, nor has the requesting carrier obtained a virtual collocation arrangement at these subloop interconnection points as defined by § 51.319(b); and

(iv) The incumbent LEC has deployed packet switching capability for its own use.

While this section answers most of the questions surrounding this issue, the FCC did not adequately address the needs of carriers who, based upon *The First Report and Order* CC Order 96-325 at ¶ 12 chose their entrance strategy to be solely UNE Combination based. This configuration is supported by the *First Report and Order,* but falls afoul of the *Third Report and Order* CC Order 99-0238 in subsection (iii) in the previous citation.

A carrier seeking to deploy ONLY UNE combinations is allowed to do so by the three pronged entry strategy defined in *The First Report and Order* CC Order 96-325 at ¶ 12. So how can the FCC then impose a collocation requirement upon the ALEC in order to be able to order the packet switching UNE?

Supra requests this Commission to clarify a set of rules by which a carrier who chooses to enter via UNE Combinations is not precluded from purchasing the packet switching UNE in this section.

Q **WHAT SPECIFIC RELIEF DOES SUPRA SEEK?**

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, Supra is asks that this Commission order BellSouth provide Supra the ability to order DSLAM and packet switching as a UNE at TELRIC cost, wherever BellSouth deploys local switching over DLC facilities.

Supra request that this Commission ensure that the follow on agreement is in full compliance with Rule 319 in every way.

Supra requests that this Commission ensure that the Follow On Agreement include a liquidated damages provision in the parties' Follow On Agreement to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 34: What coordinated cut-over process should be implemented to ensure accurate, reliable and timely cut-overs when a customer changes local service from BellSouth to Supra Telecom

Q **IS THIS STILL AN ISSUE IN THIS PROCEEDING**

A. Based upon the final order in /Docket 99-0649 (PSC-01-1181-FOF-TP) it appears that once BellSouth proves itself capable of implementing pre-ordering, ordering, provisioning and repair functions to comply with the Commission's orders and other applicable law, this issue will have been satisfied.

That BellSouth has yet to be able to prove this, despite the availability of SL1 and SL2 for at least three years, is shocking.

Q **ARE THERE ANY OTHER ISSUES THAT NEED RESOLUTION HERE?**

A. Yes. The continuing issue whether BellSouth, in violation of federal and state law, should be permitted to continue its practice of submitting an "N" and a "D" (New and Disconnect) instead of a single "C" (Change) order. The effect of this is that a customer's service is actually disconnected during the conversion process, despite the Supreme Court's finding that such should not happen. BellSouth will tell you that the "D" order and the "N" order are, in most cases, provisioned at the same time, and therefore consumers rarely go without service

for any length of time. What is wrong with this philosophy is that **no consumer should ever go without service as a result of a conversion, ever.** Remember, the conversion is only a **billing change**. Service should remain unaffected. The fact that BellSouth has created its own billing system in a manner which requires a disconnection of service in this process is violative of state and federal law, and is harmful to Florida consumers.

What makes matters worse is that, when customers go without service as a result of this process, the customer will blame Supra, not BellSouth, for the problem. Supra can speak ONLY to the BellSouth LCSC in order to resolve problems in provisioning service. A customer, whether of BellSouth, of Supra, or in the transitional phase, cannot even locate the number for the LCSC, and it is only under the most extreme situations a three way call can be setup between Supra, LCSC and the customer. If the customer wants to complain to BellSouth, even if it is on behalf of Supra, the only number the public can see is for the BellSouth retail sales center.

And BellSouth's retail sales center will invariably tell the customer that the Disconnect order was issued by Supra, and "... I'm so sorry that I can't help you, you are not our customer any more." This is a formula designed for efficient conversion of winback customers.

Supra is not the only ALEC to encounter these anti-competitive tactics. As stated in the recent IDS complaint (*Complaint of IDS* in Docket 01-0740-TP at ¶ 31), BellSouth has a glaring tendency to allow ALEC LSRs submitted as "C" Change

orders to slip through the LEO/LESOG/ Human Intervention cycle in a manner that sometimes generates both a "D" Disconnect and "N" New service order, from the ALEC LSR. However as Supra found, as long ago as June / July 2000, there are issues that can cause the "N" order to subsequently fail in SOCS, while the "D" Disconnect order is completed normally.

The customer is left without dialtone, and a call to the only BellSouth ordering telephone number, or the repair department elicits a comment of "Supra ordered your line disconnected", when Supra did nothing of the kind. A fault in LEO/LESOG, or workarounds used by LCSC representatives ("Just erase it and start over") have caused hundreds of cases of lost dialtone, BellSouth winback, and Public Service Commission and Better Business Bureau complaints again Supra.

Yet, BellSouth does not see this as problematic for Supra, and would request Supra to bring the issue up before the Change Control Process.

Q CAN ANYTHING ELSE POSSIBLY GONE WRONG ASSOCIATED WITH THIS ISSUE?

A. Unfortunately, yes. BellSouth is, for some unfathomable reason, disconnecting service to ALEC customers in Florida within 1-3 days of the time their service is converted to the ALEC. It is happening to IDS, we hear stories of it happening at MCI, and attached as Supra Exhibit # DAN-7. Supra has released

some of these numbers to BellSouth, and the preliminary analysis (which is all BellSouth has completed to date) indicates that half of the disconnections / loss of dialtone were as a result of "BellSouth Error, oops sorry. It shouldn't have happened."

Q **WHAT SPECIFIC RELIEF DOES SUPRA SEEK?**

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, Supra would request that this Commission order BellSouth to prove that it has 1) implemented effective ordering procedures for SL1 and SL2 loops used individually or in combinations (which doesn't exist today).

Supra requests this Commission include language in the Follow On Agreement that BellSouth shall not issue "N" and "D" orders in lieu of a single "C" order. In the meantime BellSouth shall not be allowed to extend or delay its commitments to deploy services in a timely fashion.

Supra requests this Commission include language in the Follow On Agreement that BellSouth will be required to identify the true cause of customer loss of dialtone shortly after conversion, to report same to Supra and to this Commission, to offer a proposed corrective action, and to conclude the project so that this type of problem never occurs again, according to a time table ordered by this Commission.

Supra requests that this Commission ensure that the Follow On Agreement include a liquidated damages provision in the parties' Follow On Agreement to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 40: Should Standard Message Desk Interface-Enhanced ("SMDI-E") and Inter-Switch Voice Messaging Service ("IVMS"), and any other corresponding signaling associated with voice mail messaging be included within the cost of the UNE switching port? If not, what are the appropriate charges, if any?

A. Yes. Unbundled Local switching requires that the ALEC who leases a switching port be given all features and functionality of the port. One such feature is the ability of the port to produce stutter dialtone, or activate a light on the telephone set of a subscriber in response to a signal from a voicemail system or provider to let the telephone subscriber know there is a message waiting. Traditionally this task has been done via the System Message Desk Interface

(SMDI) and enhancements to it such as Inter Switch Voice Messaging (ISVM) which allows one switch to pass messaging requests across the SS7 network to other switches without the use of a dedicated network.[82]

While this is clearly a function of the switch port, and functionality of it comes with the switch port, in Florida there is no unbundled access to this fundamentally important signaling network / switch port functionality. Therefore an ALEC is not in parity with the ILEC for the Local Switching UNE.

BellSouth does not provide unbundled access to this signaling network, but in its FFC #1 Access Tariff lists SMDI and something called ISMDI. The description of ISMDI is an SS7 / TCAP based network that through a convoluted conversion of conversion between SMDI, ISDN and SS7 / TCAP messages provides a single connection to a signaling connection that is supposed to be able to activate a Message Waiting Indicator (MWI) on a Latawide basis. This is clearly not as cost effective as the ISVM approach. The alternative an ALEC has would be to establish an SMDI connection to each and every BellSouth switch in Florida, a total of 206 individual connections at last count. This is not cost effective compared to ISVM and presents a substantial barrier to entry.

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[82] Lucent Document 235-190-104 5ESS 2000 switch ISDN Feature Descriptions, Section 13.4 Message Service System Features, Issue 3 pages 13-67 through 13-126

Nowhere is there any mention of direct access to the ISVM signaling, or unbundled access to any signaling required to activate MWI on a leased Local Switching port. These omissions are creating an unusually high barrier to entry for an ALEC like Supra Telecom who is expected by telephone subscribers to provide the same services as the ILEC as seamlessly as the ILEC provides those services.

As shown in Figure 13-11 , and 13-13[83] there is no separate signaling network required to transmit messages switch to switch. It is included in the basic switch port functionality, and network wide signaling across the SS7 network according to meetings Supra Telecom has held with Bell Labs personnel on this issue. Additionally the Bell Labs Engineers confirmed that this ISVM has been adopted as an industry standard for many years now (approx. 7 years). This industry standard is also supported by Nortel and Siemens, so that all switches in BellSouth's network are compliant. Figure 13-14 along with section 13.4.1.2[84] shows that the required software is part of the base generic software since, at least, the 5E8 generic. Since the current software release from Lucent is 5E15, and since Lucent does not support switches with software loads beyond two prior revisions, it is obvious that the required software is already loaded on BellSouth's switches.

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[83] Supra Exhibit # DAN-1

[84] Id.

ALEC's access to the ISVM signaling "network" should be defined as a fundamental component of Local Switching line and trunk ports and ALEC access to this network required of and provided by all Florida ILECs as it is elsewhere in the country. The various message-signaling networks are necessary to an ALEC to compete with the ILEC, and failure to have access to such signaling impairs Supra Telecom's ability to acquire new customers who view such a limitation as the mark of an inferior carrier.

Q WHAT SPECIFIC RELIEF DOES SUPRA SEEK?

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, Supra asks that this Commission order that SMDI, the so called ESMDI, ISVM are all components of the local switch port and associated SS7 signaling, and are provided at no cost when Supra orders Unbundled Local Switching.

BellSouth will provide interconnection for SMDI at any technically feasible point as specified by Supra. Both parties will bear their respective costs of transporting traffic to the Point of Interconnection.

Supra requests that this Commission ensure that the Follow On Agreement include a liquidated damages provision in the parties' Follow On Agreement to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 49 : Should Supra Telecom be allowed to share, with a third party, the spectrum on a local loop for voice and data when Supra Telecom purchases a loop/port combination and if so, under what rates, terms and conditions?

Q **IS THERE ANY OTHER TESTIMONY YOU WISH TO OFFER ON THIS ISSUE?**

A. Yes. I wish to adopt the Direct Testimony of Gregory R. Follensbee, formerly of AT&T now the lead contract negotiator at BellSouth for Supra's Interconnection agreement with BellSouth. This testimony was filed in Florida

Docket 00-731, AT&T's Interconnection Agreement arbitration against BellSouth.[85]

In this context I will be adopting his testimony in regard to AT&T issue number 33 which directly corresponds to Supra issue 49. The adopted testimony resides on pages 23-31 of his testimony. I take no exception to Mr. Follensbee's testimony in this regard. The abuses that are being heaped upon Supra are even more horrific than those Mr. Follensbee reported just last November. Since that time, BellSouth has begun using its tariffed xDSL transport service, sold to Bellsouth.net and other Internet Service Providers to provision DSL service, as a battering ram to hold onto customers that want to change to Supra and other ALECs, as a reason to clarify (reject) Supra's otherwise legitimate orders for residential and business POTS service, with no apparent way to ever clear the clarification (rejection).

Q HAS ANYTHING HAPPENED RECENTLY TO MAKE THE SITUATION EVEN WORSE?

A. Yes. BellSouth has stated in Inter Company review board meetings that because of the final order in docket 00-0731-TP, BellSouth will no longer be providing xDSL transport service to customers served by UNE combinations in

[85] Supra Exhibit # DAN-5-- Direct Testimony of Gregory R. Follensbee, formerly of AT&T now the lead contract negotiator at BellSouth for Supra's Interconnection agreement with BellSouth.

Florida. This came about as Supra was attempting to negotiate language to set rates and conditions for line sharing in the Follow On Agreement. A BellSouth attorney announced that:

> "We can choose to pay Supra 1/2 the loop cost and share the line. **However we may just decide not to offer the customer service.**" (Natural Emphasis.)

I began to worry about the import of this latest BellSouth bombshell. I didn't have long to wait.

On July 11, 2001 BellSouth sent out a letter[86] to Supra Business Systems, Inc. announcing the unilateral disconnection of all xDSL services provided over UNE Combinations. It doesn't matter whether the customer has xDSL service from BellSouth.net or any other ISP, BellSouth is going to disconnect the customer on 20 days notice.

BellSouth's Greg Follensbee (the author of the July 11) has told me this is a direct result of the FPSC order in 00-0731 where this commission ordered that BellSouth was not required to provide the splitter.

This testimony was filed in Florida Docket 00-731, AT&T's Interconnection Agreement arbitration against BellSouth.

[86] Supra Exhibit # DAN-6 -- July 11, 2001 letter from G. R. Follensbee to O.A.Ramos of Supra Business Systems announcing that any customers of Supra Business Systems provisioned as UNE Combinations will have any and all existing DSL circuits disconnected in 20 days without further notice.

I doubt this Commission realized the magnitude of BellSouth's desire to stifle its emerging competition when it issued that order. BellSouth cannot be allowed to continue this anti-competitive tactic any longer.

Q IS THERE ANY NEW INFORMATION FOR THE FPSC TO CONSIDER REGARDING THIS ISSUE?

A. Yes. Certainly BellSouth's recent "dirty Tricks" campaign against ALECs, and against Florida telephone subscribers who also are DSL subscribers is but one.

The issue of the line splitter needs to be investigated.

It may be possible that the Commission viewed line splitters as a colocatable piece of equipment married to a specific loop. In other words the splitter is brought to the loop.

This is not the case.

In each central office, BellSouth has undedicated line splitters installed. When a voice customer orders xDSL, BellSouth breaks the loop at the frame, brings the outside plant side of the loop to the splitter via a crossconnect, and returns the circuit back to the equipment side of the broken loop via a second set of crossconnect jumpers. At that point the voice circuit is in operational, and the

third set of connection on the line splitter are taken to the collocated DSLAM owned by BellSouth. BellSouth will not take the xDSL portion of the loop to a third party DSLAM, so effectively line sharing between ALECs doesn't exist in Florida at all. It only exists between BellSouth and a voice ALEC who has their own switch, or for ALEC resale customers (although this has not been allowed by BellSouth until Supra complained about it during Intra Company Review Board Meetings in this arbitration. Support is still a bit random). Line sharing exists in no other manner.

By not realizing that the loop is brought to the BellSouth splitter and not the other way around, this commission may have erred in 00-731-TP by setting a precedent that will force ALECs in Florida to collocate line splitters in each and every central office in Florida **just to support the provision of BellSouth's tariffed xDSL transport service, when BellSouth already has equipment installed that can be used.** That's right. 00-731 held that **Supra** must install the linesplitter for BellSouth Telecommunications to provide xDSL transport service to BellSouth.net or other ISP. If Supra does not, BellSouth is in a position, and they have already begun, telling customers that their xDSL service will be discontinued because Supra does not support it.

Certainly this Commission did not envision this type of arbitrage.

Q **WHAT IS AT STAKE IN THIS ISSUE?**

A. Supra's concerns are twofold: Originally, Supra Telecom was concerned with protecting its right to split its line so as to be able to provide both voice and data services, either by itself or with a third party. Via line splitting, Supra expected to share the cost of the loop element with a third party provider of DSL, including BellSouth.net. This is still a concern. However, since approximately May 3, 2001, Supra Telecom has been faced with a new concern. Since that time, BellSouth has been telling customers that if the customer presently has both BellSouth voice and data services (i.e. ADSL), the customer would lose the data services if he or she switched their voice services to Supra Telecom. Attached hereto as Supra Exhibit DAN - 6 is a copy of a letter from BellSouth wherein it indicated it would take this exact action. The harm caused Supra Telecom, as well as customers, by this unilateral action is significant. Not only is BellSouth's action anti-competitive, but it constitutes illegal tying of services in violation of the antidiscrimination clause of 251(c)(3), the separate affiliate requirements of Section 272 of the Act, and the Supreme court ruling in *AT&T v. Iowa Utilities Bd.* 525 U.S. 366, 119 S.Ct 721 (199) at 368 (et al). I personally have had to deal with a number of customers who claimed they would have switched to Supra Telecom but for the fact that BellSouth threatened to disconnect their ADSL services. Attached hereto as Supra Exhibit # DAN-4 is a spreadsheet showing a list of potential Supra customers who had called regarding this very issue.

Q **LET'S DEAL WITH THE FIRST CONCERN. WHAT DOES SUPRA WANT?**

A. Supra requests that BellSouth be required to allow Supra access to the spectrums on a local loop for voice and data when Supra purchases a loop/port combination. BellSouth must cross-connect the voice loop to line splitters already in the office for this purpose. To facilitate line splitting, BellSouth should be obligated to provide an unbundled xDSL-capable loop terminated to a collocated or already existing and in-place splitter and DSLAM equipment, and unbundled circuit switching combined with shared transport at TELRIC rates. BellSouth should not be allowed to disconnect any already combined facilities, as such would result in a disconnection of a customer's service, and be in violation of the Act[87], all FCC orders in this regard[88], orders that have been sustained by the Supreme Court of the United States[89]. The Supreme Court opinion, often remembered solely for the re-institution of Unbundled Network Elements Combinations taken away by the Eight Circuit Court[90] has much broader impact. The High Court wrote:

> "Rule 315(b) forbids an incumbent to separate already combined network elements before leasing them to a competitor"[91]

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[87] Telecommunications Act of 1996, 47 U.S.C.A. § 251(c)(3).
[88] 47 C.F.R. § 51.315(b).
[89] **Error! Reference source not found.***AT&T v. Iowa Utilities Bd.* 525 U.S. 366, 119 S.Ct 721 (Iowa Utilities Board II) at pg. 368, and pg. 393-395
[90] **Error! Reference source not found.***AT&T v. Iowa Utilities Bd.* 120 F.3d 753 (Iowa Utilities Board I)
[91] Id pg. 393.

Lest BellSouth argue, based upon a misreading of 251(c)(3) that this addresses the provisioning of combinations and not an actual requirement upon them to not disconnect or otherwise disturb a functioning telecommunications circuit, the Court went on to say:

> The reality is that § 251(c)(3) is ambiguous on whether leased network elements may or must be separated, and the rule the Commission has prescribed is entirely rational, finding its basis in § 251(c)(3)'s nondiscrimination requirement. As the Commission explains, it is aimed at preventing incumbent LECs from disconnect[ing] previously connected elements, over the objection of the requesting carrier, not for any productive reason, but just to impose wasteful reconnection costs on new entrants" ... It is well within the bounds of the reasonable for the Commission to opt in favor of ensuring against an anticompetitive practice."[92] (Emphasis added)

Thus the Supreme Court has already addressed any ambiguity in the Act and upheld the FCC's rules in this regard. In addition to LEC charges for reconnection, other wasteful reconnection costs can involve the customers loss of dialtone during conversion, the increased cost an ALEC bears in re-establishing a circuit that should never have been interrupted, customer support costs of communicating with the customer, and the potential for customer dissatisfaction with the ALEC's service, which can lead to the customer reverting back to the LEC. Lest it be argued that these are not all "wasteful reconnection costs" one must only look to the last line: "to opt in favor of ensuring against an

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[92] Id. Pg. 395.

anticompetitive practice." These acts, committed for whatever reason, are anticompetitive.

Q WHAT DOES SUPRA WANT WITH REGARD TO ITS SECOND CONCERN?

A. Supra requests that BellSouth be required to continue to provide data services to customers who currently have such services, after such customers decide to switch to Supra's voice services. To allow BellSouth to disconnect such customers' data services would be anti-competitive, discriminatory and a violation of 251(c)(3).

That this Commission review its order in 00-731 and determine if the weight of evidence that caused the Commission to order that BellSouth not be required to install linesplitters is not overcome by BellSouth's current program to use this order as an anti-competitive tool.

Supra requests that this Commission ensure that the Follow On Agreement include a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete

response in support of its position. Should it be found that Supra is entitled to additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Issue 53 : How should the demarcation points for access to UNEs be determined?

Q **WHAT IS SUPRAS POSITION.**

A. BellSouth must provide UNEs and UNE combinations to Supra at any Technically feasible point of Interconnection specified by Supra. From *The First Report and Order* CC Order 96-325 ¶26

> 360. **Section 251(c)(2) requires incumbent LECs to provide interconnection to any requesting telecommunications carrier at any technically feasible point.** The interconnection must be at least equal in quality to that provided by the incumbent LEC to itself or its affiliates, and must be provided on rates, terms, and conditions that are just, reasonable, and nondiscriminatory. The Commission concludes that the term "interconnection" under section 251(c)(2) refers only to the physical linking of two networks for the mutual exchange of traffic. The Commission identifies a minimum set of five "technically feasible" points at which incumbent LECs must provide interconnection: (1) the line side of a local switch (for example, at the main distribution frame); (2) the trunk side of a local switch; (3) the trunk interconnection points for a tandem switch; (4) central office cross-connect points; and (5) out-of-band signalling facilities, such as signalling transfer points, necessary to exchange traffic and access call-related databases. In addition, the points of access to unbundled elements (discussed below) are also technically feasible points of interconnection. The Commission finds that telecommunications carriers may request interconnection under

section 251(c)(2) to provide telephone exchange or exchange access service, or both. If the request is for such purpose, the incumbent LEC must provide interconnection in accordance with section 251(c)(2) and the Commission's rules thereunder to any telecommunications carrier, including interexchange carriers and commercial mobile radio service (CMRS) providers. (Emphasis added)

361. **Section 251(c)(3) requires incumbent LECs to provide requesting telecommunications carriers nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory.** In the Report and Order, the Commission identifies a minimum set of network elements that incumbent LECs must provide under this section. States may require incumbent LECs to provide additional network elements on an unbundled basis. The minimum set of network elements the Commission identifies are: local loops, local and tandem switches (including all vertical switching features provided by such switches), interoffice transmission facilities, network interface devices, signalling and call-related database facilities, operations support systems functions, and operator and directory assistance facilities. The Commission concludes that incumbent LECs must provide nondiscriminatory access to operations support systems functions by January 1, 1997. The Commission concludes that access to such operations support systems is critical to affording new entrants a meaningful opportunity to compete with incumbent LECs. The Commission also concludes that incumbent LECs are required to provide access to network elements in a manner that allows requesting carriers to combine such elements as they choose, and that incumbent LECs may not impose restrictions upon the uses to which requesting carriers put such network elements. (Emphasis added)

362. In addition to specifying the purposes for which carriers may request interconnection, section 251(c)(2) obligates incumbent LECs to provide interconnection within their networks at any "technically feasible point."[93] **Similarly,**

[93] 47 U.S.C. § 251(c)(2)(B).

> **section 251(c)(3) obligates incumbent LECs to provide access to unbundled elements at any "technically feasible point."** Thus our interpretation of the term "technically feasible" applies to both sections.

Here the FCC defines "technically feasible" as a technical concern only, and places the burden of proof on the ILEC to prove that a specific arrangement specified by an ALEC is not "technically feasible" to the state Commission before BellSouth can refuse to provision it. Certainly BellSouth's position in this case is not supported by the law.

> 198. **We conclude that the term "technically feasible" refers solely to technical or operational concerns, rather than economic, space, or site considerations.** We further conclude that the obligations imposed by sections 251(c)(2) and 251(c)(3) include modifications to incumbent LEC facilities to the extent necessary to accommodate interconnection or access to network elements. Specific, significant, and demonstrable network reliability concerns associated with providing interconnection or access at a particular point, however, will be regarded as relevant evidence that interconnection or access at that point is technically infeasible. We also conclude that preexisting interconnection or access at a particular point evidences the technical feasibility of interconnection or access at substantially similar points. **Finally, we conclude that incumbent LECs must prove to the appropriate state commission that a particular interconnection or access point is not technically feasible.**

Q **WHAT SPECIFIC RELIEF DOES SUPRA SEEK?**

A. Supra merely requests that the parties' Follow-On Agreement follow the current state of the law in all matters, and specific to this issue, Supra asks that

this Commission order that BellSouth be required to provide access to Unbundled Network Elements to Supra at any technically feasible point specified by Supra.

BellSouth shall immediately provision any circuits for which it has not already received an effective order from this Commission stating that the specified Point of Interconnection is not technically feasible.

BellSouth shall not be allowed to delay provisioning while it seeks an order from this Commission to prove that the Point of Interconnection is not technically feasible.

BellSouth will be penalized for any instances where it refuses to provision a circuit where the Point of Interconnection has not already been ruled as not "technically feasible".

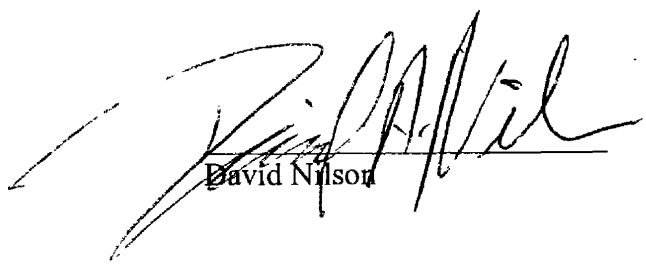
Supra requests that this Commission ensure that the Follow On Agreement include a liquidated damages provision to provide incentives for BellSouth's compliance with these rules and orders.

Furthermore, as BellSouth has refused to provide Supra with any information regarding its network, Supra is unsure as to whether it has provided a complete response in support of its position. Should it be found that Supra is entitled to

additional information, and, should Supra discover relevant information as a result, Supra request the right to supplement the record on this issue.

Q DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, this concludes my testimony.

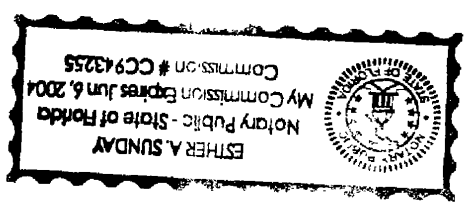


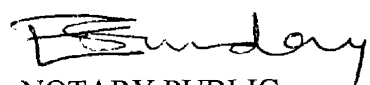
David Nilson

STATE OF FLORIDA)
) SS:
COUNTY OF MIAMI-DADE)

The execution of the foregoing instrument was acknowledged before me this 27th day of July, 2001, by David Nilson, who [√] is personally known to me or who [] produced _____ as identification and who did take an oath.

My Commission Expires:





NOTARY PUBLIC
State of Florida at Large

Print Name:

Exhibits

Supra Exhibit # DAN-1 Lucent Document 235-190-104 5ESS 2000 switch ISDN Feature Descriptions, Section 13.4 Message Service System Features, Issue 3 pages 13-67 through 13-126

Supra Exhibit # DAN-2 BellSouth and BSLD agreement to "INTERLATA END TO END TEST AGREEMENT." Dated June 13, 2000.

[redacted]

Supra Exhibit # DAN-4 Spreadsheet documenting customers subjected to "dirty tricks' campaign of BellSouth whereby customers were given false information regarding their options for continuing DSL service after switching to Supra, including disconnection, or rate increases, and other bad faith tactics.

Supra Exhibit # DAN-5 Direct Testimony of Gregory R. Follensbee, formerly of AT&T now the lead contract negotiator at BellSouth for Supra's Interconnection agreement with BellSouth. This testimony was filed in Florida Docket 00-731, AT&T's Interconnection Agreement arbitration against BellSouth.

Supra Exhibit # DAN-6 July 11, 2001 letter from G. R. Follensbee to O.A.Ramos of Supra Business Systems announcing that any customers of Supra Business Systems provisioned as UNE Combinations will have any and all existing DSL circuits disconnected in 20 days without further notice.

Supra Exhibit # DAN-7 Report of Supra customers that have lost dialtone shortly after converting to Supra. Shows the dramatic increase in the incidence of this issue since the April 26, 2001 special feature on Supra Telecom aired on WSIX, Miami TV channel 6.

Supra Exhibit # DAN-8 June 4, 2001 Letter from D. Nilson to P. Jordan - Minutes of he InterCompany review Board Meeting held May 29, 2001.

Supra Exhibit # DAN-9 June 5, 2001 Letter from D. Nilson to P. Jordan - Minutes of he InterCompany review Board Meeting held June 4, 2001.

CERTIFICATE OF SERVICE
FPSC Docket No. 001305

I HEREBY CERTIFY that a true and correct copy of the forgoing was served by U.S. Mail this 27th day of July, 2001 to the following:

Nancy B. White, Esq.
Museum Tower
150 West Flagler Street, Suite 1910
Miami, Florida 33130

Douglas R. Lackey, Esq.
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675 West Peachtree Street, N.E.
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& INFORMATION SYSTEMS, INC.
2620 S.W. 27th Avenue
Miami, Florida 33133
Telephone: (3050 476-4248
Facsmile: (305) 443-1078

By: _____
BRIAN CHAIKEN

SUPRA EXHIBIT
DAN-1
CC-1305

13.3 MESSAGE SERVICE SYSTEM

13.3.1 Description

[National] [Custom]

The Message Service System (MSS) modular feature provides call coverage capability for both analog and Integrated Services Digital Network (ISDN) stations via a Message Service Center (MSC). The MSC is operated by message service attendants who provide one or more message services.

The MSS provides centralized and personalized call coverage for subscribing users within business customer groups. Two forms of MSS capabilities are available: basic and deluxe. (Refer to Figure 99.)

Basic MSS service is provided by the 5ESS(R)-2000 switch and does not use the AP. Deluxe service offers more sophisticated options for MSS users through the applications processor (AP) or through a voice messaging system (VMS) via the applications processor interface (API) link. The API link (ISDN 0B + D) interfaces directly with the 5ESS(R)-2000 switch. Message service attendant stations can be equipped with either ISDN display station sets for basic service or cathode ray tube (CRT) displays for deluxe service (basic and deluxe services are described separately later).

Deluxe service is provided by both the 5ESS(R)-2000 switch MSS modular feature and the advanced communications package (ACP) nonmodular Customer Message Service System (CMSS) feature. The MSS environment is configured by the 5ESS(R)-2000 switch administration.

The CMSS environment is configured by the ACP administrator, the business customer administrator, and to some extent, the individual message service client. Once MSS and CMSS are set up, MSS clients are able to send, store, retrieve, and manage messages, and can maintain their individual message environment. The feature operation revolves around serving the individual client and includes personalized call coverage and MSC attendant capabilities.

To provide personalized call coverage, the message service attendant, answering an incoming call, receives a display containing information related to the call. The incoming call information is sent from the 5ESS(R)-2000 switch to the message service attendant, the AP, or the VMS, depending on the type of service. (Refer to Figure 99.) The information displayed includes, at minimum, a reason indicator [Call Forwarding All Calls (CFA), Call Forwarding Busy (CFB), or Call Forward Because No Answer (CFN)], the calling party's directory number (DN) (if

available), and the originally called client's DN. After the message has been received, a message waiting indicator (MWI) is activated to inform the client that a message is waiting to be retrieved. A client's MWI may be in the form of a special inband stutter dial tone (that is audible MWI), a lighted indicator (that is, visual MWI), or both. The MWI is deactivated after the client has retrieved all unopened messages.

For Custom ISDN only, The deluxe service also provides station users with the Leave Word Calling (LWC) feature. The LWC feature is offered in two forms: Leave Word Calling Incoming and Outgoing (LWC-IO) and Leave Word Calling Outgoing (LWC-O). The LWC-IO feature provides the user with the ability to leave predefined standard messages for other LWC-IO users without MSC attendant assistance. An LWC-IO user can also receive LWC messages from other LWC users. The LWC-O feature provides the user with only the ability to send LWC messages. An LWC user is not required to be a message service center client.

Calls terminating to message service attendant stations will have information regarding the terminating call displayed at the answering attendant's station. This information may be the calling station's DN, or if the call was forwarded within the business customer group, an indication of the type of forwarding and either the originally called (dialed) DN (OCDN) or the redirecting DN (RDN). For calls incoming to the customer group, an indication that the call originated outside the group will be provided.

The MSS features are as follows:

Basic and Deluxe MSS Features (available in both Custom and National ISDN)

- Message Service Center
- Attendant Call Coverage
- Message Service Center (MSC) Attendant Position Activation-Deactivation
- Audible Message Waiting Indicator
- Visual Message Waiting Indicator
- MWI Activation-Deactivation by Service Provider
- MWI Deactivation by Client.

Deluxe Only MSS Features (available in Custom ISDN only)

- MSS Auto Call

- o Auto Activation-Deactivation of MWI
- o Direct Login (DLOG)
- o LWC
- o Message Retrieval Display (MRD)
- o Print on Demand (POD).

13.3.2 Cross References

The following cross references apply to the Message Service System feature:

- o Feature number: 03-02-0900
- o NSEP/5SEP Number: ISMESRT.

13.3.3 Availability

The Message Service System feature is available as follows:

- o National ISDN -- 5E8 and later software releases
- o Custom ISDN -- 5E4 and later software releases.

13.3.4 Interactions

13.3.4.1 General

The 5ESS(R)-2000 switch works as designed for MSS/answering service interactions, but the end-user may want to consider the following MSS/answering service scenario for any type of connection between offices in which the incoming side has a line appearance: two offices are interconnected via a foreign exchange (FX) trunk, and user B in the far-end office has **all** of the following characteristics:

- o A line appearance of 220-1198
- o An MSS feature
- o An answering service such as the Audio Information Exchange [AUDIX(R)]
- o A Call Forwarding feature.

If user A (in the near-end office) originates a call to user B (in the far-end office) and B's Call Forwarding feature forwards the call to B's answering service, the answering service receives the calling party number as 220-1198 instead of A's DN.

When B retrieves the message, B may receive notification that the call originated from 220-1198 and not from the original party's number in the far-end office. If B then tries to call

220-1198, B cannot reach the original party via this number.

13.3.4.2 Simplified Message Service Interface

The Simplified Message Service Interface (SMSI) provides the interface to voice message systems on the 5ESS(R)-2000 switch and enables a smooth transition for simplified message service customers served via a 1A ESS(TM) switch when moving to a 5ESS(R)-2000 switch. It allows the customers to use the same hardware, firmware, and software previously used on the 1A ESS switch for voice messaging. This feature requires the ISDN message services - AP/ACP feature package on the 5ESS(R)-2000 switch using either the AP or the simplified message service interface translator.

Note: The MSS attendant is in no way related to the ISDN attendant (ISAT) which utilizes the ISDN attendant console.

The MSS attendant operates from a message service center concept. The message service center is created by the advanced communications package (ACP) administrator and corresponds to an appropriate multiline hunt group (MLHG) set up for universal call distribution, circular, or regular hunting on the 5ESS(R)-2000 switch. Calls forwarded to an MLHG arrive at an attendant station which is assigned to the MSC and associated with a particular BC.

The 5ESS(R)-2000 switch features which require Deluxe MSS interaction are: Auto Call, Leave Word Calling (LWC), Message Retrieval Display (MRD), Print On Demand (POD), and indirectly, MWI. The MSS feature is independent of any other ACP feature but does require that the directory data base is correctly populated via directory data base administration (DDA). If combined with the SMSI feature, AP dual telephone coverage, and an integrated messaging capability is realized.

This feature operates the same for MultiPoint basic rate interface (BRI), with the exception that Auto Call cannot be invoked when user is B-channel blocked.

13.3.4.3 Uniform Call Distribution (UCD) Multiline Hunt Group (MLHG)

With a UCD MLHG, the listed directory number (DN) or group DN is different from the DN of the first hunt group member. However, the listed DN and the first member DN share the same physical port although features (such as Call Forwarding and MWI) are assigned to the first member DN. The fact that the listed DN and first member DN have the same port means either DN can deactivate the MWI. This can create a problem for the end-user because when one DN (for example, the listed DN) deactivates the MWI, the other DN (for example, the first member DN) will not know it.

13.3.4.4 Advanced Services Platform (ASP) - National ISDN Only

Beginning in the 5E10 software release, an ASP originating feature that supports an off-hook delay trigger may coexist with MSS subfeatures on a National ISDN line. This functionality is available with the purchase of the ASP BRCS/OHD Interworking Extensions feature (99-5E-2343). For details on the interactions between MSS subfeatures and ASP, refer to 235-190-126, *Advanced Services Platform Release 0.1B* (R0.1 protocol).

13.3.5 Limitations

This feature is not supported on noninitialized terminals (NITs), but is supported on fully initialized terminals (FITs).

It is not possible in the 5ESS(R)-2000 switch to dial an access code followed by an ISDN feature button to perform a single function.

The following are limitations and restrictions for MSS:

- The CMSS features run on an AT&T 3B2/600 computer.
- Normally, only one line per attendant station is allowed for an MSS attendant.
- Each MSS attendant can serve only one customer which may be composed of multiple BCIDs (up to 6).
- For the MSS feature to provide service as described, appropriate 5ESS(R)-2000 switch translations are required.
- MWI activation/deactivation requests are blocked during office dependent data (ODD) backup. Requests from a subscriber or an MSS attendant, if provisioned, is given rejection treatment. Request from VMS results in the 5ESS(R)-2000 switch sending a MWI_Fail message back to the VMS.

13.3.6 Feature Implementation

13.3.6.1 Recent Change Views

Recent Change View 12.37 is used to implement the MSS features. Table BO gives the attribute status information, the attribute field as displayed on the RC View 12.37, the field values, and the default field values (where applicable). A description of the attributes associated with the MSS modular feature is listed as follows and depicted in Table BO:

1. FEATURE -- (O); Feature Name: This is 1 to 8 characters defining the feature name in code. Only a preconstructed feature has a slash (/) as the first character.
2. REMARKS -- (O); Feature Description: This is 1 to 32 characters defining the feature in narrative form.

3. ATT COVERAGE -- (O); Attendant Coverage Allowed: The allowed values are Y (yes) (default) or N (no). Station users that subscribe to this service must utilize one of the Call Forwarding options (CFV, CFBL, or CFDA) to route their calls to the MSC. If ATT COVERAGE is Y (yes), then AUD MSG WAIT IND or VIS MSG WAIT IND must be Y (yes), unless the service provider has the appropriate software update or software release. The assignment of ATT COVERAGE to Y without setting the visual or audible message waiting indicator to Y is allowed under the following conditions:

   - 5E5 software release -- Must include software update 90-0060
   - 5E6 software release -- Integral part of the feature offering.

   Selective Call Forwarding (SCF) can also be used. For information on SCF, see 235-190-130, *Local Area Signaling Services*.

4. LW CALLING -- (O); Leave Word Calling: This attribute provides the user with the ability to leave messages for message service clients without attendant assistance. This is an optional feature of the deluxe service available to analog and ISDN station users within the same business customer group. To become an LW CALLING user, a station user must subscribe to either LWC-IO or LWC-O.

   The allowed options are as follows:

   - Incoming and Outgoing (INOUT) - If LW CALLING is INOUT, then AUD MSG WAIT IND or VIS MSG WAIT IND must be Y (yes).
   - Outgoing (OUT)
   - NONE (default).

5. MSG RTRVL DISP -- (O); Message Retrieval Display: This attribute provides the station users with the capability to directly retrieve their stored messages independent of an existing voice and/or data connection. The MSG RTRVL DISP is an ISDN station option (that is, the station has display capabilities) of the deluxe service available to message service clients and LWC-IO users. A password option, provided on a business terminal group basis, requires the station user to specify an individualized password to access their stored messages for a display session. The allowed options are Y (yes) or N (no) (default).

6. PRNT ON DEMAND -- (O); Print on Demand: This attribute is an option of the deluxe service that, when provided on a per-primary DN basis, allows an analog or ISDN station user to request a printout of messages without the assistance of a message service attendant. It is available to message service clients and LWC-IO users. The allowed options are Y (yes) or N (no) (default).

7. AUD MSG WAIT IND -- (O); Audible Message Waiting Indicator: This attribute on a per-primary DN basis, provides an audible MWI for either analog or ISDN stations via special inband signaling. Whenever a message is waiting, stutter dial tone will precede normal dial tone when the user goes off-hook. Allowed values are Y (yes) or N (no) (default). When assigned to an MLHG member that is not the first member, the member must have an individual DN assigned.

8. VIS MSG WAIT IND -- (O); Visual Message Waiting Indicator: This attribute on a per-primary DN basis provides the station user, when equipped with a visual MWI, a visual indication whenever a message is waiting. The switch, upon request from the message service or AP, sends a message to the specified station to activate/deactivate the MWI at the station. When assigned to an MLHG member that is not the first member, the member must have an individual DN assigned.

   An ISDN station with a visual MWI must have a feature button assigned to the MWI feature. If the station also has the MWI deactivation feature, the MWI visual indicator and the MWI deactivation features will be assigned to the same button. Allowed values are Y (yes) or N (no) (default).

9. DEACT MSG WAIT IND -- (O); Deactivate Message Waiting Indicator: This attribute on a primary DN basis, provides the message service system clients and LWC-IO users the ability to deactivate their MWI from their station set. The provider of the MSC may or may not choose to offer this option. Allowed values are Y (yes) or N (no) (default). When assigned to an MLHG member that is not the first member, the member must have an individual DN assigned. If DEACT MSG WAIT IND is Y (yes), then AUD MSG WAIT IND or VIS MSG WAIT IND must also be Y (yes).

10. AUTO CALL -- (O); Auto Call: This attribute on a primary DN basis, provides the station user with the ability to place a call to the party associated with a displayed message during either an AP login session or a message retrieval display session, without dialing the directory number. The AUTO CALL attribute is also an option of the Electronic Directory Service (EDS). When assigned to an

MLHG member that is not the first member, the member must have an individual (no-hunt) DN assigned.

The AUTO CALL feature is an ISDN station set option of the deluxe service. It is available to message service clients with the MRD option and/or the ability to access the AP directly via a data call from an ISDN integrated voice/data station set with a CRT and keyboard terminal. Allowed values are Y (yes) or N (no) (default).

11. MSS GRP -- (O); MSS Group Name: This parameter specifies the Message Service System group name. Enter 1 to 8 characters. There is no default.

13.3.6.2 Preconstructed Features

The MSS preconstructed feature definitions are given in Table BP.

13.3.6.3 Message Service System Flowchart -- 5E6 Software Release

13.3.6.3.1 Flowchart Overview

Figures 100, 101, 102, and 103 (which have been written for the 5E6 software release) show the implementation of the ISDN Message Service System (MSS) feature.

Typically, the steps necessary to provision MSS are as follows:

1. Perform the Message Service Center Construction flowchart (Figure 100)

2. Perform the MSS Group Construction flowchart (Figure 101)

3. Perform the MSS Feature Construction flowchart (Figure 102)

4. Perform the MSS Feature Assignment flowchart (Figure 103).

All of these steps are not always necessary. Also, steps two and three can be interchanged.

13.3.6.3.2 Usage Notes

In Figures 100, 101, 102, and 103, the value to be entered into a key field is surrounded by angle brackets and delimited from the key field name by an equal sign. For example, *1. TN=<LINE'S TN> indicates that the line's telephone number should be entered into the view's key field named TN which is field number one. Key fields are denoted by an asterisk, optional key fields by an asterisk enclosed in parentheses "(*)," and required key fields by a pound sign "#." Values to be entered exactly as shown are surrounded by double quotes (").

13.3.6.3.3 General Comments

For all MSS groups assigned with an MSS feature to a line with identical applications processor IDs (APIDs), the service identifier (SRV ID) for each MSS group must be unique (View

4.37). The BCID for all MSS groups assigned with an MSS feature to a line must be the same.

For every MSS feature assigned to a line with the Message Retrieval Display (MRD) option, the APID for the associated MSS groups must be unique within the set.

For every MSS feature assigned to a line with the Print On Demand (POD) option, the APID for the associated MSS groups must be unique within the set.

The MSS features can be assigned to a line via BRCS Feature Cluster or BRCS Feature Group (BFG). These procedures are not outlined here. Keep in mind that MSS groups cannot be assigned to a line via BFG; they must be assigned individually for each MSS feature.

Message Service System (MSS) features are assignable to both analog and ISDN lines. However, not all options of MSS are assignable to analog lines.

Message Service System groups and any custom-constructed MSS features must be constructed before they can be used in MSS Feature Assignment.

A maximum of four MSS features are assignable per line.

If an MSS feature is assigned to the same line as an EDS feature, the business customer identifiers (BCIDs) for all MSS and EDS groups must be identical.

The MSS group and MSS feature must be unique for each line.

13.3.6.3.4 Assumptions

The applications processor (AP) used in MSS Group Construction has already been defined using View 24.7.

The customer premises equipment (CPE) is of the correct type.

13.4 MESSAGE SERVICE SYSTEM FEATURES

13.4.1 Interswitch Voice Messaging

13.4.1.1 Description

[National] [Custom]

The Interswitch Voice Messaging (ISVM) feature enables voice mail and call answering capabilities to be extended to business customers served by other switches, in addition to those customers connected to a 5ESS(R)-2000 switch with a voice messaging system (VMS). The ISVM feature allows voice messaging (VM) providers to expand their current intraswitch customer base to potential VM customers served by other switches. This

feature provides switch support for the necessary interswitch signaling. This feature does not change or modify existing intraswitch VMS configurations or their interface to the serving 5ESS(R)-2000 switch.

The ISVM feature is defined by the ability to provide VM capabilities to a customer who can be served by a different switch other than that connected to the VMS itself. The switch serving the VMS is referred to as the *near switch*. If the VM user is served by a different switch, that switch is referred to as the *far switch*. With the 99-5E-3270.A, Line Blocking Enhancement - Phase 1 feature the message service center (MSC) will deliver the calling party number (CPN) to the VMS even if it is restricted. The CPN is delivered for both direct or forwarded calls. The VMS can then allow users to retrieve messages from their VMS without having to reenter their directory number (DN). This 5E10 software update (SU) feature is activated on a per-switch basis with an optioned feature identifier (OFID 669) for all MSCs. A related 5E11 SU feature, 99-5E-3270, Line Blocking Enhancement - Phase 2, allows the service provider to selectively activate the feature on specific terminating MSCs. These are secured features (SFID 240) and a right-to-use (RTU) fee must be paid to Lucent Technologies before enabling information is provided. The Line Blocking Enhancements - Phase 1 and Line Blocking Enhancements - Phase 2 features do not affect CPN delivery when an intraswitch call with privacy activated is made or forwarded to a screening MSC serving an MSS VMS.

13.4.1.2 Availability

The ISVM feature is available in the following software releases:

- National ISDN -- 5E8 and later software releases
- Custom ISDN -- 5E7 and later software releases.

The Line Blocking Enhancements - Phase 1 feature is available for Custom and National ISDN as a software update for 5E10 and 5E11, and as a part of the 5E12 software release. The Line Blocking Enhancements - Phase 2 feature is available for Custom and National ISDN as a software update for 5E11, and as a part of the 5E12 software release.

13.4.1.3 Environment

The ISVM capability allows VM providers to expand their current intraswitch customer base to potential VM customers served by other switches in the same local access and transport area (LATA). This feature gives VM service providers the ability to offer voice messaging on an interswitch, intra-LATA basis. In order to provide VM services, a VM provider is assigned one or more multiline hunt groups (for example, analog, BRI) and a data

link by service order.

Line Blocking Enhancements - Phase 1 is provided on a per-switch basis using OFID 669. Line Blocking Enhancements - Phase 2 allows the feature to be provided to selected terminating MSC multiline hunt groups. Both Custom and National ISDN are supported for these two features.

13.4.1.4 Cross References

The following cross references apply to the Interswitch Voice Messaging feature:

- Feature Number:

  -- 99-5E-0658, Interswitch Voice Messaging

  -- 99-5E-3270.A, Line Blocking Enhancement - Phase 1

  -- 99-5E-3270, Line Blocking Enhancement - Phase 2

13.4.1.5 Background

Intraswitch VM refers to the VM subscriber being served by the same switch that is connected to the VMS. The caller (that is, someone who calls the subscriber) need not be served by the same switch. Intraswitch VMS is currently available on the 5ESS(R)-2000 switch through the Message Service System (MSS) feature, working with the applications processor interface (API). [It is also available on the 1A ESS(TM) switch through either the simplified message service interface (SMSI) or MSS features and the SMSI or bulk calling line message service (BCLMS) interface protocols.]

The ISVM capability refers to the VM subscriber being served by a different switch other than that connected to the VMS. The caller can be served by the VMS's switch, the subscriber's switch, or any other switch.

The *near switch* is the switch that serves the VMS. The *far switch is the switch that serves a VM user who is served by a different switch other than that connected to the VMS.*

Figure 104 illustrates these definitions.

The term voice mail is the name given by VM providers to that component of the VM which allows a subscriber to send messages to other subscribers and to retrieve messages. Voice mail can be subscribed to through a contract between the user and the VM provider, with no involvement by the 5ESS(R)-2000 switch owner. In this case, the VMS would operate in a stand-alone mode, but the subscriber would not have message waiting indicators (MWIs). That capability requires that the VMS be integrated with the switch. In this case, the VM user would subscribe to an MWI

feature through the service provider.

The term *call answering* is the name given to another VM component, whereby users forward calls to the VMS. The user subscribes to some version of call forwarding through the service provider, with the VMS as the destination DN. In order to receive notification that a call has been forwarded to the VMS and that a message has been left, the user also subscribes to MWI.

The 5ESS(R)-2000 switch supports the MSS feature, which is associated with the API protocol to provide feature-related signaling on the interface between the 5ESS(R)-2000 switch and an applications processor (AP), a VMS, or some other adjunct. The API protocol supports full NANP DNs; however, in the 5E6 software release, the 5ESS(R)-2000 switch sends a full NANP calling DN and an NANP called DN (without the NPA) to the AP. The AP previously has received NANP DNs without the NPA, which it passed unchanged to the VMS on the SMSI. However, if it received a full NANP DN, the protocol conversion would strip off the first three digits before passing the NANP DN (without the NPA) to the VMS.

Figure 105 illustrates the message feature and protocol definitions for VMS configurations with 5ESS(R)-2000 switches and 1A ESS(TM) switches.

The 5ESS(R)-2000 switch supports the API protocol, but many VMS configurations support SMSI. In order to provide intraswitch VM capabilities from a 5ESS(R)-2000 switch, in this case, protocol conversion is required between the API and SMSI. This can be performed by connecting the 5ESS(R)-2000 switch to an intermediate adjunct which performs this protocol conversion. This adjunct can be an AP, or it can be an AT&T-provided unit called the 3A SMSI translator. This is illustrated in Figure 106.

The previous figures illustrated a far switch connected directly to the near switch. However, another possible architecture includes an intermediate tandem switch. Such a switch must be able to pass Common Channel Signaling, Version 7/ISDN User Part (CCS7/ISUP), call forwarding parameters for ISVM to function. Figure 107 illustrates this arrangement and indicates the required 5ESS(R)-2000 switch, 1A ESS(TM) switch, and 4ESS(TM) switch software releases.

13.4.1.6 User Operation

13.4.1.6.1 General

End-users can subscribe to two VM capabilities through a VM provider as follows:

- Voice mail, which enables the user to compose and broadcast

messages to other users

- Call answering, which allows the user to have the VMS act as an answering service.

For both voice mail and call answering capabilities, if the end-user wants notification that there are messages to be retrieved, the end-user subscribes to an MWI feature. Users served by the 5ESS(R)-2000 switch subscribe to the MSS feature, which provides MWI. For call answering, the end-user subscribes to a Call Forwarding feature.

Typically, the VM provider assigns a voice mailbox to the end-user and arranges (with the service provider) for the user to be assigned an MWI and call forwarding to the VMS. For call answering, the user can subscribe to Call Forwarding Busy Line (CFBL), Call Forwarding Don't Answer (CFDA), Call Forwarding Variable (CFV), or some combination of these features for an interswitch operation.

Generally, an end-user's MWI is activated when a message arrives in their end-user voice mailbox and is deactivated when all the messages have been retrieved. These activations and deactivations are done by the user's switch upon receipt of an MWI request from the VMS. However, the end-user also has the capability to deactivate the MWI from the end-user station set by dialing an access code or using a feature button. This action simply turns off the indicator light or stutter dial tone. It does not alter the status of the MWI as far as the VMS is concerned. This MWI deactivation by user capability is transparent to the VMS and continues to be available with the ISVM feature.

To ease retrieval of messages for end users who have privacy on their lines, the service provider can enable and activate the Line Blocking Enhancements - Phase 1 and Line Blocking Enhancements - Phase 2 features for ISVM. For Line Blocking Enhancements - Phase 1, the service provider must unlock this secured feature (SFID 240) using recent change procedures. This feature is assigned on a per-switch basis using OFID 669.

The service provider must also use SFID 240 to unlock Line Blocking Enhancements - Phase 2 and must use recent change procedures to assign this feature to specific terminating MSC multiline hunt groups. Once the feature is activated, the end-users with privacy accessing the VMS are able to retrieve either direct or forwarded calls to the VMS without having to reenter their DN.

13.4.1.6.2 Activation

In order to provide VM services, a VM provider is assigned one or more multiline hunt groups (for example, analog, BRI) and a

data link by service order. The ISVM feature is an extension of the existing attendant-based MSS feature. A VM user separately subscribes to MWI option of the MSS feature. Users can choose either audible or visual MWIs. A VM user subscribes via service order to some form of Call Forwarding. For CFBL and CFDA, the forwarded-to DN is specified as that of the VMS. The CFV is activated and deactivated from the user's station set, and the forwarded-to DN would be entered at that time.

13.4.1.6.3 Deactivation

The MWI deactivation and activation are done by the user's switch upon receipt of an MWI request from the VMS. However, the end-user has the capability to deactivate the MWI from the end-user station set by dialing an access code or using a feature button. This action simply turns off the indicator light or stutter dial tone. It does not alter the status of the MWI as far as the VMS is concerned.

If the VM provider deactivates ISVM service to customers (for example, end-user, clients, etc.), then recent change procedures are required.

13.4.1.6.4 Voice Mail User Scenario

1. End user subscribes to MWI provided by MSS.

2. Dial VMS number (7 or 10 digits for interswitch operation)

3. When the VMS answers, enter touch-tone login and ID, and follow menu to compose or retrieve messages (for example, press 1 to compose a message, press 2 to retrieve messages). Note that a touch-tone phone or touch-tone generator is a requirement.

4. Compose a message and address it by using touch-tones when prompted by the VMS. The message can be broadcast to multiple addressees.

5. Retrieve messages.

6. Hang up.

7. Message is delivered to addressees' voice mailboxes, and MWIs are activated at their station sets.

8. If messages are retrieved, MWI is deactivated at the user's station set.

13.4.1.6.5 Call Answering User Scenario

The user subscribes to a version of call forwarding, with the VMS as the destination DN. It is assumed here that the existing preconstructed Call Forwarding features are to be used. However, if a service provider has the BRCS customization package on the 5ESS(R)-2000 switch, other call forwarding options

could be available.

The existing preconstructed Call Forwarding features essentially are /CFDA, /CFBL, and /CFV. The user subscribes to one or more of these by service order. For /CFDA and /CFBL, call forwarding is on all the time with the VMS as the forwarded-to DN. With /CFV, activation and deactivation are performed by access code from the user's station set. The forwarded-to DN is also entered from the user's station set.

1. End-user subscribes to MWI and call forwarding.

2. For CFV, dial the activation access code and the DN of the VMS. A courtesy call is then made to the VMS and, when the VMS answers, CFV is activated. Callers can then leave voice messages in the user's voice mailbox.

3. When a message is left for the user, an MWI is activated at the user's station set.

4. User dials the VMS number to retrieve messages, and MWI is deactivated when all messages are retrieved.

5. To deactivate CFV, the user dials another access code.

13.4.1.7 Engineering

13.4.1.7.1 Special Planning Considerations

The service provider installs CCS7 signaling facilities that satisfy the following two conditions:

1. Calls forwarded from any far switch to the near switch are routed entirely over trunks with CCS7 signaling. Furthermore, the CCS7 signaling protocol supports the call forwarding parameters needed for the CHI sent by the far switch to the VMS.

2. The near and far switches support the CCS7 messages used to send the specific interswitch MWI activate/deactivate messages.

The current and planned capabilities of the 5ESS(R)-2000 switch do not allow for selectively routing calls over CCS7 trunks. When calls are forwarded over non-CCS7 trunks, the ISVM feature does not function properly.

The ISVM feature is an intra-LATA service and needs to be configured as such to operate properly.

13.4.1.7.2 Hardware Resources

13.4.1.7.2.1 General

The ISVM feature can be used with any VMS that supports the API

for operation with the 5ESS(R)-2000 switch. Many VMSs support the SMSI protocol, but the 5ESS(R)-2000 switch does not. If the 5ESS(R)-2000 switch is required to provide VM services from an SMSI, then the 10-digit SMSI feature and protocol are supported from the 5ESS(R)-2000 switch through the AP or 3A translator. The 3A translator supports a single API/SMSI data link. The API data link on the 5ESS(R)-2000 switch is implemented through a special permanent virtual circuit (PVC) on an 0B+D digital subscriber line (DSL).

The ISVM feature does not change or modify existing VMS configurations or their interface to the serving 5ESS(R)-2000 switch.

For the VMS to function completely, CCS7-controlled trunks must exist from the calling party's switch to the far switch and from the far switch to the near switch. However, it is very likely that there are no CCS7 trunks between the calling party and the far switch. Assuming that the first forwarding occurs at the far switch, information concerning the calling DN is lost. However, the calling DN, while convenient, is not essential to VMS.

No hardware considerations are associated with Line Blocking Enhancements - Phase 1 or Line Blocking Enhancements - Phase 2.

13.4.1.7.2.2 3A Simplified Message Service Interface Translator

The 3A simplified message service interface (SMSI) translator provides a versatile, user-configurable and self-diagnosing interface between an integrated services digital network (ISDN) basic rate interface (BRI) and customer-supplied Electronic Voice/Attendant Message Service Systems.

The 3A SMSI translator allows the customer to send and receive SMSI messages when connected to an 5ESS(R)-2000 switch. The 3A SMSI translator receives MSS messages from the 5ESS(R)-2000 switch through the D-channel of an ISDN line. The MSS messages are defined in 235-900-303, *Applications Processor Interface (API) Specification*. The 3A SMSI translator takes care of layers 1, 2, and 3 of the ISDN communications with the 5ESS(R)-2000 switch. After the MSS message is received, the 3A SMSI translator translates the message into an SMSI message. After the translation, the message is sent to the VMS.

The 3A SMSI translator supports the traditional SMSI protocol. This interface supports 7 digits in both the calling and called DN fields. The 7-digit SMSI interface does not support interswitch voice messaging which uses full NANP calling and called DN fields. The 3A translator supports a 10-digit SMSI interface that delivers 10 digits in both the calling and called DN fields. If the voice mail vendor is not capable of supporting full NANP calling and called DN fields, do not use

the 10-digit option on the 3A SMSI translator for ISVM.

One 3A SMSI translator is needed for every API link used. Both the business customer identification (BCID) and line card equipment number (LCEN) are programmed into the 3A SMSI translator during installation.

13.4.1.7.2.3 TCAP/ISUP Hardware

The common network interface (CNI) ring provides a general interface among nodes communicating with the common channel signaling (CCS) protocol. This is true for either CCS direct signaling (for example, TCAP) or CCS trunk signaling (for example, ISUP) messages. A direct link node (DLN) is optional; it improves the capacity. If a DLN is used, then a communications module 2 (CM2) is required.

13.4.1.7.3 Software Resources

The VMS connection requires a loaded SM. The ISUP trunk terminates on either a standard or loaded SM. The software packages available for ISVM are as follows:

- Existing MSS software
- CCS7 TCAP
- CCS7 ISUP
- AP Communications Package (APCP).

The ISVM feature uses CCS7 messages to transport all call information to a single switch. The VMS at that single switch may need a small amount of added capability. The far switch has the capability of sending the interswitch part of the CHI in the appropriate CCS7 ISUP message. In addition, the far switch is also able to translate the incoming MWI CCS7 translation capabilities application part (TCAP) message into the appropriate action.

The Line Blocking Enhancements - Phase 1 and Line Blocking Enhancements - Phase 2 are optional ISVM features. No additional software considerations are associated with these features.

13.4.1.7.4 Transition Considerations

No transition considerations are associated with Line Blocking Enhancements - Phase 1 or Line Blocking Enhancements - Phase 2.

13.4.1.7.5 Network Operations

- *SMSI Support of Variable Length DNs.*

  Currently, the SMSI protocol supports NANP calling and called DNs (without the NPA) in CHI and MWI messages. Pending Bellcore approval for the SMDI [FN1] industry

standard, the SMSI protocol will be enhanced to support full NANP DNs and can then allow support of ISVM.

- *Alternatives to SMSI for ISVM.*

  The 5ESS(R)-2000 switch sends and receives full NANP DNs on the API for both intraswitch and interswitch applications. Therefore, any VMS that supports the API receives and sends full NANP DNs. The 3A translator, or AP (when available), translates the API protocol to SMSI and also provides full NANP DNs to the VMS. A full NANP DN version of the 3A translator will be available as a separate product in the 5E7 software release. An enhancement to version 7 ACP SMSI to support full NANP DNs is also available as a separate product from ISVM. Currently, the AP only displays an NANP called DN without the NPA.

- *Sending 10-Digit DNs on API.*

  The API supports full NANP DNs, but in the 5E6 software release, the 5ESS(R)-2000 switch sends a full NANP calling DN and an NANP called DN (without the NPA). This is sufficient for intraswitch applications, but interswitch operations require 10 digits. The 5ESS(R)-2000 switch supports ISVM by sending full NANP calling and called DNs in the CHI message over the API.

- *Receiving 10-Digit DNs from API.*

  The MWI messages sent from the VMS to the 5ESS(R)-2000 switch contain a full NANP destination DN for interswitch applications. Previously, for intraswitch VM, an NANP DN (without the NPA) has been sent in the MWI message. The 5ESS(R)-2000 switch can handle a full NANP DN (with or without the NPA) in the MWI message. If the switch receives an NANP DN without the NPA and determines that no such DN exists on the switch (that is, it can be an interswitch application), an MWI_Fail message is returned to the VMS. Note that this is the way that unrecognized destination DNs have been handled.

  ------- FOOTNOTE -------

  FN1 Simplified Message Desk Interface (SMDI) is the Bellcore Industrial Standard version of the SMSI protocol. The SMDI is described in Bellcore document TR-TSY-000283.

13.4.1.8 Interactions

An originating interaction is when the VM user is the originating party. A terminating interaction is when the multiline hunt group (MLHG) serving the VMS is the terminating party. A list of features with no additional interaction is provided at the end of this section.

The following interactions apply for this feature:

- *Service Switching Point (SSP) 800 Services.*

  VM user can forward calls to a toll-free access number (such as, 800 or 888), where this number translates to an MLHG serving the VMS.

  Call history information delivered to the VMS cannot be complete if one of the parties in the call forwards their call to a toll-free access number and the VM is the final termination of the call.

- *900 Services.*

  If the service provider makes the DN of the MLHG serving the VMS a 900 number, a VM user can forward calls there.

  Call history information delivered to the VMS cannot be complete if one of the parties in the call forwards their call to a 900 number and the VMS is the final termination of the call.
  Typically, the call history is missing or incomplete if the call goes through a tandem switch [local exchange carrier (LEC) or interexchange carrier (IEC)] which does not pass OCN, RgN, or RI parameters.

- *Account Codes.*

  The Account Code/Customer Dialed Account Recording (CDAR) feature can be used normally in direct calls to the VMS. A VM subscriber may wish to use Account Codes/CDAR to add an account code to the AMA record or MDR record for calls forwarded to the VM systems. This can be done using the Call Forwarding Over Private Facilities (CFPF) feature, but not with other Call Forwarding features. When activating CFPF, the user has the option of forwarding calls over the commercial network rather than over private facilities. This option is useful because private facilities do not support CCS7 signaling.

  The Account Code/CDAR feature can be assigned to a terminal in the MSS MLHG.

- *Add-On/Consultation Hold Incoming Only.*

A VM user can add a VMS to an existing conversation.

- *Analog MWI.*

  The far switch interworks with an incoming MWI transaction capabilities application part (TCAP) message with MS&, and must then be able to activate/deactivate the MWI lamp. However, the mechanism for turning on and off the lamp is not impacted.

- *AT&T Network Operation Group CCS7 Network Interconnection.*

  At a 5ESS(R)-2000 switch toll office, the RI, OCN, and RgN parameters are considered unrecognized and are dropped.

- *Attendant Call Transfer/Call Splitting/ISDN Attendant Call Transfer.*

  When a call is transferred, it appears as new call to the switch. Thus, if user A calls user B, and user B transfers user A to the VMS, the calling DN is user B, not user A. Similarly, if user A calls user B, and user B transfers to user C who, in turn, forwards to the VMS, the originally called DN is user C and the calling DN is user B.

- *Attendant Conference -- Six-Way.*

  A VMS could be part of a conference call, provided that one of the conferees can provide a valid login and ID.

- *Attendant Recall from Satellite.*

  An attendant could transfer a call to a VMS using this feature. The party transferred would have to know a valid login and ID to access the system.

- *Authorization Codes.*

  An authorization code could be required in order to place a call to the VMS. Normal procedures apply for the use of the Authorization Code feature in any direct call to the VMS. When users forward their calls to the VMS, the required authorization code can be entered along with the forward-to DN, using the Call Forwarding Over Private Facilities (CFPF) feature. This cannot be done with other Call Forwarding features.

  The Authorization Code feature can be assigned to a terminal in an MSS MLHG.

- *Automatic Callback-Calling.*

  There are interactions with call forwarding in scenarios; such as, user A calls user B and is forwarded by user B to the MLHG of the VMS. If the call cannot be queued for the MLHG and receives busy treatment, ACBC cannot be used to camp on to the MLHG. Interactions with ACBC are not-changed by ISVM.

- *Automatic Intercept System/Intercept Service Using an External Information System.*

  The call gets routed to an intercept trunk. The called DN is put in the calling DN/ANI bits and an intercept digit is also inserted. This information is signaled to the Automatic Intercept System (AIS) along with the rerouting of the call.

  If the forward-to DN goes directly, or after rerouting, to a nonworking DN, then interswitch forwarded calls get AIS treatment at the far switch; an intraswitch forwarded call gets AIS treatment at the near switch.

- *Automatic Route Selection/Deluxe ARS/Electronic Tandem Switching Trunk Access/Expensive Route Warning Tone/Facility Restriction Level/Outward Calling for PBX Via ARS.*

  The ARS feature cannot be used to route forwarded calls unless CFPF is used.

  It is assumed, if on a direct call, that if ARS selects a CCS-controlled trunk, then the calling and called DNs are successfully interworked into the ISUP Initial Address Message (IAM). Of course, if a non-CCS-controlled trunk is chosen, then the calling party number is lost. The pre-5E7 software release 5ESS(R)-2000 switch implementation supports ASP hop-off which allows subscribers to call and access their ARS list until they reach a list entry that indicates 'ASP.' At that point, the call becomes ASP as if the subscriber had dialed an ASP access code or was from a dedicated line. Once the call has `hopped-off' to ASP, the subscriber cannot reenter the ARS list for continued searching.

  A VMS could have ARS assigned to its MLHG lines, but this is not likely.

- *Basic Queuing/Priority Queuing.*

  Calls that terminate at the DN of the MLHG serving a VMS

are queued if all lines to the VMS are busy. If the queue is full, the calling party receives busy treatment.

- *Call Associated CCS7 Network Interconnect.*

  Prior to the 5E7 software release, an exchange acting as an access tandem drops unrecognized ISUP parameters and does not pass them on to an IEC switch.

- *Call Forwarding Busy Line.*

  The VM users can forward their calls to a VMS using CFBL. For interswitch operation, where the VM user is served by a different switch than the VMS, the call must be forwarded on a CCS7 trunk. The far switch sends call-related data for the CHI, required by the VMS, in a CCS7 ISUP message to the near switch. This information includes the originally called DN, the reason for forwarding, and the redirecting DN (if multiple forwarding).

  The near switch routes the call-related CCS7 information in the ISUP message to MSS, and then maps this information to API messages. The MSS then sends the information to the VMS on the API.

- *Call Forwarding Busy Line -- Incoming Only.*

  VM users can forward their calls to a VMS using CFBLIO.

  For interswitch operation, the near switch routes the call-related CCS7 information in the ISUP message to MSS and then maps this information to API messages. The MSS then sends the information to the VMS on the API.

- *Call Forwarding Don't Answer.*

  VM users can forward their calls to a VMS with CFDA.

  For interswitch operation, the near switch routes the call-related CCS7 information in the ISUP message to MSS, and then maps this information to API messages. The MSS then sends the information to the VMS on the API.

- *Call Forwarding Don't Answer -- Incoming Only.*

  VM users can forward calls to a VMS using CFDAIO.

  For interswitch operation, the near switch routes the call-related CCS7 information in the ISUP message to MSS, and then maps this information to API messages. The MSS then sends the information to the VMS on the API.

- *Call Forwarding -- Incoming Only.*

  VM users can forward calls to a VMS using CFIO.

  For interswitch operation, the near switch routes the call-related CCS7 information in the ISUP message to MSS, and then maps this information to API messages. The MSS then sends the information to the VMS on the API.

- *Call Forwarding Over Private Facilities.*

  The signaling information necessary for VM services would not be sent interswitch over private facilities.

- *Call Forwarding Simultaneous Intra-Office Calls.*

  It is not likely that a single station set forwarding to a VMS has more than 99 calls active at the same time.

- *Call Forwarding Variable.*

  VM users can forward calls to a VMS using CFV. The CFV is generally activated by an access code from the user's station set, followed by the DN of the station to be forwarded to (in this case, a VMS). The switch then places a courtesy call to the forwarded-to DN and, when that DN answers, CFV is activated. If the DN does not answer, a second dialing of the access code plus forwarded-to DN activates CFV.

  For interswitch operation, the near switch routes the call-related CCS7 information in the ISUP message to MSS and then maps this information to API messages. The MSS then sends the information to the VMS on the API.

- *Call Forwarding In A (Within) Group.*

  VM users can forward calls to a VMS using CFIAG on an intraswitch basis; however, interswitch groups are not supported.

- *Call Pickup.*

  A forwarded call can be picked up if the forward-to DN is in the same pickup group. There are no interswitch groups. The MLHG members can pick up a call.

  The information for the forwarded call (calling party number, originally called DN, redirecting DN, etc.) is reinitialized if the party performing call pickup redirects

the call later on, since this is considered a new call.

In the case of a direct call from party A to party B [the originally called directory number (OCDN) with privacy=Yes] and queued or directed call pickup being used, the private OCDN is provided for display on party C's [the individual calling line identification (ICLID) user's] terminal.

In the case of a direct call from party A to party B (the OCDN with privacy=Yes) who forwards the call to party C (ICLID user) and the call picked up by party D (ICLID user), the private OCDN is not provided for display on party D's terminal. Instead, party D has a "private number" indication displayed because, technically, the OCDN (user B) is not the party whose call is being picked up.

An OCDN privacy request is respected when using CPU on forwarded calls and is not respected when using CPU on direct calls.

In the case of a direct call from party A to party B (the OCDN) who forwards the call using CCS7 to party C (ICLID user) and the call picked up by party D (ICLID user), the off-switch OCDN is not displayed on party D's terminal.

- *Call Trace.*

  A call to a DN on the trace list causes a printout of trace information, even when the call is forwarded from that DN to the VMS.

- *Call Transfer -- Individual -- All Calls/ Satellite Attendant Transfer.*

  The VM users transfer calls to a VMS. However, since the call appears to the VMS to be a direct call from the party who does the transfer, the calling party is prompted for login and ID and is not able to leave a message in the VM user's mailbox.

  If a call is transferred to a VM subscriber and then forwarded to the VMS, the call appears to the VMS to be a forwarded call, and the calling party is the one who does the transfer.

- *Call Transfer -- Individual -- Incoming Only/Internal Only.*

  The VMS can be part of a terminal group. All the existing restrictions apply to the VMS.

- *Calling Party Number Presentation.*

The ISVM feature sets the privacy status of the original called DN to that of the calling party number. The changes CPNP makes then carries over to the OCDN.

When the CPNP feature has been activated, the presentation status of the forwarding DN is determined based on the following precedence list. Precedence ranges from highest to lowest:

-- Line Indicator -- values: Public, Private, and Not Set. The default value is Not Set. The line indicator is the existing all-call privacy (ACP) indicator.

-- Screening Index Indicator -- values: Public, Private, and Not Set. The default value is Not Set. The screening index indicator is a new indicator.

-- Switch Indicator -- values: Public and Private. The default value is Public. The switch indicator is the existing switch indicator.

When an indicator has a value of 1Not Set, the next indicator is examined in precedence order. This applies to both the OCDN and RDN. This presentation status is indicated when a call to the party is forwarded and the forwarding numbers are provided.

When the CPNP feature is not active, but the line indicator (ACP indicator) has a value of Not Set, this value is treated as though it were a value of "Public."

The CPN delivery is also affected if either the Line Blocking Enhancements - Phase 1 or Line Blocking Enhancements - Phase 2 feature is active. See "Description", Section [REF. 13.4.1.1] for further information.

o *Carrier Interconnection.*

Call Forwarding does not allow forwarding to 950-XXXX numbers. As a result, the VMS should not have a 950-XXXX number assigned to it.

o *CCS7 Improved ISUP.*

Direct and forwarded interswitch calls to a VMS use 5E7 software release ISUP procedures.

Direct and forwarded interswitch calls to a VMS use ISUP procedures.

- *Code Restriction.*

  Forwarded calls to 3-digit customer-specified codes [(numbering plan area (NPA))] or to 6-digit codes (NPA-NXX) are blocked.

- *Common Channel Signaling 7 ISDN User Part Version 4 - Enhancements.*

  The new ISUP parameters (OCN, RgN, RI) are considered under the ISVM feature, as opposed to this feature.

  The ISUP Version 4 feature is providing, among other things, a new ISUP message called the Call Progress (CPG) Message. As currently planned for the 5E7 software release, the call forwarding scenarios involving this message, user-to-user information (UUI), etc., are implemented by the ISUP Version 4 feature.

- *Common Control Switching Arrangement Access.*

  Interswitch calls to a VMS must be forwarded over CCS7 trunks. If they are not, essential call-related information is lost.

  A call that is forwarded to a VMS over a non-CCS7 trunk does not have access to the calling DN, originally called DN, the redirection DN, the redirection information parameter, and other data needed by the VMS.

- *Conference Calling -- Three-Way/Six-Way.*

  A VM user can add a VMS to a conference call for the purpose of recording the conversation. However, the administered message length of the VMS limits how much of the conference is recorded.

  The VMS/MSC can be added on a conference call. For call history information delivery purpose, each leg set up by the conference controller is considered as a separate call.

- *Customer Access Treatment Code Restriction.*

  Depending on digits dialed and originating restrictions of a station, direct or forwarded calls to the VMS can be blocked in some cases.

  Depending on the origin of a call and on terminating restrictions of the VMS MLHG, direct or forwarded calls to the VMS may be blocked in some cases.

- *Delay Announcement for Queued Calls on Hunt Group.*

  It is expected that calls to a VMS are to be queued. However, the design of the MLHG is probably such that the waiting time in the queue is minimal, on the order of 2 or 3 seconds. An announcement is probably not needed nor appropriate; however, it is an available feature, if needed.

- *Dial Access to Private Facilities.*

  Both direct and forwarded calls can be routed by the 5ESS(R)-2000 switch over private facilities toward a switch that serves a VMS. The ISVM can only be supported if the private facility is a CCS7 trunk. Since CCS7 private facilities are not supported, ISVM cannot be supported over private facilities.

  Both direct and forwarded calls can be routed by the 5ESS(R)-2000 switch over private facilities toward a switch that serves a VMS. The ISVM can only be supported if the private facility is a CCS7 trunk. Since CCS7 private facilities are not supported, ISVM cannot be supported over private facilities.

- *Dial Pulsing.*

  Touch-tone dialing/signaling is needed to operate a VMS inband. Thus, rotary dialing does not work with recovering messages from a VMS.

- *Defense Switched Network/Automatic Voice Network (DSN/AUTOVAN).*

  ISVM is not supported in the DSN environment.

- *Dual Telephone Coverage.*

  One of the MSS features to which a client subscribes may be an ISVM feature. This means that the client can subscribe to up to four MSS features of which only one can be ISVM. The client uses the various flavors of call forwarding to redirect calls to the appropriate messaging system.

  When an MWI control message comes from another switch to a client with multiple MWIs, the 5ESS(R)-2000 switch knows which MWI to update since the client is allowed to have only one ISVM feature with auto MWI security set to "No."

- *E911 Service.*

Calls cannot forward to an E911 call type.

- *Enhanced Private Switched Communications Service/CCS7 Leased Network Interoffice Signaling/ISDN Access to Leased Network Features.*

  The CCS7 transport within the EPSCS network is supported. The 5ESS(R)-2000 switch can act as an AT&T-owned EPSCS node.

  The 5ESS(R)-2000 switch can also provide access to an EPSCS network for users served by the 5ESS(R)-2000 switch. This access uses inband signaling rather than CCS7. The EPSCS subscribers can also gain access via the PRI from a PBX. Since neither access method is via CCS7, ISVM cannot be supported when a VM subscriber is connected to the VMS via EPSCS.

  A 5ESS(R)-2000 switch EPSCS node does not support NANP private-network DNs (without the NPA) on the API.

- *Feature Code Definition.*

  Feature codes can be used to activate and deactivate Call Forwarding features. A feature code can be used to deactivate an MWI from the user's station set.

- *Foreign Exchange Line.*

  This is transparent to the 5ESS(R)-2000 switch and 1A ESS(TM) switch. This capability should not be confused with tie trunks, which are interswitch private trunk groups.

- *ICLID Call Forwarding Display.*

  When an ISVM call terminates, the CCS7 redirection information (RI) parameter is mapped from the original redirection reason (ORR) to the corresponding ISDN call identification (ICI) value.

  The MSS software checks to see that if the OCDN/RDN is 10 digits. If it is 10 digits and the call reason is unknown/other, then call forwarding all (CFA) is displayed on the ISDN station set. If the OCDN/RDN is not 10 digits, then INX (incoming) is displayed on the ISDN station set.

  Only the MSC attendant has the option to display either the first or last redirecting DN.

  The ICLID displays can be the same for intraswitch and

interswitch call forwarding scenarios when all switches and trunks are equipped to transmit/receive the calling DN, redirecting DN, redirecting DN presentation indicator, and redirecting reason. For example, user A originates a call to user B. User B has calls forwarded to user C on another switch. The switches are connected with CCS7 lines that transmit originating DN and redirecting information. User C displays user A's DN, user B's DN, and ICI indicating the reason for forwarding. The ICLID displays the original called DN for multiple forwardings, but options on a message service center (MSC) attendant can allow ICLID to display the original called DN or the DN of the last forwarding party.

- *Inspect for ISDN Terminals.*

  Additional DN (for example, originally called DN, redirecting DN) information is not displayed.

- *Intercom Dialing/Single-Digit Dialing.*

  A number dialed per a special dialing plan, and intended for another switch, is translated to a normal full NANP number before being sent to the other switch.

  When calls are forwarded to a VMS, the originally called DN, or the redirecting DN, is sent in the CHI to the VMS. If the originally dialed number was per a special dialing plan, the 5ESS(R)-2000 switch translates all the directory numbers from the individual dialing plan format to the full directory number format.

- *Intermodule Trunking.*

  When a call is forwarded to a VMS, the following call-related information is available to be sent to the VMS:

  -- Originally called DN.

  -- Original redirection reason.

  -- Redirecting DN.

  -- Redirection reason. Intermodule trunking does not have the capability of sending this information from the forwarding SM to the VMS's SM if non-CCS7 controlled trunks are utilized.

     If CCS7-controlled trunks are used for the inter-SM trunking, the call forwarding parameters (OCN, RgN, RI) would be passed in and obtained from the ISUP IAM used for these trunks' signaling.

- *INWATS (800 Services).*

  A VM user can forward calls to a toll-free access number, where this number translates to an MLHG serving the VMS.

  Terminating -- Call history information delivered to the VMS may not be complete if one party in the call forwards a call to a toll-free access number and the VMS is the final termination of the call.

  Typically, the call history is missing or incomplete if the call goes through a tandem switch (LEC or IEC) which does not pass the OCN, RgN, or RI parameters.

- *ISDN Attendant Conference Calling.*

  An attendant could add a VMS to a conference call (for example, to record the conversation) provided the attendant or one of the conferees could log on to the system. Also, if the attendant attempted to include a VMS subscriber whose calls were forwarded to a VMS, the VMS would be added to the conference if the originally called party did not answer or was busy.

- *ISDN Attendant Control of Voice Terminals.*

  A call could terminate at an MLHG serving the VMS and then be diverted to an attendant.

- *ISDN Attendant Emergency Override.*

  Attendant Emergency Override would override CF to a VMS.

- *ISDN Attendant Night Service/Night Service/ISDN Attendant Power Failure Transfer.*

  The attendant can use the night service (NS) feature button to forward calls to a VMS. The VMS could be either preselected or selected by using CFV.

- *ISDN Basic Message Service System.*

  Basic MSS is not extended for ISVM.

- *ISDN Delayed and Abbreviated Ringing.*

  The MSS MLHG associated with the VMS should not have shared directory numbers.

- *ISDN Electronic Directory Service.*

The EDS feature is an intraswitch feature. There is no impact of ISVM on EDS. However, the 5E4 software release requires that if a client has MSS and EDS, the client must be in the same business customer identification (BCID) for both of these features. In addition, in the 5E6 software release, a client is able to subscribe to four MSS and one EDS features. However, the client can only be in one business customer group (BCID).

With ISVM, the auto MWI security value is set to "No." When the "Auto" MWI security is yes, the BCID association with the MSS feature may be 0. If the customer decides that security is necessary, then auto MWI security is set to "Yes." In this case, the service is intraswitch.

- *ISDN Key Set Intercom Functions/ISDN Single-Digit Intercom.*

  The calling and called DNs are given to the terminating side.

  Intercom calls cannot be forwarded and, therefore, cannot be forwarded to a message service.

- *ISDN Multibutton Key System Feature Definition Buttons.*

  Message service supports several feature buttons. One of which is the message waiting indicator(s). Other feature buttons are associated with aspects of MSS which are not being extended interswitch.

- *ISDN Message Service -- Automatic Control of Message Waiting.*

  When a message is recorded at, or retrieved from, a VMS, the VMS issues an MWI activation or deactivation request and sends it to the switch. The switch determines whether the destination DN is served by itself or another switch. If the switch serves the destination DN, it acts upon the MWI request. If the DN is on another switch, the MWI request is packaged into a TCAP message and sent to that switch for action. Success or failure is reported back to the switch that sent the TCAP message. If the result is failure, the external messaging system is notified that the MWI update failed.

- *ISDN Message Service -- Leave Word Calling.*

  For interswitch call forwarding using CCS7, if the leave word calling (LWC) requester is on a switch different from the OCDN, the LWC requester receives rejection treatment

when attempting to activate LWC for the off-switch OCDN.

- *ISDN Multiple Call Appearances.*

  A voice messaging system would not typically have multiple call appearances for a given DN. If the voice messaging system did have multiple call appearances, since these DNs are part of a uniform call distribution (UCD) multiline hunt group, if any one of the call appearances is busy, the DN itself is considered busy.
  Since there is an option for "No Screening" on the MSS MLHG, it is possible to forward secondary-only, or non-MSS, directory numbers to the messaging system, and the forwarding DNs phone number is sent to the voice messaging system.

- *ISDN Multiple DNs.*

  The MSS feature can only be assigned to the primary DN.

  When a VMS issues an MWI request, the message contains the destination DN. The MWI lamp is activated or deactivated at the station set where the destination DN is primary.

- *ISDN Number of Calls on Queue.*

  It is not anticipated that the ICIs would change due to ISVM.

- *ISDN Shared Call Appearances of a Directory Number.*

  If call forwarding is active for a shared DN, the shared DN becomes the originally called DN (rather than using the primary DN of the terminal on which the shared DN appears).

  If a VMS issues an MWI request, the message includes a destination DN. The MWI is activated and deactivated at the station set which is the primary terminal for the destination DN.

  If the VMS specifies a DN which does not subscribe to the MSS feature, the MWI request is rejected by the switch.

- *LASS Automatic Callback.*

  A VMS can place a call in order to deliver a message. This occurs when MWIs are not used. However, the ISVM feature assumes that an MWI is used to alert a user that a message is waiting.

  Automatic Callback cannot be activated on a DN which has

call forwarding active (for example, CFV, CFBL, or CFDA). If AC is used in a call terminating to the VMS, the call history information contains the calling party DN and a call reason of direct call. The AC has a window where it can camp on to a line with forwarding.

- *LASS Automatic Recall.*

  If a VM user calls the VMS directly and gets busy signal (that is, all lines in the MLHG are busy and the queue is full), AR could be activated. Then, the calling party would be called back and connected to the MLHG queue when space becomes available.

  The AR cannot be activated to a DN which has call forwarding active (for example, CFV, CFBL, or CFDA). If AR is used in a call terminating to the VMS, the call history information contains the calling party DN and a call reason of direct call. The AR has a window where it can camp-on to a line with forwarding.

- *Individual Calling Line Identification Calling Number Delivery/BRCS Supplementary Services for ISDN Circuit-Switched Data Calls/ISDN ICLID Calling Number Delivery.*

  For calls that are forwarded to a VMS, the calling party DN is included in the call history information sent to the VMS. For interswitch call forwarding, the calling party DN is in the CCS7 IAM. The ISVM feature makes off-switch originally called DN available to the ICLID feature.

  The ICLID Calling Number Delivery feature is modified to directly accept 10 digits for the originally called DN. The originally called DN becomes available for both intraswitch and interswitch calls.

  The ICLID Calling Number Delivery provides full NANP originally called DNs for intraswitch and interswitch calls.

  The ICLID DN Privacy feature is extended to apply to the originally called DN for an incoming call, for both intraswitch and interswitch calls. If the party originally forwarding the calls subscribes to either "all-call" DN privacy, or the switch has office privacy active, then the party's DN, (that is, the originally called DN) is marked as "presentation restricted." When the call is terminated, the presentation restriction indicator should be examined to determine whether the originally called DN is to be displayed.

- *Individual Calling Line Identification Directory Number Privacy.*

  If a line with privacy has it's calls forwarded to a VMS MLHG, the line's DN is sent to the VMS in the forwarded DN field of the call history information, (that is, privacy is ignored for calls forwarded to the VM MLHG.) The VMS needs to know the forwarded DN (either the originally called DN or the redirecting DN) in order to route the call to the called party's mailbox so that a message can be left.

  The calling (originating) line's DN is not sent to the VMS in the calling party number field of the call history information, either for a direct or a forwarded call, if the calling DN has all-call privacy (fixed) or per-call privacy activated. The 5ESS(R)-2000 switch overrides privacy if the calling DN is in a business customer group served by the VMS (intra-business group calls). For ISVM services, the Line Blocking Enhancements - Phase 1 and Line Blocking Enhancements - Phase 2 features override privacy to the VMS. The calling DN is not necessary for the VMS to operate, although there are instances where it can be convenient.

  The redirecting DN (that is, the OCDN or RDN) is marked as private if the forwarding party has either "all-call" privacy or the forwarding party's switch has office privacy active.

  If the call terminates to a BRI with ICLID assigned, all-call privacy status of the forwarding DN is referenced when displaying the called DN at the forward-to party. For example, if user A originates to user B, user B has an all-call privacy status of PRIVATE, and user B has calls forwarded to user C, then user C displays user A's DN, PRIVATE NUMBER (represents user B's DN), and the reason for forwarding.

- *LASS Selective Call Acceptance/Computer Access Restriction.*

  A VM user can use the SCA feature for those calls to be forwarded to the VMS.

  The SCA feature can be assigned to the main DN of the MLHG associated with a VMS. Incoming calls are then screened against the SCA list before an idle member is searched. Calls from DNs not on the list are either forwarded or routed to announcement. If the VM provider only allows specific users to have calls accepted by the VMS, SCA can be used.

- *LASS Selective Call Forwarding.*

  A VM user with SCF activated has the DN of the VMS MLHG as the SCF forward-to number for calls to be forwarded to the VMS. Other Call Forwarding features can also be assigned to the same user, but SCF has precedence. An SCF user is able to forward to a nonscreening MSC.

- *LASS Selective Call Rejection.*

  The SCR feature can be assigned to the main DN of the MLHG associated with a VMS.

  Incoming calls to the VM user are checked against the SCR list. Only if the call is accepted is it then terminated to the VMS.

- *Line Blocking Enhancements - Phase 1 or Line Blocking Enhancements - Phase 2.*
  The Line Blocking Enhancements - Phase 1 and Line Blocking Enhancements - Phase 2 features override the privacy restriction for CPNs on ISVM calls for both direct and forwarded calls to all MSCs on a specific switch (in Phase 1) and to specific MSCs (in Phase 2).

- *Multiline Hunt Service Circle Hunting.*

  Uniform call distribution (UCD), regular, and circular are valid hunt types for an MSC.

- *Multiple DNs Per Line with Distinctive Ringing.*

  For all versions of this feature, an originating call from an MDNL port is always associated with the "Master DN," pointed to by the LEN translator. Therefore, any call placed from an MDNL port (associated with the LEN) passes the "Master DN" as the calling party number. **Terminating** --
lients with MDNL can only subscribe to the MSS feature once. However, they can assign MSS to either the master or dependent DNs; but the MSS feature is "assigned" to the master DN and all of the dependent DNs. Thus, the same assignments of the visual and audible MWIs are used for the master DN and all of the dependent DNs. When the VMS issues an MWI request, the destination DN is the DN whose mailbox received a message or had its messages erased.

- *MultiPoint or Standard BRI.*

  As long as users have their own unique DN, they can subscribe to MSS (and ISVM). Users can forward calls to a VMS and receive MWIs from a VMS.

- *OUTWATS/OUTWATS with Simulated Facilities Group.*

  Calls cannot forward over OUTWATS trunks.

  Call history information delivered to the VMS may not be complete if the call terminates to the VMS through an OUTWATS trunk.

- *Precedence and Preemption.*

  There are interactions between PP and CF. For example, if a busy subscriber has CFBL active, they can have their active call disconnected and be connected to a new incoming precedence call.

  There are interactions between PP and calls terminating to an MSS MLHG. For example, an active call to the MSS MLHG can be torn down and replaced by a precedence call.

- *Q.931 and CCS7 ISDN User Part Interworking Enhancements.*

  There are some changes to the ICLID feature involving the display of the OCN.

- *Remote Activation of Call Forwarding/Remote Access to Call Forwarding.*

  A VM user can remotely activate CFV to the VMS. However, CFBL and CFDA cannot be remotely activated. Remote call forwarding allows someone who has CFV assigned to their phone to activate it from a remote location. Once CFV is activated in this way, it acts just like it would if activated from the user's station set except that a courtesy call is not sent.

- *Remote Call Forwarding.*

  The remote DN can be the DN of the MLHG serving the VMS. This feature is similar to CFV, but is always active and not controllable by the subscriber.

  A physical station set is not required to be associated with the dialed DN; however, CHI would be sent as if it were. For example, if a call was forwarded to a VMS from such a DN, the originally called DN in the CHI would be the forwarding DN. An MWI would not be assigned to the forwarding DN.

- *Series Completion.*

Each member of a series completion list can separately subscribe to call forwarding; however, call forwarding has precedence over Series Completion.

Series Completion does not update the forwarding parameters.

- *Service After Delay Announcement.*

  Call history information is stored while the announcement is being played and is sent to the VMS when the call is terminated to an MLHG member.

- *Software Defined Network.*

  Two cases for ISVM configuration are as follows:

  1. The VM subscriber is also an SDN customer, while the VMS is outside the SDN.

  2. The VM subscriber and the VMS are both SDN users in the same virtual private network.

  Terminating based on the previous two cases is as follows:

  1. An on-net call arriving at the VM subscriber's DN can be forwarded to the VMS, and ISVM works properly.

  2. Calls can be forwarded via SDN from a VM user to the VMS. However, the ACP does not pass along the CCS7 Call Forwarding parameters. Therefore, the CHI is not available when the call terminates to the VMS. The conclusion is that ISVM cannot work in this configuration.

- *Special Intercept Announcement.*

  A forwarded call could get routed to a special intercept announcement.

- *Speed Calling.*

  A speed calling code can be used to place a direct call to a VMS. To activate CFV from a station set, speed calling can also be used, either as the forwarded-to DN or including the CFV access code. A maximum of 32 digits can be represented in the code.

  The speed calling codes used in place of DNs by a subscriber are expanded within the switch to full directory numbers.

- *Terminal Group Station Restriction.*

  Current Call Forwarding procedures apply. If VM users are restricted to forwarding calls to a VMS within their own terminal group, then interswitch VMS does not work, since the concept of a terminal group cannot be extended across switches.

  Restrictions on calling privileges are based on the terminal group that the client belongs to. No checks are made based on business customer group.

- *Tie Trunk Access/Tandem Tie Trunk Dialing.*

  Calls cannot be forwarded over tie trunks.

  Calls for the MLHG serving a VMS must arrive on a CCS7 trunk if they originate on another switch.

- *Time-of-Day.*

  TOD can be used to schedule call forwarding to a VMS.

- *Toll Diversion to Attendant.*

  If the attendant forwards the call to a VMS, the attendant's DN is the OCDN.

13.4.1.9 Limitations

The ISVM feature extends MWI control and call history information flow between switches. These capabilities are extended interswitch as part of the MSS feature. This document refers to voice messaging. The messaging system on the near switch serving clients on the far switch could also be a text-based attendant service; such as, the 5ESS(R)-2000 switch applications processor. However, the ISVM feature will NOT extend any of the other capabilities of MSS (that is, MRD, POD, LWC, CLWC, Auto Call) to clients on the far switch.

In addition, ISVM does not extend any of the capabilities of basic MSS, such that basic MSS attendants cannot serve clients on another switch. The ISVM feature does not extend the capabilities of attendant activation/deactivation of MWI to work interswitch. There is no modification or enhancement to intraswitch attendant activation, and deactivation of MWI (that is, the security check) is not bypassed. Only MWI control messages which are received over the data link from the voice messaging system is sent interswitch using CCS7. The ISVM feature is an interswitch intra-LATA service and needs to be configured as such to operate properly.

13.4.1.10 Incompatibilities

No incompatibilities are associated with any of the ISVM features.

13.4.1.11 Dependencies

The ISVM feature requires CCS7 connectivity (that is, TCAP direct signaling and ISUP trunk signaling) from the far switch to the near switch; however, the calling party's switch to the far switch does not require CCS7. The calling party's DN is not available if the CCS7 connectivity does not exist between the calling party's switch and the far switch. The ISUP trunk must terminate on either a standard or loaded SM.

In order for Line Blocking Enhancements - Phase 1 and Line Blocking Enhancements - Phase 2 to work, the ISVM feature must be active. No other features need to be installed or activated.

13.4.1.12 Isolation Constraints

No isolation constraints are associated with these features.

13.4.1.13 Service Order Perspective

In order to provide VMS capabilities, a provider is assigned one or more multiline hunt groups and a data link by service order. A VM user subscribes to the MWI option of the MSS feature. Users can choose either audible or visual MWIs. A VM user also subscribes by service order to some form of the Call Forwarding (CF) feature. For the CFBL and CFDA features, the forwarded-to DN is specified as that of the VMS itself. The CFV feature is activated and deactivated from the user's station set, and the forwarded-to DN would be entered at that time.

13.4.1.14 Feature Implementation

13.4.1.14.1 Modified RC Office Records

The following Office Records are modified for the Interswitch Voice Message feature:

- *Multiple TNs for Multiline Hunt Groups -- 5114.*

  The attribute CLIENT TN TYPE -- Client Telephone Number Type is added and the values for this attribute are "OCDN," "RDN," or unknown. The default value is unknown.

- *Multiline Hunt Group -- 5110-2.*

  The following attributes were added:

  -- CLIENT TN TYPE -- Client Telephone Number Type is added and the values allowed for this attribute are "OCDN," "RDN," or unknown. The default value is unknown.

  -- BCID SCRNING -- Business Customer Identification

Number Screening is added and the values for the attribute are "Y," "N," or unknown. The default value is unknown.

-- DELAY RING -- Delay Ring is used to indicate whether the power ringing of the MSC MLHG is to be delayed for two seconds so that the application processor (AP)/voice messaging service (VMS) has time to process the call history information sent from the switch. The default entry "N" indicates do not delay power ringing.

-- INTRA SW DN -- Intraswitch Directory Number determines whether the MSC is sent the interswitch DN (OCDN or RDN) or the intraswitch DN (OCDN or RDN). This field applies to the CLIENT TN TYPEs "OCDN" and "RDN". Valid entries for this attribute are "Y" and "N". The default entry is "N".

-- MSC -- Message Service Center is an added verify only attribute. The values for the attribute are "Y" or "N."

- *Message Service System Group Parameters -- 5962-2.*

  The attribute GRP TYPE -- Message Service System Group Type is added. If the GRP TYPE is "ISVM"; the rest of the fields are automatically translated, DELUXE and PASSWORD are "N" and other fields are blank. If GRP TYPE is "MSS," the other fields, except for SRV ID, cannot be unknown.

- *Message Service System Feature Definition -- 5962-1.*

  The attribute MSG WAIT IND SCTY -- Message Waiting Indicator Security is added and the values are "Y," "N," or unknown. The default is unknown.

- *DSL AP Communications Data -- 5963.*

  The attribute ISVM is added with allowed values of "Y" and "N." The default is "N."

Additional information on the attributes for the ISVM feature can be found in 235-080-100, *5ESS*(R)*-2000 Switch Translations Guide (TG-5)*.

13.4.1.14.2 Recent Change Provisioning

13.4.1.14.2.1 Recent Change Implementation Steps

See 235-118-2xx, *Recent Change Reference*, for detailed information on allowed values.

The steps necessary to implement ISVM are very similar to implementing a typical Message Service System (MSS) BRCS Feature.

1. RC View 8.1

   The attribute Applications Processor Option (APOPTION) on this view must be set to SM. This option determines if an applications processor is allowed for either the SM or the AM.

2. RC View 8.15

   The ISVM TCAP Time-out Parameter for the office should be set on this view as desired. The default value is 3 seconds, and the range is from 1 to 10 seconds. This parameter would be set the first time ISVM is implemented in an office.

3. RC View 8.17

   The ISVM Translation Type and Subsystem Number is set using this view which is keyed by Application Type. For ISVM, the type is "ISVM." This tuple would be provisioned the first time ISVM is provisioned in an office.

4. RC View 24.11

   Only one ISVM group can be assigned to a line. Measurements cannot be taken for ISVM groups. This view does not allow the ISVM group to be input.

5. RC View 24.7

   The attribute ISVM on this view indicates if the applications processor can be used for ISVM. If the AP is used for E911, then it cannot be used for ISVM.

6. RC View 3.5

   This view's CLIENT TN TYPE attribute should be set to OCDN or RDN to indicate which DN will be sent to the VM system in the event of multiple call forwarding legs. The OCDN indicates that the originally called DN will be sent to the VMS. The RDN indicates the last redirecting DN will be sent to the VM.

   This view's BCID SCRNING attribute should be set to "N" for ISVM. The value of this field also appears on RC View 4.36's display only attribute BCID SCRNING.

   Note: If BCID SCRNING is changed from "Y" to "N" in error and an attempt is made to change it

back to "Y," this change is blocked if the MSC has MSS groups (that is, if any of the fields BCID1-6 are assigned). This block ensures that when BCID SCRNING is reactivated, the BCIDs are set up properly.

The only way that the BCID SCRNING field can be changed from "N" to "Y" when the MSC has MSS groups is to use the following procedure:

1. Build a temporary MSS UCD MLHG on RC View 3.5, keeping in mind that all BCIDs for the temporary MLHG must match the BCIDs for the original MLHG.

2. Make a note of the MSS GRPs for the original MLHG on RC View 4.36.

3. Update the MSS GRPs for the original MLHG by changing the MSG SRV CNTR field on RC View 4.37 to the temporary MSS UCD MLHG (thus updating RC View 4.36 to reflect the temporary MLHG).

4. Change the original MLHG's BCID SCRNING to "Y" on RC View 3.5.

5. Update the MSS GRPs for the temporary MSS UCD MLHG by changing the MSG SRV CNTR field on RC View 4.37 to the original MLHG (thus updating RC View 4.36 to reflect the original MLHG).

6. Delete the RC View 3.5 for the temporary MLHG.

The INTRA SW DN applies to CLIENT TN TYPEs OCDN and RDN. If "Y" is the value for this field an intraswitch DN is used. If the default value "N" is entered in this field an interswitch DN is used.

The "Y" value for the DELAY RING field is used to delay power ringing for two seconds to allow the AP/VMS time to process call history information sent from the switch. If the "Y" value is used, then the AP SITE ID field must be specified. The default value "N" is used to keep power ringing from being delayed.

7. RC View 3.3

The attribute CLIENT TN TYPE on this view should be set to OCDN or RDN to indicate which DN will be sent to the VM

system in the event of multiple call forwarding legs. The OCDN indicates that the originally called DN will be sent to the VM. The RDN indicates the last redirecting DN will be sent to the VM. When the CLIENT TN TYPE is OCDN, the OCDN COUNT on RC View 4.36 is incremented accordingly. When the CLIENT TN TYPE is RDN, the RDN COUNT on RC View 4.36 is incremented accordingly. The COUNTs (OCDN and RDN) are decremented when CLIENT TN TYPE goes from any of the allowed options to blank.

8. RC View 4.37

   The attribute GRP TYPE on this view is used to identify the type of MSS group used when provisioning ISVM. If GRP TYPE is MSS, the group is used for normal MSS service. If GRP TYPE is ISVM, the group can only be used for ISVM.

9. RC View 12.37

   The attribute MSG WAIT IND SCTY on this view allows a Voice Mail (VM) system on the switch to activate/deactivate an ISVM customer's message waiting indicator (MWI) on the subscriber switch, thus bypassing the normal BCID and applications processor identification (APID) security checks. This option is also available to MSS subscribers in the configuration where MSS resides on the same switch as the subscriber. The MSS feature assigned to the line has MSG WAIT IND SCTY set to "N" on this view.

10. Call Forwarding

    In order to have ISVM, a subscriber with attendant coverage must have some type of call forwarding.

The ISVM Recent Change Service Order Processing flowchart is shown in Figure 108.

13.4.1.14.2.2 RC Views Associated with ISVM

See 235-118-2xx, *Recent Change Reference*, for detailed information on allowed values.
The Interswitch Voice Messaging feature modifies the following views for 5E7 and later software releases:

- *RC View 3.3.*

  Multiple TNs for Multiline Hunt Groups View -- Added the attribute CLIENT TN TYPE. This determines which telephone number would be sent to the VMS. The telephone numbers that can be sent are the originally called directory number (OCDN) or the redirecting directory number (RDN). CLIENT TN TYPE is not a required field. The default value is unknown (blank space). Only multiple DNs associated with

the group DN may be assigned a client TN type.

- *RC View 3.5.*

  Multiline Hunt Group View -- added the following attributes:

  -- MSC -- Message Service Center: This is a display-only field that determines whether a multiline hunt group is a Message Service Center or not. MSG SRV CTR? has a default value of "No."

  -- CLIENT TN TYPE -- Client Telephone Number Type: This determines whether the telephone number that is sent to the VMS is the OCDN or the RDN. The value entered for this field serves as the default for the active Message Service Center. This includes all multiple DNs of the group DN. The default value of this field is unknown (blank space).

  -- BCID SCRNING -- Business Customer Identification Number Screening: This field determines whether the Message Service Center screens the BCIDs. It has a default value of unknown (blank space).

  -- The INTRA SW DN applies to CLIENT TN TYPEs OCDN and RDN. "Y" is the value in the INTRA SW DN field when an intraswitch DN is used. If the default value "N" is entered in this field an interswitch DN is used.

  -- The "Y" value for the DELAY RING field is used to delay power ringing for two seconds. If the "Y" value is used, then the AP SITE ID field must be specified. The default value "N" is used to keep power ringing from being delayed.

- *RC View 4.36.*

  MSC Users Group View -- added three new display only attributes:

  -- BCID SCRNING -- Business Customer Identification Number Screening: This field is a verify-only field to indicate what the BCID SCRNING field from RC View 3.5 is set to.

  -- OCDN COUNT -- Originally Called Directory Number Counter for MSC Group DN: This is a verify-only field that keeps track of how many multiple directory numbers have CLIENT TN TYPE set to OCDN from RC View 3.3. The OCDN COUNT is derived by subtracting rc_msusr.rdn_cnt from rc_msusr.cdn_cnt.

-- RDN COUNT -- Redirecting Directory Number Counter for MSC Group DN: This is a verify-only field that keeps track of how many multiple directory numbers have CLIENT TN TYPE set to RDN from RC View 3.3.

- *RC View 4.37.*

  MSS Group Parameters View -- added the attribute Group Type. This is used to identify the type of MSS group that is used when provisioning Interswitch Voice Messaging. It is an enumerated field with "0" being "MSS" and "1" being "ISVM." If the GRP TYPE is MSS, then the group is used for normal MSS service. If the GRPTYPE is ISVM, then the group can only be used for Interswitch Voice Messaging.

- *RC View 8.15.*

  CCS Office Parameters View -- added the attribute ISVM TCAP Timer. This is a Global CCS Office Parameter that specifies the time-out value (in seconds) for TCAP Message Waiting Indicator Activate/Deactivate requests. It has a default value of 3 seconds.

- *RC View 8.17.*

  Direct Signaling Application View -- This is not modified; however, the field, APPLIC, is modified to accept "ISVM" as an application type.

- *RC View 12.37.*

  MSS Feature Definition View -- added the attribute Message Waiting Indicator Security. The MSG WAIT IND SCTY field allows a VMS on the switch to activate/deactivate an Interswitch Voice Messaging customer's message waiting indicator on the subscriber switch; bypassing the normal BCID and APID security checks. This option is available to Message Service System subscribers in a configuration where the MSS resides on the same switch as the subscriber. It has a default value of unknown (blank space); either AUD MSG WAIT IND or VIS MSG WAIT IND has to be Y for MSG WAIT IND SCTY to be known.

- *RC View 24.7.*

  DSL AP Communications Data view -- added the attribute ISVM. This field indicates that the application processor can be used for interswitch voice messaging. If E911 SITE = Y, then ISVM must be N.

13.4.1.14.2.3 RC Views Associated with Line Blocking Enhancements

See 235-118-2xx, *Recent Change Reference*, for detailed information on allowed values.

The service provider unlocks the security lock for the Line Blocking Enhancements - Phase 1 and Line Blocking Enhancements - Phase 2 features by populating the following fields in RC/V view 8.22, SECURED FEATURE UPGRADE:

FIELD	VALUES
FEATURE ID	240
MODULE	OFC
PASSWD	(Obtain from Lucent Technologies SFID Administrator)
ACTIVE	Y

The service provider assigns the Line Blocking Enhancements - Phase 1 feature on a per-switch basis by populating the following fields in RC/V view 8.31, OPTIONED FEATURES:

FIELD	VALUES
FEATURE ID	669
MODULE	OFC
ACTIVE	Y

The service provider either assigns the Line Blocking Enhancements - Phase 2 feature on a per switch basis as described for Line Blocking Enhancements - Phase 1, or they assign it on an MSC basis by populating the following fields in RC/V view 3.5, MULTILINE HUNT GROUP (LINE ASSIGNMENT):

FIELD	VALUES
BCID SCRNING	No
INTRA SW DN	No
CPN PRVCY OVERIDE	Y

Note: If both options of Line Blocking are required

simultaneously, the two separate options of the features must be assigned as required for each phase.

13.4.1.14.3 Customer Premises Equipment

End-users can access the VMS from either analog or ISDN station sets. The VMS can either be on service-provider premises or on the premises of a third-party VMS provider. The VMS is connected to a single switch, but serves a multiswitch area through use of the CCS7 network. The operation of the VMS is the responsibility of the VM provider. Line Blocking Enhancements - Phase 1 does not have an impact on customer premises equipment (CPE).

13.4.1.14.4 CCS7 ISUP Protocol

13.4.1.14.4.1 Setting the Mandatory ISUP Parameters for the Initial Address Message

For every CCS7 interswitch call, information needed for call processing and service logic is carried between switches in an ISUP initial address message (IAM). Every IAM contains six mandatory ISUP parameters. These include the message type, nature of connection indicators, forward call indicators, calling party's category, user service information, and called party number (CdPN) parameters. In addition, an IAM can contain one or more optional ISUP parameters.

13.4.1.14.4.2 Setting Selected Optional Parameters for the IAM

Setting the Calling Party Number:

For intra-LATA calls, an originating exchange [1A ESS(TM) switch, 5ESS(R)-2000 switch, etc.] always generates and sends in an IAM the calling party number (CPN) parameter. The CPN parameter can only transport network validated numbers. This is a number that is either provided by the network or provided by the originating user and has passed network screening.

If the user-provided number is network validated, it replaces the network-provided number in the ISUP CPN parameter. In all other cases, the CPN parameter is the network provided number.

A calling address is said to be "unique" if calls to the address always alert at the same unique terminal. Nonuniqueness indicates the sharing of an address between two or more terminals. Nonunique line types include the following:

- Lines behind a PBX
- Multiparty lines
- Lines which are part of an MLHG
- Shared DNs.

Beginning with the 5E6 software release, the NPA is stored as

the 3-digit CPN for a call originating from a multiparty line over a trunk, or a PRI when the CPN is not available.

13.4.1.14.4.3 Call Forwarding

Once an exchange determines that a call is forwarded, it first checks that the forwarding does not result in the call exceeding the number of forwardings allowed within the network. Next, given that the limit is not exceeded, the parameters that are to be used in an IAM for the forwarded call are set.

The ISVM service relies on interswitch call forwarding which requires that the CCS7 ISUP protocol provide the CPN, CdPN, RI, and the OCN parameters on all incoming interswitch calls in the ISUP IAM. In addition, if a call has been forwarded two or more times, the redirecting number (RgN) is also provided. The OCN and RgN parameters, when generated, contain 10 digits. The CPN contains 10 digits for the MSS to send to the VM provider. If it is not 10 digits or if the nature of address indicator is international, then the CPN is not sent to the VMS provider.

A switch acting as a local tandem passes the OCN, RgN, and RI parameters. They should also be passed by a forwarding exchange to a toll office of an interexchange carrier (IEC). Once passed to the IEC, these parameters may or may not be delivered to the terminating LEC. An AT&T toll office [for example, a 5ESS(R)-2000 switch acting as a toll office] drops these parameters. The ISUP parameters CPN/GAP, CN/OLI, ATP, and UUI are passed by a forwarding exchange to an IEC based on IEC subscription options. Upon receipt of an incoming CCS7 call from a far switch, the ISVM user's switch attempts to set up the call.

13.4.1.14.5 Assignment Verification

The following testing procedures assure proper assignment of the ISVM feature and allow verification of proper ISVM functionality:

- Assignment Testing

  -- End-user is responsible for deciding the following options:

  1. The end-user can access the VMS from either analog or ISDN station sets.

  2. The end-user subscribes to the MSS feature.

  3. The following two capabilities are offered to the end-user:

     a. Voice Mail -- end-user subscribes to an MWI feature (through MSS) and chooses audible, visual, or both MWI.

b. Call Answering -- end-user subscribes to an MWI feature and subscribes to a Call Forwarding feature (for example, CFV, CFBL, CFDA, or a combination).

-- Service provider is responsible for the following:

1. The service provider is assigned one or more multiline hunt groups and a data link by service order.

2. The service provider installs CCS7 signaling facilities for complete functionality.

3. ISVM can be used with any VMS that supports the API (and with use of a 3A translator).

4. RC Views are populated as follows:

a. RC View 8.1 -- Set APOPTION for office to "SM."

b. RC View 8.15 -- Set the ISVM TCAP Time-out Parameter.

c. RC View 8.17 -- Set ISVM Application Type (CCS).

d. RC View 24.7 -- Set the ISVM use field to "Yes."

e. RC View 3.5 -- Define ISVM (MSC) MLHG.

f. RC View 3.3 -- Set up the multiple TN for the (MSC) MLHG, if needed.

g. RC View 4.37 -- Define an ISVM group.

h. RC View 12.37 -- Define ISVM (MSS) feature.

i. RC View 12.12 -- Define Call Forwarding features and assign associated RC Views associated with Call Forwarding.

o Usage Testing

-- Review all of the required views to assure they have been completed properly.

13.4.1.14.6 CCS7 TCAP Protocol

13.4.1.14.6.1 General

Internal messages have a CNI header. If requested, CNI returns an error message if a problem in routing an outgoing message occurs (for example, congestion, subsystem number not defined, etc.). The return bit is set in the CNI header for MWI activate/deactivate TCAP messages. Error codes returned by CNI are mapped to the API error cause for a failure message sent to the VMS. Table BQ maps error code descriptions, VM cause, and failure type.

Transaction capability applications part (TCAP) is the control protocol that is used for MWI. Any TCAP protocol (formatting or parsing) errors should be handled according to TCAP specifications. These are laid out in the AT&T T1-Based Signaling System No. 7 Transaction Capabilities Protocol Specification for the Local Exchange Carrier Applications, Issue 2.

13.4.1.14.6.2 Message Waiting Indicator

The MWI alerts the VM subscriber that a voice message is available for retrieval. This indicator can be either a visual lamp or a stutter dial tone, depending on the CPE. When the VM subscriber and the VM provider are situated on different switches, the near switch sends TCAP query messages to notify the far switch that a voice message is available or that a voice message is no longer available.

13.4.1.14.6.3 Signaling Connection Control Part (SCCP) Procedures

The MWI TCAP query messages are sent in the data field of an SCCP unit data message. Query messages are routed by global title translation (GTT); therefore, the destination point code (DPC) is that of the signal transfer point (STP) performing the GTT. The originating point code (OPC) is that of the near switch. The protocol class is connectionless (class 0) and the unit data service option is "return on error." The messages are routed using connectionless service.

The called party address contains a subsystem number of 0, a translation type for ISVM, and a global title of NPA-NXX-XXXX (the full NANP DN of the ISVM subscriber.) The calling party address contains the subsystem number for ISVM and the point code of the near switch. Any error code returned in a unit data service message should be mapped to API as referred to in Table BQ.

The MWI TCAP response messages are sent in the data field of an SCCP unit data message. Response messages are routed through DPC. The DPC is that of the near switch and the OPC is that of the subscriber's switch. As with query messages, the protocol class is connectionless (that is, class = 0); however, the unit data service option is "return on error." The called party address parameter contains the subsystem number of the ISVM feature from the calling party address parameter received in the

initial message. (Note that the SSN for ISVM in the near switch need not be the same as the SSN for ISVM in the far switch.)

13.4.1.14.6.4 Message Available/Provided (MWI Activation/Deactivation)

The following list reviews the sequence of TCAP messages exchanged between near and far switches when a voice message is available or when all voice messages have been retrieved:

1. Send notification from near (VM) switch as follows:

   When the VMS informs its switch that it has a message for a VM subscriber through an MWI_ACT message, or that all messages have been retrieved through an MWI_DEACT message, the near switch determines if the subscriber is supported by a different switch. If not, then the switch should follow the procedures for intraswitch MWI activation/deactivation.

   If the subscriber is served by a different switch, then a TCAP message is sent using global title translation (based on the subscriber's DN, specifically NPA-NXX-XXXX digits) to notify the served user that they have a voice message available or that all messages have been retrieved. A timer is set upon sending this message. It can have a value between 1 and 10 seconds with default value of 3 seconds.

   The notification message is of the "Query with Permission" package type and contains a single "Invoke (Last)" component with an operation type of "Report Event -- Voice Message Available" or "Report Event -- Voice Messages Retrieved." The component contains an "Invoke Identifier." There are two "Digits" parameters contained within this component. The first contains the destination number (number of the served user), and the second contains the VMS storage and retrieval ID (VMSRID). The default value for the VMSRID is hard coded to 0.

   The far (serving) switch can receive (from another vendor's switch) a VMSRID, timestamp, or CPN parameters. This causes no special action to be taken by the 5ESS(R)-2000 switch.

2. Send response from far (serving) switch as follows:

   a. *Send confirm* -- Upon receiving the TCAP query activation/deactivation notification, the far switch notifies the VM user through the subscribed form of notification (lamp or dial tone). In normal situations, the far switch serves the destination number and is able to notify the served user that there is a voice message waiting, or that all messages

have been retrieved by activating or deactivating their MWI indicator. To confirm success, the far switch sends a TCAP message of the "response" package type containing a single empty "return result (last)" component to the VMS switch. No parameters are present in this message.

b. *Send fail* -- If the activation/deactivation notification could not be performed, the far switch sends a TCAP message of the "response" package type containing a "return error" component and error code to the VMS switch. The following service-specific errors can be encountered:

   - If the destination DN is not currently assigned to an active interface, the far switch returns the error code "Unassigned DN."

   - If the received destination DN is not a full NANP DN, the far switch returns the error code "Unassigned DN."

   - If the far switch is overloaded and cannot currently handle the request, the far switch returns the error code "Task Refused."

   - If the far switch implements MWI security based on the VMSR ID and if a destination DN is not a customer of the identified VMS, the far switch returns the error code "VMSR System Identification did not Match User Profile." This implementation of ISVM does not provide any MWI security checking (for example, by checking the VMSR IDs) for received interswitch TCAP MWI messages. Regardless of the value of the received VMSR ID, ISVM ignores it and, hence, this error code is not returned.

   - If there is no feature in the destination DN's line data at the far switch that has the security option set to "no" (that is, the destination DN is not an ISVM subscriber), then the switch returns the error code "Unassigned DN."

   - If the far switch detects other TCAP data errors (for example, unavailable resources, an unexpected data value) the switch returns an appropriate error code.

c. *Send reject* -- If a far switch receives a TCAP message with a missing mandatory parameter (for example, destination DN or VMSRID), a response package

containing a "reject" component is returned to the near switch. If a far switch receives a TCAP message with any unrecognized parameter (for example, destination DN or VMSRID), a response package containing a "reject" component and problem code is returned to the near switch. In either case, MWI activate/deactivate is not carried out by ISVM service.

If other TCAP protocol errors are detected (for example, a message type, component type, operation code, or legitimate TCAP parameters other than those permitted for ISVM), a "reject" component and problem code are returned to the near switch.

3. Receive response at near (VM) switch as follows:

   a. *Receive confirm* -- If, after sending a query message indicating voice message available/retrieved, the near switch receives a "response" package containing a "return result (last)" component and the near switch cancels the waiting timer and assumes that the transaction was completed. No corresponding message is sent to the VMS.

   b. *Receive fail* -- If, after sending a query message indicating voice message available/retrieved, the near switch receives a "response" package containing a "return error" component and cancels the waiting timer and generates an MWI_Fail message. This message is generated from the information received in the "return error" component. The application-returned error code is mapped into the cause field, and the message type field is set to "MWI_Fail" of the MWI_Fail message. Network-returned error code is mapped into the cause field. The MWI_Fail message is sent to the VMS.

      If the waiting timer expires, an MWI_Fail message is generated. Moreover, if a response is received after a time-out, then no additional MWI_Fail is generated.

      Any TCAP error code other than the four specified for ISVM (for example, unavailable resources) is mapped to the API error cause in the MWI_Fail message sent to the VMS per Table BQ.

   c. *Receive reject* -- If, after sending a query message indicating voice message available/retrieved, the near switch receives a "response" package containing a "reject" component, the near switch cancels the waiting timer and generates an MWI_Fail message. The

problem code contained in the returned "reject" component is mapped to the API error cause in the MWI_Fail message sent to the VMS per Table BQ.

If a protocol or application error is detected by the near switch in the received response message from the far switch, the near switch cancels the timer and sends a unidirectional package containing a reject component or a return error component, respectively, to the far switch. The near switch also sends (through API) an MWI_Fail message containing an "invalid" error code to the VMS. This unidirectional message is discarded by far switch.

13.4.1.14.6.5 Network-Returned Messages

After sending a query or response message into the CCS7 network, the message can be undeliverable to the final destination for a variety of reasons. Because the UDS option is set in the SCCP header for both queries and responses, the CCS7 network returns the message to the sender in these cases. The message format is identical to that sent, with the exception of appropriate returned bits being set.

13.4.1.14.7 Deleting Customer Service

If a VM provider deactivates ISVM service to customers (that is, end-users, clients, etc.), the service provider requires recent change procedures to delete the VMS provider's MSC from the switch data base. An MSC is defined as a multiline hunt group that serves a message service provider.

In the 5E6 software release, the 5ESS(R)-2000 switch does not allow an MSC to be deleted unless the association in switch data between each message service client and the serving MSC has previously been removed. In addition, all clients of an MSC are served by the same switch as the MSC.

With the interswitch capabilities provided by the ISVM feature, the association in switch data between each voice messaging client and an MSC is not present. For clients on a different switch from the MSC, no association is possible. For clients on the same switch as the MSC, the association with the MSC in switch data may or may not exist. If ISVM service is to be deactivated, a list of the end-users to be notified is kept independently of switch data. Either the service provider or the VM provider (or both) could maintain this list, depending on the business arrangement used.

13.4.1.14.8 Changing a Subscriber's Service

13.4.1.14.8.1 General

Service changes by the service provider are accomplished by recent change (RC) procedures. In ISVM, recent change is used for the following:

- Assignment of Call Forwarding features to provide coverage
- Assignment of data link to serve VMS
- Assignment of MLHGs to serve VMS
- Assignment of client TN type to be included in CHI for forwarded calls
- Construction of MSS features
- Assignment of MSS features to end-users
- Assignment of ISVM subsystem number and translation type
- Assignment of TCAP time-out parameter for ISVM.

13.4.1.14.8.2 Call Forwarding Features

Users who want Call Answering forward their calls to the VMS. Standard methods for assignment and activation of Call Forwarding features are used for this purpose.

13.4.1.14.8.3 AP Data Link Assignment

For both the 5ESS(R)-2000 and 1A ESS(TM) switches, existing methods are to be used for assigning the data link to serve the VMS. For the 5ESS(R)-2000 switch, the following applies: with each AP site ID, the RC parameter "ISVM" with allowed values Yes/No, default=No. If AP is dedicated to E911 service, then the value is set to "No." The E911 feature uses a dedicated AP.

When the 5ESS(R)-2000 switch receives an MWI request with a full NANP destination DN over an API data link and determines that the target DN is not served by the same switch, it checks the value of the parameter "ISVM" before sending a TCAP MWI request toward another switch. If "ISVM=Yes," then the TCAP message is sent; whereas, if "ISVM=No," then the TCAP message is not sent, and an MWI_Fail message is sent to the VMS.

13.4.1.14.8.4 Screening for Multiline Hunt Groups

Each VMS is served by one or more MSS MLHGs. For MSS MLHGs, the applications processor identification (APID) identifying the associated API data link is specified on a per-MLHG basis, just as in the 5E6 software release. Also, as in the 5E6 software release, the API data link is defined in recent change before it is assigned to an MSS MLHG.

In addition, a new attribute is specified on a per-MLHG basis for MSS MLHGs. This attribute is "Screening=(Yes/No)." It is mandatory for MSS MLHGs. When "Screening=Yes," the following applies:

- Calls forwarded to the MSS MLHG receive screening as in the 5E6 software release.

- Courtesy calls to the MSS MLHG from subscribers on the same 5ESS(R)-2000 switch are blocked.

- When a subscriber with a Call Forwarding feature on the same 5ESS(R)-2000 switch as the MSS MLHG requests the 5ESS(R)-2000 switch to change the forwarded-to DN to that of the MSS MLHG, the 5ESS(R)-2000 switch screens the request the same as in the 5E6 software release.

When "Screening=No," none of the three types of screening specified previously are done. In other words, all calls (that is, direct, forwarded, courtesy) are allowed to terminate to a non-screening MSC. When "Screening=Yes/No," the MLHG is referred to as a screening/non-screening MLHG. The ISVM subscriber forwards their calls to a non-screening MLHG; otherwise, the call forwarding request receives failure treatment. For the deluxe MSS feature (used with ACP and an API data link), both screening and non-screening MLHGs can be associated with the same API data link. When an MSS group is defined, the MSS MLHG associated with it can either be screening or non-screening. For basic MSS (meaning an API data link is not used), only screening MLHGs can be used.

In the 5E6 software release, at least one BCID is associated through recent change with each MSS MLHG. This is also true in the 5E7 software release with one exception: a non-screening deluxe MSS MLHG can be assigned either with or without one or more BCIDs.

13.4.1.14.8.5 Assignment of OCDN/RDN to Lead DN of MLHGs

An attribute to be specified on a per-lead DN of MSS MLHG basis is "Client TN Type=(OCDN/RDN)," where OCDN means originally called DN, and RDN means redirecting DN. Client TN type is a mandatory parameter. Since this parameter is applied to the lead DN of the MLHG, this field is added to View 3.5 (which "creates" the MLHG) and to View 3.3 (used to add additional lead DNs to an MLHG). If an individual DN within the MLHG is "forwarded-to," the DN which is sent to the VMS (either OCDN or RDN) is based on the option which is set for the MLHG as a whole (View 3.5). In other words, the option set in View 3.5 is the default.

For calls forwarded to an MSS MLHG, the client TN type controls which DN is inserted into the client DN field in the CALL_INFO message sent over the data link from the switch towards the message system. If a message is left, it is put into the mail box associated with the client DN. When "Client DN Type=OCDN," the OCDN is sent in the client DN field. When "Client TN Type=RDN," the RDN (that is, the DN that forwarded the call to the MSS MLHG) is sent. The OCDN and RDN are the same for calls that are forwarded only once, but they differ for multiple

forwarded calls.

For a basic MSS MLHG on the 5ESS(R)-2000 switch, the value of the client TN type is OCDN. However, a no-screening basic MSS MLHG with "Client TN Type=OCDN" is not allowed. The value of RDN is not allowed for basic MSS MLHGs.

13.4.1.14.8.6 Construction and Assignment of VMS Features

An option provided by the present feature is the ability to bypass the MWI security check. This is necessary to allow the far switch to carry out MWI activation/deactivation requests received through CCS7 from the near switch. Equivalent service for intraswitch subscribers is provided by bypassing the security check for MWI activation/deactivation requests received over API. The ability to bypass the MWI security check applies only to MWI requests received over a data link (CCS7 or API). The MWI security check is not bypassed when an MSS attendant sends an MWI activation/deactivation request to the near switch through the attendant's analog line or DSL.

To provide the option of bypassing the MWI security check, recent change provides for definition of an MSS feature option. This MSS option is "Auto MWI Sec=Yes/No."

When "Auto MWI Sec=Yes," the 5ESS(R)-2000 switch acts on all MWI activation/deactivation requests the same as in the 5E6 software release. (The MWI security check is made). When "Auto MWI Sec=No," the 5ESS(R)-2000 switch bypasses the security check for MWI activation/deactivation requests received through CCS7 or API. The choice of option has no effect on MWI activation/deactivation requests sent by an attendant to the 5ESS(R)-2000 switch through the attendant's analog line or DSL. Regardless of the value of this option, the MWI security check is not bypassed for these requests.

For interswitch subscribers, the service provider administers the feature "Auto MWI Sec=No," so that the MWI security check is bypassed.

The procedure for assigning MSS features is the same in the 5E7 software release as it is in the 5E6 software release. For the 5E7 software release, no more than one MSS feature with "Auto MWI Sec=No" can be assigned to a primary DN.

For an interswitch VM subscriber, it is known that deluxe MSS (AP-based CMSS) is used, but the APID and the identity of the message system are not needed. In addition, no BCID is used; therefore, the information in the MSS group is not needed for an interswitch subscriber. The same is true for intraswitch subscribers who are provided equivalent service.

Consistent with the current practice for provisioning all MSS

features, a special MSS group (can be called an ISVM group) is used to provision ISVM. This special MSS group is not predefined in the 5ESS(R)-2000 switch ODD. The service provider personnel define the group when they desire to provision the ISVM service. The ISVM group can only be assigned to a line in conjunction with an MSS feature with MWI "Security=No" and the LWC, CLWC, POD, MRD, and AC options set to "No."

The parameters in the ISVM group are default values that have no effect on the service provided to users. When "Auto MWI Sec=No," it should be possible to assign the ISVM group to a (primary DN, MSS feature) pair. The service provider can use this procedure to simplify the administration of MSS groups. The 5E6 software release requirement (that all MSS features assigned to a given primary DN have the same BCID) continues to apply, except that a single MSS feature having "Auto MWI Sec=No" can be assigned with the ISVM group. The 5ESS(R)-2000 switch enforces the restriction that the ISVM group cannot be assigned when "Auto MWI Sec=Yes."

An attribute "Type" should be associated with each MSS group. For ISVM groups, type has the value "ISVM." For pre-5E7 software release MSS groups, type has the value "MSS." The default is "MSS."

The ISVM group can be assigned to intraswitch MSS subscribers when both of the following are true:

- The desired service does not involve the switch receiving any MWI activation/deactivation requests through an attendant's analog line or an attendant's DSL.

- The MSS feature options listed as follows have the values shown:

  -- Auto MWI Sec=No

  -- Leave Word Calling=None

  -- Cancel Leave Word Calling=None

  -- Message Retrieval Display=No

  -- Print on Demand=No

  -- Auto Call=No.

If the MSS feature has any of the previously listed feature options, the ISVM group should not be used. The 5ESS(R)-2000 switch enforces this restriction.

For interswitch subscribers, the only available MSS feature

options are "Aud MWI" and "Vis MWI," "MWI Deact by User," and "Att Cov." The ISVM group can be assigned to simplify service provider administration of MSS groups for interswitch subscribers.

The preconstructed MSS features are provided in Table BR. In each case, the feature definition should include association with the ISVM group, and all MSS feature options not shown should be denied.

The following are the four preconstructed features introduced by ISVM and the definitions:

- /MSAAM -- Attendant Coverage, Audible Message Waiting Indicator, Message Waiting Indicator Deactivation.
- /MSAVM -- Attendant Coverage, Visual Message Waiting Indicator, Message Waiting Deactivation.
- /MSAAVM -- Attendant Coverage, Audible Message Waiting Indicator, Visual Message Waiting Indicator, Message Waiting Indicator Deactivation.
- /MSAA -- Attendant Coverage, Audible Message Waiting Indicator.

The service provider can also assign any of these preconstructed features in association with an MSS group of type MSS or ISVM.

13.4.1.14.8.7 ISVM Subsystem Number and Translation Type

The ISVM is an application type. The capability to specify the subsystem number and translation type for the ISVM application is provided on a per-office basis.

This is administered through recent change in the 5ESS(R)-2000 switch. In the 5ESS(R)-2000 switch, the ISVM application type is entered as the key in an existing recent change view, and the subsystem number and translation type are entered as mandatory parameters in this view.

13.4.1.14.8.8 TCAP Time-Out Parameter for ISVM

When a TCAP MWI activation/deactivation request is sent, a timer is set where expiration is determined by the value of the TCAP time-out parameter for ISVM. This is a per-office parameter that is recent changeable in the 5ESS(R)-2000 switch. The allowed values are from 1 to 10 seconds in steps of 1 second, with a default value of 3 seconds.

13.4.1.14.8.9 Recent Change Table

For the 5ESS(R)-2000 switch, the recent change parameters for ISVM specified previously are summarized in Table BS. Each parameter in the first column is to be assigned to the entity specified in the second column.

13.4.1.14.8.10 Counter for Multiple DNs

The service provider is not allowed to change an MSC MLHG to a non-MSC MLHG whenever there is a lead multiple DN assigned with a valid client TN type. In order to assist the service provider in determining the number of lead multiple DNs with a valid client TN TYPE, a counter is implemented. Two counters are used to keep track of how many lead multiple DNs have a nonnull value for client TN TYPE. One counter indicates how many have the client TN option and the other indicates the RDN option. Each counter is 4 bits, thus, allowing a maximum of 15 lead multiple DNs with a value for client TN TYPE specifically set for that DN.

13.4.1.15 Feature Operation

13.4.1.15.1 Overview

When a VMS is integrated with a 5ESS(R)-2000 switch to provide intraswitch VM, two types of messages are exchanged between the switch and the VMS. These are the CHI and MWI control messages. The CHI receives information from the 5ESS(R)-2000 switch to the VMS concerning the call that is being set up. The MWI control messages include MWI activation and deactivation requests sent by the VMS to the 5ESS(R)-2000 switch, and an MWI_Fail message sent from the 5ESS(R)-2000 switch to the VMS.

When VMS is extended to cover users on another switch, information for the CHI and MWI control messages is exchanged between the switch serving the VMS (the near switch) and the switch serving the user (the far switch). In addition, the near switch converts the interswitch CCS7 signaling messages into CHI or MWI messages that can be sent on the switch/VMS interface (that is, the API for the 5ESS(R)-2000 switch). The far switch converts the MWI activation and deactivation signals into a lamp or stutter dial tone indication. The far switch also generates and sends ISUP data for CHI messages and TCAP MWI_Fail and MWI confirm messages to the near switch.

13.4.1.15.2 Interswitch Data for CHI

13.4.1.15.2.1 General

The following information is sent from the far switch to the near switch (on the CCS7 network) to support the ISVM feature.

13.4.1.15.2.2 Voice Mail

The only CHI data needed for voice mail (that is, a direct call to the VMS) is the calling party number (that is, the DN of the party who is calling the VMS).

13.4.1.15.2.3 Call Answering

The CHI data needed for call answering (that is, for calls that are forwarded to the VMS) include the following:

- The calling party number -- The DN of the party

originating the call.

- The originally called DN (OCDN) -- The DN of the party who was originally called and who forwarded the call either to the VMS or to some intermediate station.

- The original redirecting reason -- The reason the call was forwarded from the originally called station (for example, user busy, no reply, unknown).

- The redirecting DN (RDN) -- The last DN that a call is forwarded to before it is forwarded to the VMS. For example, if party A calls party B who forwards to party C, and party C forwards to the VMS, party B is the originally called DN, and party C is the redirecting DN.

- The redirecting reason -- The reason the call was forwarded to the VMS from the redirecting DN.

For both voice mail and call answering, calls are terminated at one of the MLHGs serving the VMS. The near switch puts the MLHG ID and the MLHG member ID in the CHI sent to the VMS.

13.4.1.15.2.4 Multiple Call Forwarding

Calls can be forwarded more than once before arriving at a VMS. The number of times a call is forwarded is kept in a call forwarding counter in the redirection information parameter. This counter records the total number of forwardings, both intraswitch and interswitch. The originally called directory number (OCDN) and the redirecting directory number (RDN) are sent from the far switch to the near switch in the CCS7 ISUP initial address message (IAM). The OCDN is the DN of the party who was originally called and who forwarded the call either to the VMS or to some intermediate station. The RDN is the last DN that a call is forwarded to before it is forwarded to the VMS. The RDN is the party that forwards to the VMS.

13.4.1.15.3 MWI Control Messages

The following messages are exchanged between the near switch and far switch, using CCS7, in order to implement MWI control:

- MWI activation request -- Sent from the near switch to the far switch.

- MWI deactivation request -- Sent from the near switch to the far switch.

- MWI confirm -- Sent from the far switch to the near switch when an MWI activation or deactivation request has been successfully carried out.

- MWI fail -- Sent from the far switch to the near switch when an MWI request is not able to be carried out.

13.4.1.15.4 Call Processing Treatment

13.4.1.15.4.1 General

The ISVM feature uses the MSS software to send and receive CHI and MWI messages. However, some aspects of MSS are modified for ISVM services.

There is no provision for a BCID to be sent interswitch. For ISVM operations, it is required that calls can be forwarded to a VMS and that MWI requests can be acted upon. This implies that the BCID security checks for CF and MWI control are not performed.

An option to bypass BCID screening of forwarded calls is provided on a per-MLHG basis. When the no-screening option is chosen, calls forwarded to the MLHG by both interswitch and intraswitch subscribers bypass BCID screening. Intraswitch subscribers who want BCID screening of forwarded calls should forward their calls to an MLHG that has the screening option.

13.4.1.15.4.2 Call Processing for Call Forwarding to VMS

When a call is forwarded to the VMS from a subscriber's phone, the 5ESS(R)-2000 switch first checks the attributes of the MLHG that the call is forwarded to. The new screening attribute is set to "No" for MLHGs that ISVM users forward to. This directs the 5ESS(R)-2000 switch not to look for the BCID-based call forwarding check, but to forward the call without any screening to the VMS. This option is also available to intraswitch users, if needed.

For calls that are forwarded interswitch, and for some intraswitch calls also, a BCID is not associated with the forwarding DN. However, MSS requires that the BCID field in the call history message be populated. Where there is no BCID associated with the calling party DN (for direct calls) or the forwarding party (for forwarded calls), a default value can be put into the BCID field of the CHI message. Previously, if an interswitch direct call was made to a VMS (implying that there was no BCID available), a value of zero was put in the BCID field. This practice is extended to all calls where BCIDs are not available.

13.4.1.15.4.3 Call Processing for MWIs from VMS

As already stated, it is highly desirable that a VM provider have the option to provide or not provide MWI security to intraswitch users. There are a number of ways that intraswitch MWI security can be bypassed.

An MWI message from the VMS to the near switch contains the destination DN and, also, a BCID and station ID (SID) (optional). The BCID and SID (optional) can be put into the MWI message either by the VMS or an AP, depending on how the VMS is connected to the near switch. An SID is only needed if the VMS

is connected to an AP with multiple messaging services.

For end-users with "Security=No," any value could be put in the BCID field since the end-user would not be associated with a business group so far as this feature is concerned.

The 5ESS(R)-2000 switch would first assume that the MWI message pertained to an MSS feature with "Security=Yes." Just as previously done, it would check the value of the BCID, the service ID, and APID against values contained in the MSS group description (MSS GRP) for each MSS feature associated with the destination DN which had "Security=Yes." If a match was found, the 5ESS(R)-2000 switch would adjust the user's MWI. If no match was found among the features with "Security=Yes," but there was a feature left with "Security=No," the 5ESS(R)-2000 switch would assume that this was the right feature and would activate or deactivate the MWI.

Note: An end-user can only subscribe to one MSS feature with "Security=No."

If the full NANP destination DN for the MWI request is on another switch. It then packages the request into a TCAP message and sends it to the far switch. There is no BCID, APID, or SID in the message.

In the 5E6 software release, end-users who subscribe to multiple messaging services receive the Dual Telephone Coverage feature, allowing them to have a unique MWI for each service. For example (with the 5E6 software release), the 5ESS(R)-2000 switch is able to turn on indicator light 1 if an MWI activation request originates from messaging service 1. The 5ESS(R)-2000 switch turns on indicator light 2 if the request comes from messaging service 2. If a 5E7 software release customer wants to subscribe to multiple messaging services (one of which is VM on another switch), the switch that is turning on the indicator light recognizes when that particular VMS sends an indication. It can do this because it is assumed that an off-switch MWI comes from a VMS. (Note that this restricts a user to either subscribing to only one messaging service with "Security=No," or else to accept that MWIs generated by all off-switch messaging services are treated as if they came from the same source.)

13.4.1.15.5 Call Processing Scenarios

13.4.1.15.5.1 Overview

The following discussion describes typical scenarios for direct and forwarded calls to the VMS.

13.4.1.15.5.2 Direct Call to VMS -- Voice Mail

13.4.1.15.5.2.1 Intraswitch Operation

It is assumed that VM user A, voice mail user B, and the VMS

share the same 5ESS(R)-2000 switch. For voice mail, user A calls the VMS, retrieves messages, and composes and sends a message to user B. The following steps occur:

1. User A calls the VMS (NANP DN without the NPA).

2. The call is completed to an MLHG serving the VMS.

3. The MSS sends CHI to the VMS, using the API protocol.

4. The VMS answers the call.

5. After sending a message to user B and retrieving messages, user A hangs up.

6. The VMS sends an MWI deactivation message for user A to the 5ESS(R)-2000 switch. The message contains user A's DN, a BCID, and an SID, if appropriate.

7. The VMS sends an MWI activation message for user B to the 5ESS(R)-2000 switch. The message contains user B's DN, a BCID, and an SID, if appropriate.

8. The 5ESS(R)-2000 switch checks the MSS features associated with the destination DN in the MWI message. For each feature with "Security=Yes," it checks the associated group view to see if there is a match between the BCID, APID, and SID, if appropriate. In this case, no such match would be found (having assumed a "Security=No" feature), and the 5ESS(R)-2000 switch would check the list of MSS features to see if there was one with "Security=No." Upon finding this feature, the 5ESS(R)-2000 switch acts upon the MWI request without first attempting the security check. If no feature with "Security=No" is found, an MWI_Fail message would be sent to the VMS.

9. The 5ESS(R)-2000 switch deactivates user A's MWI and activates user B's MWI. If users A and/or B subscribe to more than one messaging service with a corresponding multiplicity of MWIs, the 5ESS(R)-2000 switch then identifies which MWI is to be activated or deactivated.

13.4.1.15.5.2.2 Interswitch Operation

Here, it is assumed that VM user A and VM user B are served by the far switch, with the VMS served by the near switch. As for the intraswitch scenario, user A calls the VMS, retrieves messages, and sends a message to user B. It is assumed that users A and B are in the same LATA. The following steps occur:

1. User A calls the VMS (NANP DN with or without the NPA).

2. The call is completed to an MLHG serving the VMS.

3. The far switch sends CHI to the near switch in a CCS7 IAM message.

4. The ISUP process in the near switch delivers the information in the CCS7 message to MSS, and MSS maps the message to an API message.

5. The MSS sends CHI to the VMS, using the API protocol.

6. The VMS answers the call.

7. After sending a message to user B and retrieving messages, user A hangs up.

8. The VMS sends an MWI deactivation message for user A to the 5ESS(R)-2000 switch. The message contains user A's DN, BCID, and an SID, if appropriate.

9. The VMS sends an MWI activation message for user B to the 5ESS(R)-2000 switch. The message contains user B's DN, a BCID, and an SID, if appropriate.

10. The MSS feature in the near switch verifies that the full NANP DNs in the MWI request messages for users A and B are not on the near switch. The switch performs screening, maps the MWI request messages for users A and B into separate CCS7 TCAP messages and then sends these messages to the TCAP process. The TCAP process sends the messages to the far switch. One TCAP message contains user A's DN and the other contains user B's DN. They also contain a 10-digit default value of the VMSRID, although this is not used. There is no BCID, APID, or SID.

11. The far switch maps the CCS7 MWI messages to MSS. Included in the mapping is the information that the MWI originated at another switch.

12. If the far switch is a 5ESS(R)-2000 switch, it uses the information that the MWI originated at another switch to deduce that the MWI came from a VMS. The 5ESS(R)-2000 switch checks the MSS features associated with the destination DN (user A's or B's) and finds the one with the "Security=No" attribute. There can be only one such feature for each DN. When the 5ESS(R)-2000 switch finds an MSS feature with "Security=No," it acts upon the MWI request without first attempting the security check. If the check is negative (that is, there is no feature with "Security=No"), the far switch sends an TCAP error message to the near switch and the near switch sends the MWI_Fail message to the VMS.

13. The far switch deactivates user A's MWI and activates user B's MWI.

Note that VM user B could be served by the near switch. In that case, the near switch would not map the MWI activation message for user B to a CCS7 TCAP message, and the procedure would be the same as the intraswitch case. Also, VM user A could be served by the near switch, with user B on the far switch. The MWI deactivation message for user A would not be mapped to a CCS7 TCAP message, and the procedure would be the same as the intraswitch case.

13.4.1.15.5.3 Call Forwarding to the VMS Call Answering

13.4.1.15.5.3.1 Intraswitch Operation

Here, it is assumed that user B has subscribed to Call Forwarding to the VMS. User A may or may not be a VM subscriber. The following occurs:

1. User A calls user B (who has call forwarding to the VMS).

2. The call is forwarded to the MLHG serving the VMS.

3. The MSS checks the attributes of the MLHG serving the VMS. (It is assumed in this scenario that the VMS subscriber forwards calls to an MLHG that has been assigned the value "Screening=No" by the service provider.) The switch then forwards the call to the VMS without screening.

4. The MSS sends CHI to the VMS.

5. The VMS answers the call.

6. User A leaves a message for user B and hangs up.

7. The VMS sends an MWI activation request for user B to the switch. The MWI message contains user B's DN, a BCID, and an SID, if appropriate.

8. The switch checks the MSS features associated with the destination DN (user B's DN) in the MWI message. For each feature with "Security=Yes," it checks the associated group view to see if there is a match between the BCID, APID, and SID. In this case, no such match would be found (because we have assumed a "Security=No" feature), and the switch would then check the list of MSS features associated with user B to see if there was one with "Security=No." Upon finding this feature, the switch acts upon the MWI request without first attempting the security check.

9. The switch activates user B's MWI.

13.4.1.15.5.3.2 Interswitch Operation

Here, it is assumed that VM users A and B are served by the far switch, and the VMS is served by the near switch. User A calls user B who has calls forwarded to the VMS. It is also assumed that user A and B are in the same LATA. The following steps occur:

1. User A calls user B who has call forwarding to the VMS (interswitch)

2. The call is forwarded to the MLHG serving the VMS

3. The far switch sends the data for CHI to the near switch in a CCS7 IAM message.

4. The ISUP process in the near switch delivers the information in the IAM message to MSS, and MSS maps the message to an API CHI message.

5. The MSS checks the attributes of the MLHG serving the VMS. (It is assumed in this scenario that the VMS subscriber forwards calls to an MLHG that has been assigned the value "Screening=No" by the service provider.) The switch then forwards the call to the VMS without screening.

6. The MSS sends CHI to the VMS.

7. The VMS answers the call.

8. User A leaves a message for user B and hangs up.

9. The VMS sends an MWI activation request for user B to the switch. The MWI message contains user's B's DN, a BCID, and an SID, if appropriate.

10. The MSS process in the near switch maps the MWI message to a CCS7 TCAP message and sends it to the TCAP process. The TCAP process sends it to the far switch. The TCAP message contains user B's DN. It also contains a default value of the VMSRID, although this value is not used. There is no BCID.

11. The far switch maps the CCS7 TCAP message to the MSS. Included in the mapping is the information that the MWI originated on another switch.

12. If the far switch is a 5ESS(R)-2000 switch, it uses the information that the MWI originated at another switch to deduce that it was sent by a VMS. The 5ESS(R)-2000 switch checks the MSS features associated with user B's DN and finds the one with "Security=No." There can only be one such feature per DN. When the 5ESS(R)-2000 switch finds this feature, it acts upon the MWI request without

attempting the security check. If there is no feature with "Security=No," the far switch sends an TCAP error message to the near switch and the near switch sends it to the VMS.

13. The switch activates user B's MWI.

14. The far switch sends back a TCAP response to the near switch.

13.4.1.15.6 Internal Call Processing Controls

13.4.1.15.6.1 Code Interpretation

The service provider continues to have the ability to assign and change the access codes for call forwarding to the VMS and to screen MWI deactivation by user.

13.4.1.15.6.2 Screening

The 5ESS(R)-2000 switch MSS feature screens call forwarding to a message service, based on a BCID. For ISVM, this screening cannot be done since BCIDs are not sent interswitch. For a VMS serving only intraswitch customers, screening is an option.

Similarly, the 5ESS(R)-2000 switch MSS feature screens MWI activation and deactivation messages based on a BCID and APID. For ISVM, this screening is not done. For intraswitch VMS, it is an option. In addition, the 5ESS(R)-2000 switch performs the following screening for interswitch MWI requests. After verifying that the DN specified in the MWI request is not on the same switch, the 5ESS(R)-2000 switch checks for the following:

- That the MWI request was received over an API data link having the value "Yes" for its associated "ISVM" parameter.

- That the full NANP DN in the MWI request is allowed as a possible full NANP DN in the North American Numbering Plan.

If both these conditions are met, the MWI request is mapped to a TCAP message which is sent towards a far switch. If neither condition is met, no TCAP message is sent and an MWI_Fail message is returned over the API data link. The purpose of this screening is to avoid, to the extent possible, using network resources to process unauthorized or invalid interswitch MWI requests.

13.4.1.15.7 TCAP Message Trapping

The service provider is provided the capability to trap on abnormal events that occur in connection with CCS7 TCAP messages used for MWI activation/deactivation. When a trap has been set, occurrence of the specified abnormal event triggers a display or printout which indicates occurrence of the abnormal event and provides information about the event. Capability is provided to set and clear traps, to verify the status of a trap, and to

display the information related to a trapped event.

Capability is provided to trap on the following types of abnormal events:

a. Response Time: A TCAP MWI activation/deactivation request is sent out over CCS7, but no response is received before time-out.

b. Failure Message Received: Either a TCAP response package or unidirectional package is received containing a return error component or a reject component.

c. Message Not Delivered: A TCAP MWI activation/deactivation request is sent out over CCS7, and the message is returned by the CCS7 network because it could not be delivered to its intended destination.

d. Failure Message Sent: Either a TCAP response package or unidirectional package is sent out over CCS7 containing a return error component or a reject component.

Abnormal events of types 1 and 3 occur when the 5ESS(R)-2000 switch plays the role of near switch. Event types 2 and 4 occur when the 5ESS(R)-2000 switch is acting either as far switch or near switch.

When an abnormal event is trapped, the resulting display or printout includes the following information, when available:

- Type of abnormal event.
- Type of request (activation or deactivation) in the TCAP message.
- Values of destination DN in the TCAP message.

13.4.1.16 Administration

13.4.1.16.1 Measurements

13.4.1.16.1.1 VM Provider (MLHG)

An existing AMA record (Call Code 320, Structure Code 01058) records peg counts of call history messages sent out over the API data link and of MWI activation/deactivation requests received and successfully carried out. The events are pegged on a per-MLHG basis. They are treated similarly to those in Section 75 of TRFC30. All call history messages are pegged to the MSS MLHG to which the call is offered.

The MWI activation/deactivation requests that are received by the 5ESS(R)-2000 switch over an MSS attendant's analog line (or digital subscriber line) are pegged to the MSS attendant's MLHG, just as in the 5E6 software release. However, MWI

activation/deactivation requests that are received by the 5ESS(R)-2000 switch through TCAP or API encounter the following complication. When an MWI activation/deactivation request is carried out, but the MWI security check is bypassed, there is no determination by the 5ESS(R)-2000 switch as to which message service originated the MWI request. Therefore, the event cannot be pegged to an MSS MLHG. On the other hand, when the MWI security check is made, the 5ESS(R)-2000 switch uses parameters in a pre-5E7 software release MSS group to identify the message service. The MSS MLHG number is one of the parameters of this pre-5E7 software release MSS group. Therefore, the 5ESS(R)-2000 switch pegs the count for the specific MSS MLHG.

These facts lead to successful MWI activation/deactivation requests, received over TCAP or API, being pegged in Structure Code 01058 if the MWI security check is made, but not pegged if the MWI security check is not made. This provides a meaningful AMA record in the 5E7 software release. Interswitch MWI activation/deactivation events are never pegged. Intraswitch counts are pegged only when originated by an attendant or when the MWI security check is carried out. The name of the field that records MWI activation/deactivation counts in Structure Code 01058 is not changed.

The MWI activation/deactivation events are pegged in Structure Code 01058 and are summarized in Table BT. The results are given separately for MWI activation/deactivation requests received from an MSS attendant over TCAP and API.

For MWI requests received from MSS attendants, a security check of BCID is always made. For successful requests received over TCAP, the security check is never made. This accounts for the two boxes labeled "Not Applicable" in Table BT. Note that Structure Code 01058 records all call history messages, but records only those MWI activation/deactivation events that have the MWI security check.

The Section 75 of TRFC30 is an existing special study (on a per MSS MLHG basis) in which the following types of events are pegged:

a. The number of attempts to complete incoming calls to the MSC MLHG.

b. The number of incoming calls completed to the MSC MLHG for which call history information is received and then sent over the API to the VMS.

c. The number of incoming calls completed to the MSC MLHG for which call history information, minus the calling DN, is received and then sent over the API to the VMS.

d. The number of MWI activation/deactivation requests.

For more detailed information on measurements and peg counts, refer to 235-070-100, *Traffic and Plant Measurements*, Appendix 1.

13.4.1.16.1.2 End-User

For MSS features, an existing AMA record (Call Code 319, Structure Code 01057) records (on a per-BCID basis) peg counts of business customer requests to use the following MSS feature options:

- MWI Deactivation by User
- Leave Word Calling (LWC)
- Message Retrieval Display (MRD)
- Printout on Demand (POD)
- Auto Call.

In the 5E6 software release, each MSS feature option is assigned with a pre-5E7 software release MSS group which specifies the BCID to which the request is pegged. A changed aspect for the 5E7 software release is that, when "Auto MWI Sec=No," certain MSS feature options can be assigned with the ISVM group which does not specify a BCID. In this case, it is not appropriate to peg the request on a per-BCID basis in Structure Code 01057. In Structure Code 01057, the 5ESS(R)-2000 switch pegs requests for feature options that are assigned with a pre-5E7 software release MSS group, but does not peg requests for feature options assigned with the ISVM group.

The MSS feature options LWC, MRD, POD, and Auto Call can be assigned only with a pre-5E7 software release MSS group. Therefore, requests to use these feature options are always pegged in Structure Code 01057. There is no change from the 5E6 software release; however, the MSS feature option "MWI Deact by User" can be assigned with either a pre-5E7 software release MSS group or the ISVM MSS group. Requests for "MWI Deact by User" that are associated with the ISVM group are not pegged. This would typically occur for interswitch subscribers and for intraswitch subscribers with equivalent service.

The net result is that existing AMA recording on a per-BCID basis is preserved, but no AMA recording is made of requests for "MWI Deact by User" when this feature option is assigned with the ISVM group. For this case, flat-rate charging of end-users meets service provider needs.

13.4.1.16.2 Billing

There are three parties involved in VM services: the 5ESS(R)-2000 switch service provider, the VM provider, and the end-user. The 5ESS(R)-2000 switch service provider supplies services to both the VM provider and the end-user and has the capability to charge both parties. The VM provider supplies services to the end-user and is assumed to keep appropriate records for charging the end-user.

It is assumed that the 5ESS(R)-2000 switch service provider and the VMS provider create the arrangement, whereby, the end-user is billed by both parties separately, or the service provider bills the VM provider for all VM-related items and the VM provider bills the end-user. (The service provider can also be the VM provider.)

A possible business billing arrangement is for end-users to request VM from the provider and for the VM provider to order the appropriate end-user features from the service provider. The service provider would charge the VM provider for these services and the VM provider would bill the end-user who would then receive a single monthly bill for VMS. This arrangement requires the service provider to administer data of the following type (note that this data need not be administered in the switch):

a. Associated with the VM provider-- A list of end-users and a list of the service provider services provided to each end-user that are to be charged to the VM provider.

b. Associated with each end-user-- A list of services that are to be charged to the VM provider and the identity of the VM provider.

The VM provider can choose to charge the end-user for placing and storing messages in the end-user's voice mailbox. The VMS would use CHI received from the switch on a per-call basis to determine into which end-user's voice mailbox to place a message.

In order to make use of call answering, the end-user also subscribes to at least one Call Forwarding feature. The usual billing for call forwarding subscription applies (that is, subscription to call forwarding is billed flat rate).

The ISVM feature uses call code 320 and structure code 01058 for billing the voice message provider by the telephone service provider. The ISVM feature uses call code 319 and structure code 01057 for billing the end-user by the telephone service provider.

With the Line Blocking Enhancements - Phase 1 and Line Blocking Enhancements - Phase 2 features usage sensitive "Per Call

Privacy" will be pegged even if overridden.

For more detailed information on AMA records and billing information, refer to 235-190-300, *5ESS(R)-2000 Switch Billing Features and Specifications* document.

13.4.2 Message Service Center

13.4.2.1 Description -- MSC Basic Service

[National] [Custom]

When a call is terminated to the basic message service attendant, the switch collects the following information:

- The calling DN (if available)
- The originally dialed DN
- A reason indication.

The 5ESS(R)-2000 switch then sends the call information over the D-channel to the answering attendant's visual display. Based on the call information displayed, the attendant may provide customized responses.

Basic service does not use the AP and is limited to the use of ISDN station sets by Message Service Center attendants. An MSS client with basic service may use either analog or ISDN station sets. Additionally, basic service only supports the OCDN client.

The MSS client can leave messages, retrieve new messages, or update personal status by calling the MSC directly. The MSS user, wishing to have call coverage, may subscribe to the Call Forwarding feature to forward user phone calls to the basic MSC.

13.4.2.2 Description -- MSC Deluxe Service

[National] [Custom]

When a call is terminated to the Message Service Center, the switch collects the following call information:

- The business customer identification (ID)
- A reason indication (Call Forwarded Don't Answer, Call Forward Busy Line, All Calls Forwarded)
- The calling DN (if available)
- The originally called (dial) DN (OCDN)
- The redirecting DN (optional in Custom ISDN)
- The identity of the MSC line answering the incoming call.

Call information is sent to the AP or the VMS through the AP Interface data link.

An MSS client can retrieve new messages or update status information by calling the MSC directly. The direct call screen provides the attendant with call information, the client's status profile, messages left by the client for incoming callers, and messages left for the client by incoming callers. The forwarded call screen provides the attendant with call information, the client's status profile, messages left by the client for incoming callers, and a message input form.

The MSS deluxe service uses an ACP or VMS to automate the message entry-retrieval and MWI activation-deactivation requests. The MSS clients and MSC attendants with deluxe service may use either analog or ISDN station sets. Additionally, MSS deluxe service supports either the OCDN or RDN client types.

13.4.2.3 Cross References

The following cross references apply to the Message Service Center feature:

- Feature number: 99-5E-0389
- NSEP numbers: ISMBKDX and ISMESRT.

13.4.2.4 Availability

The MSC capability is available in the:

- 5E8 software release for National ISDN
- 5E4 software release for Custom ISDN.

13.4.2.5 Interactions

The following interactions apply for this feature:

- *Call Forwarding (CF).*

  A user may activate Call Forwarding to the MSC if the user has Attendant Call Coverage and is served by the MSC.

  When a call terminates to an MSC after multiple forwardings, the originally dialed DN is the number presented to the attendant for MSS Basic Service or sent across the API link for MSS Deluxe Service.

  Note: Since call coverage is being provided for an MSC client, an error condition will result if the originally dialed DN is different from an MSC client.

If a user has Call Forwarding and attempts to forward calls to a message service that does not cover the BCID of the user, the switch does not forward calls to that service.

The following describes when the switch checks for a valid BCID:

-- When the forward-to DN is entered via recent change, recent change does not check for a valid MSS feature and BCID. When the feature is activated via recent change, or by the user via an activation action (for example, when using the action BNTOG), during the forwarding attempt, the switch checks for a valid MSS feature and BCID. The BCID of the client must match the BCID of the MSC on the 5ESS(R)-2000 switch. In addition, the message service provider's BCID must match the client's BCID on the switch. If the checks do not pass, the call is not forwarded.

-- When the user is allowed to enter the forward-to DN (using the action CFDNCH) and the forward-to DN is for a message service, but the user does not have a valid MSS feature and BCID, then the forward-to DN is not updated. The user is then given reorder tone treatment.

o *Time-of-Day (TOD).*

Time-Of-Day lines forwarded to the MSC must be served by the MSC. If not, they will be rejected.

o *DN Privacy.*

An incoming call to an MSC attendant will override DN Privacy on direct forwarded calls if the calling party is also in a BCID served by the MSC. Incoming forwarded calls will override privacy of the forwarding party since the forwarding party must be served by the MSC.

o *Electronic Directory Service (EDS) Calling Name Display (CND) (Custom Only).*

The calling party's name will be displayed at the ISDN MSC for Custom ISDN. EDS is not available on the National ISDN BRI.

o *Multiline Hunt Group (MLHG) Hunting.*

The MSC is dependent on MLHG Hunting. An MSC consists of an MLHG with a uniform call distribution (UCD), regular or circular hunt type.

- *Individual Calling Line Identification (ICLID).*

  An incoming call from within the same business customer group to an MSC attendant will display the originator's DN even if the DN Privacy feature is activated during the origination.

- *Shared DN.*

  The MSC DNs should not be shared. The MSC DNs may be equipped as a primary DN or a secondary-only DN for MSC Attendants with ISDN station sets.

13.4.2.6 Feature Implementation

Refer to MLHG in 235-190-103, *Business and Residence Feature Descriptions.*

13.4.3 Applications Processor Dual Telephone Coverage

13.4.3.1 Description

[Custom]

The AP Dual Telephone Coverage capability is available through the 5ESS(R)-2000 switch AP in conjunction with the 5ESS(R)-2000 switch. This capability allows subscribers of the MSS feature to have incoming telephone calls redirected between MSS and one of the other answer points or message services that uses the simplified message service interface (SMSI), based upon the time of day or a characteristic of the call itself, such as internal versus external. For example, a business may choose to have outside calls answered by an attendant and internal calls handled by a voice message system. In the 5E4 and 5E5 software releases, the switch allowed only one service to be the coverage point for all types of incoming calls. The AP Dual Telephone Coverage capability allows two message services to be offered and integrated in a single AP, with only one attached processor interface (API) link to the switch required. This capability requires the AP features, CMSS, and SMSI, which are contained in the advanced communications package.

13.4.3.2 Cross References

The following cross references apply to the Applications Processor Dual Telephone Coverage feature:

- Feature number: 99-5E-0633

- NSEP number: ISMESRT.

13.4.3.3 Availability

The Applications Processor Dual Telephone Coverage feature is available with the 5E4 and subsequent software releases for Custom ISDN.

13.4.3.4 Interactions

The following interactions apply for this feature:

- *Call Forwarding.*

  When a call terminates to an MSC after multiple forwardings, the originally dialed DN is the number sent across the API link. If the originally dialed DN is an MSC client, then it must be provisioned for attendant-based or voice messaging system-based service.

  Note: Since call coverage is being provided for an MSC client, an error condition will result if the originally dialed DN is different from an MSC client.

  If a DTC user has Call Forwarding and attempts to forward calls to a message service that does not cover the BCID of the user, the switch does not forward calls to that service.

  The following describes when the switch checks for a valid BCID:

  -- When the forward-to DN is entered via recent change, recent change does not check for a valid MSS feature and BCID. When the feature is activated via recent change, or by the user via an activation action (for example, when using the action BNTOG), during the forwarding attempt, the switch checks for a valid MSS feature and BCID. If the checks do not pass, the call is not forwarded.

  -- When the user is allowed to enter the forward-to DN (using the action CFDNCH) and the forward-to DN is for a message service, but the user does not have a valid MSS feature and BCID, then the forward-to DN is not updated. The user is then given reorder tone treatment.

- *Simplified Message Services Interface (SMSI).*

  The AP SMSI provides the interface to voice message systems on the 5ESS(R)-2000 switch and enables a smooth transition for simplified message service customers served via a 1A ESS(TM) switch when moving to a 5ESS(R)-2000 switch. It allows the customers to use the same hardware, firmware, and software previously used on the 1A ESS(TM) switch for

voice messaging.
This feature requires the ISDN message services (AP/ACP feature package on the 5ESS(R)-2000 switch using either the AP or the simplified message service interface translator).

Note: The MSS attendant is in no way related to the ISDN attendant (ISAT) which uses the ISDN Attendant Console.

The MSS attendant operates from a message service center concept. The message service center is created by the ACP administrator and corresponds to an appropriate MLHG set up for universal call distribution (regular or circular) on the 5ESS(R)-2000 switch. Calls forwarded to an MLHG arrive at an attendant station which is assigned to the MSC and is associated with a particular business customer.

The 5ESS(R)-2000 switch features requiring deluxe MSS interactions are: Auto Call, LWC, MRD, PODS, and indirectly, MWI. The MSS feature is independent of any other ACP feature but does not require that the directory data base is correctly populated via Directory Data Base Administration (DDA). If combined with the SMSI feature, AP Dual Telephone Coverage and an integrated messaging capability is realized.

This feature operates the same for MultiPoint BRI, with the exception that Auto Call cannot be invoked when user is B-channel blocked. For detailed coverage of the SMSI feature, see 235-190-103, *Business and Residence Feature Descriptions*.

13.4.4 Dual Telephone Coverage

13.4.4.1 Description

[Custom]

The DTC provides the ability for users to be served by multiple message services (maximum of four) with either a Message Waiting Indicator (MWI) for each service or a 5ESS(R)-2000 switch integrated MWI where the activation/deactivation of the single MWI by multiple services is controlled by the 5ESS(R)-2000 switch. In addition, DTC provides new preconstructed Call Forwarding features for Call Forwarding features that may currently be constructed using Modular Feature Construction (MFC). These new Call Forwarding features provide the ability to forward calls that originate internal to a customers terminal group to a specific message center that may be different from a message center that services calls originating external to a customer's terminal group.

The DTC users selectively forward calls arriving at their station sets to multiple message service centers based on the

origination source of the call and the condition encountered at the called station/line. Currently, the switch limits the user to one MSS feature. With DTC, the user may subscribe to multiple message services. In addition, since an MWI is provided as an integral part of MSS, an MWI may be offered on either an integrated basis (multiple services use a single MWI) or an individual basis (each service uses a separate MWI). For integrated MWI service, the switch must keep track of the message waiting status of all services, and must guarantee that the MWI is inactive only when no messages are waiting on all services.

The DTC feature provides telephone users the ability to selectively forward calls arriving at their station sets to multiple (at least two but no more than four) message service centers (answering or coverage points). Messages may be taken at these centers and the originally called person will be alerted to the message waiting condition via an MWI.

The call forwarding may be based on the following:

1. The source of the call (for example, internal to or external from the business customer's terminal group)

2. The condition encounted at the called station/line (that is, busy, no answer, or all calls forwarded).

The user may choose to have all calls selectively forwarded for one period of time and have none forwarded at other times. The user may also choose to have some specific types of calls not forwarded while others are being forwarded. Each user may accomplish the desired call forwarding by subscribing to and using a combination of BRCS and Local Area Signaling Services (LASS) call forwarding features, if available. Users may alter their forward-to DNs through existing options on the Call Forwarding features, and may activate and/or deactivate some or all of their forwarding choices. All call forwarding discussed here is subject to normal limitations associated with BRCS preconstructed and constructed Call Forwarding features.

A user's call coverage points may be any DNs depending on the call forwarding permissions normally available (for example, a business customer may choose to restrict forwarding of calls to within the customer's organization or allow unrestricted forwarding).

13.4.4.2 Cross References

The following cross references apply to the Dual Telephone Coverage feature:

- Feature number: 99-5E-0591

- NSEP number: ISDTRTU.

13.4.4.3 Availability

The Dual Telephone Coverage feature is available with the 5E6 and later software releases for Custom ISDN.

13.4.4.4 Feature Operation

An MWI activation/deactivation is performed in two aspects. If the client has only one MWI, the switch remembers when messages are waiting for each assigned MSS feature so that it is able to deactivate the client's MWI only when no messages are waiting on all message services. If the client has separate MWIs for each message service, the switch remembers when messages are waiting for each assigned MSS feature so that it is able to associate each MWI activation/deactivation with the correct MWI.

13.4.4.5 User Operation

A DTC user can activate and deactivate the feature by using LASS or BRCS Call Forwarding features. Note that in the 5E6 software release, DTC is restricted to intraswitch configurations. For example, the DTC user and the users message service must be on the same switch.

13.4.4.6 Interactions and Limitations

The Leave Word Calling subfeatures can only be assigned to one user's line. If a user subscribes to more than one MSS and has the LWC capability, the user must choose at subscription time which system handles their incoming LWC messages.

The LASS Selective Call Forwarding feature takes precedence over other BRCS Call Forwarding features. The BRCS Call Forwarding Variable feature takes precedence over Call Forwarding Don't Answer and Busy Line.

This feature interacts with the ISDN MBKS Secretarial MWI Control feature. Secretarial MWI Control is a feature that has a principal's call picked up by a secretary (via shared DN or call forwarding). The secretary then can activate an MWI on the principal's station set. Both features may use the same or different MWIs.

When a call terminates to an MSC after multiple forwardings, the originally dialed DN is the number sent across the API link. If the originally dialed DN is an MSC client, then it must be provisioned for attendant-based or voice messaging system-based service.

Note: Since call coverage is being provided for an MSC client, an error condition will result if the originally dialed DN is different from an MSC client.

If a DTC user has Call Forwarding and attempts to forward calls

to a message service that does not cover the BCID of the user, the switch does not forward calls to that service.

The following describes when the switch checks for a valid BCID:

- When the forward-to DN is entered via recent change, recent change does not check for a valid MSS feature and BCID. When the feature is activated via recent change, or by the user via an activation action (for example, when using the action BNTOG), during the forwarding attempt, the switch checks for a valid MSS feature and BCID. If the checks do not pass, the call is not forwarded.

- When the user is allowed to enter the forward-to DN (using the action CFDNCH) and the forward-to DN is for a message service, but the user does not have a valid MSS feature and BCID, then the forward-to DN is not updated. The user is then given reorder tone treatment.

13.4.4.7 Feature Implementation

The DTC is not itself a feature assignable to a line (DN). The DTC is achieved by assigning a combination of terminal group, multiple Call Forwarding and multiple MSS features to a line.

In addition, the DTC capacity requires at least two Message Service Centers; one to provide call coverage for calls originating outside the clients terminal group and another to provide call coverage for calls originating inside the clients terminal group.

The DTC feature is provided to a line (DN) by assigning a terminal group, two MSS features (each associated with an MSC via the MSS group assignment), and multiple Call Forwarding features (each forwarding to the desired MSC). The Call Forwarding features should be those that forward based on whether the incoming call originated from inside the terminal group (that is, /CFBLIO, /CFBLITG, /CFDAIO, /CFDAITG, /CFIO, and /CFVITG).

Since a message waiting indicator (MWI) is associated with each MSS feature, the client's terminal type must be considered when selecting the MSS features. If the client has an analog phone with a visual MWI, then the client may have an audible MWI for one message service and a visual MWI for the other message service. The analog client may also have both MSS features share the visual MWI so that the lamp is on when a message is waiting on either service. Any combination of audible and visual MWI may be selected for an analog terminal.

A client with an ISDN terminal may have the same MWI arrangement as previously described for the analog phone. In addition, the client may have two visual MWIs; one for each message service,

since the MWIs are assigned as feature buttons on the terminal.

MSS preconstructed feature may be assigned as follows:

- Use RC View 12.12 to construct CFDA and CFBL features for intragroup calls.

- Use RC View 4.37 to create MSS groups that contain the Business Customer Identifier and the MLHG and API that serves them.

- Use RC View 1.11 or 23.8 to assign an MSS feature and group to a given subscriber line.

- Use RC View 1.22 to assign call forwarding to the DN. The different Call Forwarding features are CFDAIO and CFBLIO (preconstructed), or CFDAG and CFBLG (constructed).

- Use the Individualized Dialing Plan to set up access codes for Leave Word Calling, Print On Demand, Client Deactivation of MWI.

  In Addition, RC View 12.5 may be used to set up configuration groups for ISDN Feature Button assignment.

A list of modified recent change views and office records for DTC is as follows:

- *RC View 1.8* - BRCS Assignment - TN

  This is a modified view for the 5E6 software release.

  The MSS FEAT (value 1-4) is a new field. The MSS GRPNM (value 1-4) is a modified field.

- *RC View 2.8* - BRCS Assignment - OE

  This is a modified view for the 5E6 software release.

  The MSS FEAT (value 1-4) is a new field. The MSS GRPNM (value 1-4) is a modified field.

- *RC View 3.8* - BRCS Assignment - MLHG

  This is a modified view for the 5E6 software release.

  The MSS FEAT (value 1-4) is a new field. The MSS GRPNM (value 1-4) is a modified field.

  For the 5E7 and later software releases, RC Views 2.8 and 3.8 are consolidated into RC View 1.8.

- *RC View 4.37 (Office Record 59622)* - Message Service

  This is a modified view for the 5E6 software release.

  The SERV ID is a new field.

- *RC View 4.37v* - Message Service Center User Group

  This is a modified view for the 5E6 software release.

  The SRV ID (value 1-8) is a new field.

- *RC View 23.8* - DSL/BRCS Assignment - TN

  This is a modified view for the 5E6 software release.

  The MSS FEAT (value 1-4) is a new field. The MSS GRPNM (value 1-4) is a modified field.

The DTC feature is not itself assignable to a line. Dual Telephone Coverage is achieved by assigning a combination of Terminal Group, multiple Call Forwarding, and multiple Message Service features to a line. Service order processing for DTC is not changed for Terminal Group, Call Forwarding, and Message Service provisioning except that the service identifier for the involved Message Service groups must be populated correctly.

When provisioning DTC, consider the following points:

1. The following are the minimal assignments to a line that must be made to provision DTC:

   - One *IO* type CF feature and one *TIG* type CF feature
   - Two Message Service features (one for each of the preceding)
   - One Terminal Group feature
   - Necessary parameters for all of the preceding.

2. The use of Automatic Forms presentation and/or the use of one of the "combined" views (RC views 1.8, 2.8, 3.8, or 23.8) integrates some of the necessary steps in provisioning DTC.

   For the 5E7 and later software releases, RC Views 2.8 and 3.8 are consolidated to RC View 1.8.

3. The use of preconstructed features eliminates the need for definition of features.

4. Typical combinations of preconstructed Call Forwarding features used to provide DTC include:

   - /CFIO and /CFVITG
   - /CFBLIO and /CFBLITG
   - /CFDAIO and /CFDAITG

5. The *IO* type features are existing features. The *TIG* type features are provided by the DTC capability, but are not limited to use for DTC purposes.

Figure 109 depicts the service order processing view flow diagram for DTC.

13.4.4.8 Administration

13.4.4.8.1 Measurements

There are no changes to the traffic measurements that are provided on a per MSC basis (for example, per MLHG basis). All measurements currently associated with Message Service features, MSC attendants, and BRCS features still apply. No new measurement requirements apply.

13.4.4.8.2 Billing

There are no changes to the billing requirements that are provided on a per MSC basis (for example, per MLHG basis). All billing requirements currently associated with Message Service features, MSC attendants, and BRCS features still apply. No new billing requirements apply.

13.4.5 Attendant Call Coverage

13.4.5.1 Description

[National] [Custom]

An MSS user assigned with the MSS Attendant Call Coverage capability and served by the MSC may activate Call Forwarding to an MSC. At that point, the MSS user becomes the MSC client.

13.4.5.2 Cross References

The following cross references apply to the Attendant Call Coverage feature:

- Feature number: 99-5E-0392
- NSEP number: Not available.

13.4.5.3 Availability

The Attendant Call Coverage feature is available in the:

- 5E8 and later software releases in National ISDN

- 5E4 and later software releases in Custom ISDN.

13.4.5.4 Interactions

The following interactions apply for this feature:

- *Advanced Services Platform (ASP).*

  Beginning in the 5E10 software release, an ASP originating feature that supports an off-hook delay trigger may coexist with this feature on a National ISDN line. This functionality is available with the purchase of the ASP OHD/BRCS feature (99-5E-2343). For details on the interactions between these features, refer to 235-190-126, *Advanced Services Platform Release 0.1B* (R0.1 protocol).

- *Call Forwarding.*

  If a user activates Call Forwarding to the MSC without the Attendant Call Coverage feature assigned, it will be rejected.

- *Shared Directory N.r"*

  The Attendant Call Coverage feature can only be assigned to a primary DN.

13.4.6 Automatic Call History Display

13.4.6.1 Description

[Custom]

Call information, client status information, and messages are displayed to the message service attendant automatically when the message service client calls from the station set to receive messages. For forwarded calls, the call information, client's status information, and a message entry template are displayed.

13.4.6.2 Cross References

The following cross references apply to the Automatic Call History Display feature:

- Feature number: 99-5E-0392

- NSEP number: ISMESRT.

13.4.6.3 Availability

The Automatic Call History Display feature for MSS is available with the 5E4 and subsequent software releases for Custom ISDN.

13.4.7 Automatic Call Setup

13.4.7.1 Description

[Custom]

The Automatic Call Setup feature is an ISDN station option of message service available to message service clients who also

have the MRD option and/or the Direct Access to Message Data Base feature. The Automatic Call Setup feature provides the user with the ability to place a call to the party associated with a message displayed during either an AP logon session or an MRD session without dialing the DN.

13.4.7.2 Cross References

The following cross references apply to the Automatic Call Setup feature:

- Feature number: 99-5E-0397
- NSEP number: ISMESRT.

13.4.7.3 Availability

The Automatic Call Setup feature for MSS is available with the 5E4 and subsequent software releases for Custom ISDN.

13.4.7.4 Feature Operation

13.4.7.4.1 Automatic Call Setup During Data Call to Applications Processor

After placing a data call to the AP and successfully completing the login sequence to the MSS applications program, the user enters the message file to retrieve messages. While retrieving messages on the CRT, the user can request a call to the party associated with a displayed message by selecting the Auto Call option from the screen menu. If the user did not enter the telephone extension during the login procedure, the user is now prompted to enter the extension. After the user receives confirmation of the Auto Call request on the CRT, the user takes the appropriate actions to obtain a dial tone and dials the Auto Call access code, or presses the **Auto Call** function button to initiate the call.

13.4.7.4.2 Automatic Call Setup During Message Retrieval Display

While retrieving messages during an MRD session, the user can request a call to the party associated with the displayed message (or message segment) by taking the required actions to receive dial tone and dialing the Auto Call access code, or pressing the **Auto Call** function button to initiate the call.

The retrieval session is not terminated when an Auto Call is requested. The user can continue to retrieve messages.

13.4.8 Message Waiting Indicator Control by Service Provider

13.4.8.1 Description

[National] [Custom]

Basic message service requires attendant action to activate/deactivate the message waiting indicators. The deluxe message service provides automatic activation/deactivation of MWIs by the AP or VMS.

13.4.8.2 Cross References

The following cross references apply to the Message Waiting Indicator Control by Service Provider feature:

- Feature number: Not available
- NSEP number: Not available.

13.4.8.3 Availability

The Message Waiting Indicator Control by Service Provider is available in the:

- 5E8 and later software releases in National ISDN
- 5E4 and later software releases for Custom ISDN.

13.4.8.4 User Operation

When a call is forwarded to the MSC, while the MSC attendant is active on the call, the attendant presses the feature button ATACTMWI. The button lights and the MWI light comes on for the station indicated as the OCDN or RDN (depending on the client type for the MSC MLHG). (This assumes that the OCDN or RDN has MWI assigned, is in the correct MSS group, has the correct BCID, etc.)

When the client with the MWI makes a call to the MSC attendant, while the attendant is active on the call, the attendant presses the ATDCTMWI feature button and the light goes out (assuming the same criteria previously mentioned).

13.4.8.5 Feature Operation

The MWI can be a visual or audible notification to the client. This could be a flashing or steady light on the telephone set or a stutter dial tone. Both of these items are activated by the 5ESS(R)-2000 switch but are indirectly controlled by MSS. The following types of indicators are available:

- **Audible Message Waiting Indicator** provides an indication tone when the client goes off-hook.
- **Visual Message Waiting Indicator** allows the 5ESS(R)-2000 switch to activate/deactivate a message waiting indicator lamp on a station set.
- **Electronic Billboard** provides name of persons who have messages (Deluxe MSS - Custom ISDN only).

When a new message is posted, the AP software requests that the switch activate the MWI. Likewise, once there are no new messages remaining, a request to the switch is made to deactivate the MWI. A manual MWI deactivation by the MSC client capability may be set up on the 5ESS(R)-2000 switch.

13.4.8.6 Interactions

The following interactions apply for this feature:

- *Advanced Services Platform (ASP).*

  Beginning in the 5E10 software release, an ASP originating feature that supports an off-hook delay trigger may coexist with this feature on a National ISDN line. This functionality is available with the purchase of the ASP OHD/BRCS feature (99-5E-2343). For details on the interactions between these features, refer to 235-190-126, *Advanced Services Platform Release 0.1B* (R0.1 protocol).

- *Call Forwarding (CF).*

  When a call is forwarded to the MSC and the attendant invokes the MWI activation, the original called party's MWI is activated.

- *Call Pickup.*

  When a call is picked up via the Call Pickup feature and the MWI activation is invoked, the MSC attendant receives rejection treatment.

- *Shared DN.*

  When the MSC attendant activates/deactivates MWI, if successful, the MWI of the primary terminal is activated or deactivated.

13.4.8.7 Feature Implementation

The configuration group (button group) assigned to the MSC attendant MLHG should have two feature buttons assigned with FEATURE = /* and ACTION = ATACTMWI and ATDCTMWI.

Note: Message Waiting Indicator Control by Message Service Attendants is not allowed if the client's MSS feature has MWI security set to NO.

13.4.9 Audible Message Waiting Indicator (AMWI)

13.4.9.1 Description

[National] [Custom]

If the user has an active MWI status at the switch, the user will receive stutter dial tone before normal dial tone upon going off-hook. To receive AMWI, the user must have AMWI assigned. The AMWI feature may be assigned to analog or ISDN users.

13.4.9.2 Cross References

The following cross references apply to the Audible Message Waiting Indicator feature:

- Feature number: 99-5E-0440

- NSEP numbers: ISMESRT and ISMBKDX.

13.4.9.3 Availability

The Audible MWI is available in the:

- 5E8 and later software releases for National ISDN

- 5E4 and later software releases for Custom ISDN

13.4.9.4 Interactions

When used with the Shared DN feature, the AMWI feature can only be assigned to a primary DN.

13.4.10 Visual Message Waiting Indicator (VMWI)

13.4.10.1 Description

[National] [Custom]

If a station is equipped with a Visual MWI, and the user has an active MWI status at the switch, the user will receive a visual indication whenever a message is waiting. To receive VMWI, the user must have VMWI assigned. The VMWI feature may be assigned to analog or ISDN users.

The 5ESS(R)-2000 switch refreshes the analog visual message waiting indicator about every 30 minutes. The visual message waiting indicator on an ISDN terminal is refreshed about every two minutes. The message waiting indicators are refreshed based on the current message waiting status stored on the 5ESS(R)-2000 switch.

Note: A phone set which has its own power supply and a Frequency Shift Key (FSK) receiver is required to assign this feature to an analog line.

13.4.10.2 Cross References

The following cross references apply to the Visual Message Waiting Indicator feature:

- Feature number: 99-5E-0440

- NSEP numbers: ISMESRT and ISMBKDX.

13.4.10.3 Availability

The Visual MWI capability is available in the:

- 5E8 and later software releases in National ISDN

- 5E4 and later software releases in Custom ISDN

13.4.10.4 Interactions

When used with the Shared DN feature, the VMWI feature can only be assigned to a primary DN.

13.4.11 MSC Attendant Position Activation-Deactivation

13.4.11.1 Description

[National] [Custom]

Activation-Deactivation is also referred to at times in 5ESS(R)-2000 switch documentation as Make-Busy/Make-Unbusy. Its function is to toggle an MLHG member off and on.

To receive incoming calls, the MSC attendant positions must be made position not busy. To stop receiving calls, the MSC must be made position busy.

13.4.11.2 Cross References

The following cross references apply to the MSC Attendant Position Activation-Deactivation feature:

- Feature number: Not available
- NSEP number: Not available.

13.4.11.3 Availability

The MSC Attendant Position Activation-Deactivation capability is available in the:

- 5E8 and later software releases in National ISDN
- 5E4 and later software releases in Custom ISDN

13.4.12 Auto Activation-Deactivation of MWI

13.4.12.1 Description

[Custom]

This feature indicates the automatic activation-deactivation of the message waiting indicator by the applications processor after a new message is stored or all messages are retrieved by the client.

13.4.12.2 Cross References

The following cross references apply to the Auto Activation-Deactivation of MWI feature:

- Feature number: 99-5E-0393
- NSEP number: ISMESRT.

13.4.12.3 Interactions

When used with the Shared DN feature, the MWI on the primary terminal is activated or deactivated.

13.4.13 MWI Deactivation by Client

13.4.13.1 Description

[National] [Custom]

When a message is recorded for a client, a request to activate

the MWI should be made by the MSC attendant. The request to deactivate it can be made either by the MSC attendant or the client. This feature is provided to the MSC clients to deactivate their MWIs from their station sets.

13.4.13.2 Cross References

The following cross references apply to the MWI Deactivation by Client feature:

- Feature number: Not available
- NSEP number: Not available.

13.4.13.3 Availability

The MWI Deactivation by Client capability is available in the:

- 5E8 and later software releases in National ISDN
- 5E4 and later software releases in Custom ISDN.

13.4.13.4 Interactions

Advanced Services Platform (ASP):

Beginning in the 5E10 software release, an ASP originating feature that supports an off-hook delay trigger may coexist with this feature on a National ISDN line. This functionality is available with the purchase of the ASP OHD/BRCS feature (99-5E-2343). For details on the interactions between these features, refer to 235-190-126, *Advanced Services Platform Release 0.1B* (R0.1 protocol).

13.4.14 Direct Access to Message Data Base

13.4.14.1 Description

[Custom]

The Direct Access to Message Data Base feature allows the message service client to update the status information, leave messages for incoming calls, and retrieve messages by directly logging onto the AP without assistance from the message service attendant. A video display terminal with a standard keyboard and the AP are required for this feature.

13.4.14.2 Cross References

The following cross references apply to the Direct Access to Message Data Base feature:

- Feature number: 99-5E-0395
- NSEP number: ISMESRT.

13.4.14.3 Availability

The Direct Access to Message Data Base feature for CMSS is available with the 5E4 and subsequent software releases for Custom ISDN.

13.4.14.4 Feature Operation

An analog station user who has a CRT with keyboard terminal and modem can directly access the AP by placing a circuit-switched data call to the AP. The ISDN station user can place a circuit-switched (B-channel) or a packet-switched (B- or D-channel when packet-switching is available) data call to the AP using an ISDN integrated voice/data station set, which provides a standard interface (RS232-C) to a CRT with keyboard terminal (no modem required). The ISDN station set may also take the form of an integrated voice/data/CRT with keyboard terminal.

After the call has been established, the AP initiates a login sequence, which includes the retrieval extension and may also include a password, to access the CMSS application program. The AP then prompts the user for the telephone extension. The telephone extension is used for the Auto Call feature. The user may either enter the telephone extension and then hit return, or may just hit the return key. This allows the user to retrieve messages and request the Auto Call option from another user's terminal and telephone. The user's message file is then displayed on the CRT. Using the menu-driven program running on the AP, the user can update personnel status information, leave messages for incoming callers, or retrieve (undelivered) messages left by incoming callers. The user is also able to display retrieval (delivered) messages that are still on file. If a password is required, the user is able to change the password.

13.4.15 Leave Word Calling

13.4.15.1 Description

[Custom]

This feature is offered in two forms: LWC-IO and LWC-O.

The LWC-IO allows the user to send and receive LWC messages to/from users within the same business group. This feature requires that the users must have either an audible or a visual message waiting indicator feature, and a message file maintained on the applications processor to store LWC messages.

The LWC-O allows the user to only send LWC messages to other LWC-IO users within the same business group.

This feature allows an MSS user to leave a predefined standard message for other MSC clients and LWC-IO users to activate their MWI without assistance. The calling and called parties must be served by the same switch and be in the same business group. The LWC message is stored in the called party's message file on the applications processor which serves the called party. The LWC message is stored along with any other messages taken by the MSC if the called party is an MSC client. The LWC message includes the extension of (1) the calling party, (2) the number

of LWC messages left by the calling party, and (3) the date and time of the last LWC message left by the caller. The LWC feature can be activated from either an analog or an ISDN station set.

13.4.15.2 Cross References

The following cross references apply to the Leave Word Calling feature:

- Feature number: 99-5E-0394
- NSEP number: ISMESRT.

13.4.15.3 Availability

The Leave Word Calling feature for MSS is available with the 5E4 and subsequent software releases for Custom ISDN.

13.4.15.4 Feature Operation

When the LWC feature is activated, a predefined standard message is placed in the specified or called user's message file. The receiving user's MWI is then automatically activated. The LWC messages can be retrieved by the same means as a message taken by the MSC. The message retrieval display option for ISDN display stations enhances the LWC feature by providing the user with the ability to display the LWC messages at the station.

The LWC message includes the extension of the calling station user, number of LWC messages (n) left by the calling station user, and the date and time (12-hour clock) of the last LWC message left by the calling station user. If a data base containing DN/name correlations is available, the message includes the calling station user's name.

To activate the LWC feature without initiating a call, an analog station user goes off-hook to receive dial tone and dials the LWC access code. The user receives recall dial tone to prompt the user for a DN. The user then dials the DN of the desired destination station. The station user receives confirmation tone followed by a dial tone when the LWC request has been successfully sent to the AP.

An ISDN station user requests the feature by taking the appropriate actions to receive dial tone and dialing the LWC access code, or pressing the LWC feature button. The user receives recall dial tone to prompt the user for the destination DN. The user then dials the desired destination DN. In-band confirmation tone and audible/visual confirmation indication provided by the station set is received by the user when the LWC request has been successfully sent to the AP.

The LWC feature can also be activated after initiating a call to another station user. The most common cases are as follows:

a. The calling station user receives a busy signal (ISDN stations only) or ringing.

b. The call is answered by the originally dialed station user, another station user or an MSC attendant.

To activate LWC from an analog station in either of the previous situations, the user switchhook flashes, which places the call on soft hold, then dials the LWC access code. The user receives a confirmation tone when the switch has successfully sent the LWC request to the AP.

An ISDN station user activates the feature in situations (a) and (b) by pressing the LWC feature button without interrupting the current voice connection. The user receives only visual confirmation when the switch has successfully sent the LWC request to the AP. The user does not receive inband confirmation.

The user answering the call in the second situation (b) can leave a message from the answering user to the originally dialed user by activating the LWC feature as in the previous paragraphs. If the user answers a redirected call originated from outside the business group, a message is left from the answering user to the originally dialed user.

To deactivate the LWC feature, the user does the following:

- Dials the access code for cancel Leave Word Calling
- Receives new dial tone
- Dials # to cancel *message on.*

13.4.15.5 Interactions

The following interactions apply for this feature:

- *Automatic Callback-Calling (ACBC).*

  The LWC feature can be activated after an ACBC ringback is answered and the resulting termination goes answered or unanswered.

- *AUTO Automatic Route Selection (ARS).*

  While retrieving messages during an MRD or EDS session, a user can request that a canned message be left for the party associated with the displayed message (or message segment) by taking the required actions to receive dial tone and dialing the LWC access code or pressing the LWC function button to initiate LWC. After initiating LWC and receiving second dial tone, a user should depress the Auto

Call function button. The user hears inband tone (confirmation tone) denoting that a message was sent to the party associated with the displayed message.

Note: This works only with an Auto ARS feature on the directory number.

- *Call Forwarding.*

  The LWC feature may be invoked after a call is forwarded. The original dialed party receives the LWC message.

- *Call Pickup.*

  The LWC feature may be invoked after a call is picked up. The original dialed party receives the LWC message.

- *Conference Call.*

  The LWC feature cannot be activated in a conference call. Any LWC requests are rejected during a conference call. The LWC requests can be invoked after a three-way conference drops back to a two-way call.

- *Multiway Calling.*

  The LWC feature cannot be activated in a multiway call. Any LWC requests are rejected during a multiway call. The LWC requests can be invoked after a three-way call drops back to a two-way call. The LWC feature may be activated after a call is transferred.

- *99-5E-3730, Number Portability - NPA-NXX Growth.*

  For the calling DN, the LWC feature determines whether it sends an NANP DN without the NPA or the full NANP DN by checking the attribute ALW DUP NXX on RC/V view 24.7. The default is the NANP DN without the NPA. This feature also applies to Cancel Leave Word Calling (CLWC).

- *Shared DN.*

  The LWC-IO feature can only be assigned to a primary DN. The LWC-O feature can be assigned to either a primary DN or a secondary-only DN.

13.4.16 Message Data Base

13.4.16.1 Description

[Custom]

A message data base is available to the message service attendant on the AP. This data base stores customer

organizational data, client status data, and standard "canned" messages. Messages received by the message service attendant for the client area also stored in the data base for later retrieval. Client status information is provided at the client's discretion. The owner of the data base is responsible for administration of the message data base.

13.4.16.2 Cross References

The following cross references apply to the Message Data Base feature:

- Feature number: 99-5E-0391
- NSEP number: ISMESRT.

13.4.16.3 Availability

The Message Data Base feature for MSS is available with the 5E4 and subsequent software releases for Custom ISDN.

13.4.17 Message Retrieval Display

13.4.17.1 Description

[Custom]

The MRD feature provides the ISDN station user with the capability to directly retrieve the message service messages or LWC messages independent of an existing voice and/or data connection. The minimum capability requires a 40-character alphanumeric display unit and three feature buttons assigned to MRD functions. The unit must be able to display information contained in signaling messages sent over the D-channel.

13.4.17.2 Cross References

The following cross references apply to the Message Retrieval Display feature:

- Feature number: 99-5E-0396
- NSEP number: ISMESRT.

13.4.17.3 Availability

The Message Retrieval Display feature for MSS is available with the 5E4 and subsequent software releases for Custom ISDN.

13.4.17.4 Feature Operation

The station user requests or terminates a retrieval display session by pressing the **Start/End** MRD feature button. When a retrieval session is requested, the user receives a prompt on the display for the DN associated with the stored messages (for example, "WHOSE MESSAGES? READY FOR PHONE NUMBERS"). The user then dials the DN. This allows the user to retrieve messages from another user's ISDN display station set within the same business group. If the user is requesting the session from their own station set, the user specifies their directory number (for example, the DN associated with the user's station set) by

dialing an end-of-dialing character (#).

If the user is retrieving messages from their own station and fails to enter a DN or the end-of-dialing character, then critical interdigit timing may be used to terminate entry of the retrieval DN. This will be interpreted as though the user is retrieving messages for the DN associated with the particular station set in use for this MRD session. If the user has a null password and does not enter the end-of-dialing character, then critical interdigit timing may be used to terminate collection of the password. Also, if the user fails to enter a password when one is required, critical interdigit timing will expire and the password verification will fail.

After a DN is specified, if the user is a member of a business group that has the password option, a message is displayed prompting the user for a password (for example, "READY FOR PASSWORD"). The user then dials the password, which is not echoed back on the display by the station set, followed by an end-of-dialing character to indicate the end of the password. If the user has a null password, the user just dials the end-of-dialing character. The user does not receive the prompt for a password if the associated business group does not have the password option.

After the request is made, the user receives a confirmation message on the display (for example, "RETRIEVAL IN PROGRESS"). The request for a retrieval session along with the dialed information is sent to the AP. The AP determines whether or not the directory number has message service (that is, a message file). If so, the AP will then compare the received password against the password associated with the DN. If the DN and/or password is rejected, the user receives a message on the display informing the user of the error and requesting the user to terminate the session and try again (for example, "INCORRECT PASSWORD - SESSION ENDED"). If a retrieval session cannot be established, a message is displayed to inform the user of the problem (for example, MESSAGES UNAVAILABLE NOW - SESSION ENDED).

Upon a successful request (including a matched password if the user has the password option), the station user's name (if DN/name correlations are available on the AP), extension, and the number of messages to be retrieved are displayed (for example, "9 MESSAGES FOR J. DOE 5177," "NO MESSAGES FOR J. DOE 5177"). The second feature button, labeled **Next MES/QRY**, is used to request for the first and subsequent messages (last-in, first-out). The third feature button, labeled **Deliver**, is used to mark the displayed message as delivered which will prevent the message from being displayed again. A message is displayed confirming that the message has been delivered with the name and extension of the station user that left the message (for example, "DELIVERED J. DOE 5177"). When the **Next MES/QRY** feature butt

1 is pressed after the last message has been displayed, a message is given on the display, such as "END OF FILE, PUSH NEXT TO REPEAT". Pressing the **Next MES/QRY** feature button again starts the display sequence over again (only messages that have not been marked delivered are displayed).

To terminate a display session, the station user presses the **Start/End** feature button. A message is then displayed confirming the end of the display session with the number of undelivered messages left in the message file. The station user's MWI is automatically deactivated if all the current messages have been marked delivered.

During an established MRD function, if the user does not press any of the MRD feature buttons within an inactivity time-out interval, the switch terminates the session and the user receives an error message (for example, "TIMEOUT - SESSION ENDED").

For messages longer than 40 characters, the AP may divide the message into segments. Each segment may be up to 40 characters in length. The first segment displayed contains the name and extension of the station user that left the message along with the date, time, and number of segments to follow. The user presses the fourth feature button labeled **Next SEG/Name** to display the next segment. Each displayed segment indicates whether it is the last segment or that there are more segments to come. If the text exceeds 35 characters, the message is displayed using additional segments with the word "more" at the far right of the display window to indicate another segment. When the message is complete, the word "end" is displayed. If the **Delivered** feature button is pressed prior to the display of the last segment, the message is marked delivered (as stated previously) and pressing the **Next SEG/Name** feature button displays the next new message (that is, not the next undisplayed segment of the old message). Pressing **Next MES/QRY** enables the user to move to the next new message. Once the last message is displayed, "END OF MESSAGES" is displayed. Pressing the MRD or **Start/End** feature button will exit the user from this session.

13.4.17.5 Interactions

The following interactions apply for this feature:

- *Common Password.*

  See 235-190-103, *Business and Residence Feature Descriptions*, for interactions with the Common Password feature.

- *EDS Auto Call.*

During a message retrieval session, a user can invoke Auto Call to the party who left the message.

- *99-5E-3730, Number Portability - NPA-NXX Growth.*

  For the calling DN, the MRD feature can collect NANP DNs with or without the NPA. This is based on the value selected for ALW DUP NXX on RC/V view 24.7. The default is the NANP DN without the NPA. The value of this attribute is also used by the MRD to determine whether it sends the API a retrieval NANP DN with or without the NPA.

- *Shared DN.*

  The MRD feature can only be assigned to a primary DN.

13.4.18 Print Messages on Demand

13.4.18.1 Description

[Custom]

The POD feature is an option of the message service that allows an analog or ISDN message service client to request a printout of their messages without assistance from a message service attendant. This feature assumes the existence of a data base on the AP which contains each station user's DN, name, location, organization, and printer number (optional).

13.4.18.2 Cross References

The following cross references apply to the Print Messages on Demand feature:

- Feature number: 99-5E-0398

- NSEP number: ISMESRT.

13.4.18.3 Availability

The Print Messages on Demand feature for MSS is available with the 5E4 and subsequent software releases for Custom ISDN.

13.4.18.4 Feature Operation

A station user requests a printout of current messages including directory information (that is, name and location of the requesting user) from an analog station by going off-hook and dialing the POD access code. The user receives recall dial tone to prompt the user for a DN. The user then dials the DN or an end-of-dialing character. If the business group subscribed to the password option, a second recall dial tone sequence or dial-through announcement prompts the user for a password. The user then dials the password followed by an end-of-dialing character (#). If the user has a null password, the user just dials the end-of-dialing character. A user without the password option requests the feature from their own analog station by dialing the POD access code followed by an end-of-dialing

character. Confirmation tone, followed by a dial tone, is returned to the user when the POD request has been successfully sent to the AP.

A station user requests the feature from an ISDN station set by taking the appropriate actions to receive dial tone and dialing the POD access code or pressing the POD feature button. The user receives recall dial tone to prompt the user for a DN. The user then dials the DN or an end-of-dialing character (if the request is from their own ISDN station). If the user has the password option, a second recall dial tone sequence or dial-through announcement prompts the user for a password. The user then dials the password followed by an end-of-dialing character or just the end-of-dialing character (if the user has a null password). Inband confirmation tone and audible/visual confirmation indication provided by the station set is received by the user when the POD request has been successfully sent to the AP.

An ISDN station user with a feature button assignment for POD and who does not have the password option is able to request POD from the station set without interrupting a voice and/or data connection. The user is also able to request POD while the set is in the on-hook state. To request POD, the user presses the feature button and receives audible/visual confirmation indication provided by the set when the POD request has been successfully sent to the AP. The user does not receive inband confirmation.

After a successful request, if the POD request was made at a retrieval station, the messages associated with the specified directory number are printed at the retrieval station. Otherwise, the messages are printed at the printer specified in the directory for the specified DN. Each MSS client must be assigned a printer in the AP directory data base record or the messages will not be printed when the user activates the Print on Demand feature. When the messages have been marked delivered and are scheduled to be printed, the station user's MWI is automatically deactivated.

13.4.18.5 Interactions

When used with the Shared DN feature, the POD feature can only be assigned to a primary DN.

With the introduction of the 99-5E-3730, Number Portability - NPA-NXX Growth feature for 5E12 and later, the POD can collect NANP DNs with or without the NPA. This is based on the value selected for the attribute ALW DUP NXX on RC/V view 24.7. The default is the NANP DN without the NPA.

For both the calling DN and the retrieval DN, the POD feature also checks the value of this attribute to determine whether it

sends an NANP DN with or without the NPA to the API.

13.4.19 MSS for Secondary-Only Directory Numbers Enhancement

13.4.19.1 Description

[Custom]

The MSS for Secondary-Only DNs Enhancement allows an ISDN secondary-only DN to forward to MSS. This feature is assignable to primary DNs *and* secondary-only DNs.

Note: A Message Waiting Indicator is not assignable to secondary-only DNs (not changed).

13.4.19.2 Cross References

The following cross references apply to the MSS for Secondary-Only DNs Enhancement feature:

- Feature number: Not available
- NSEP number: Not available.

13.4.19.3 Availability

This feature was issued at general availability with the 5E6 and later software releases for Custom ISDN. The feature is also available for the 5E4 and 5E5 software releases via software updates 90-0027 and 90-0060, respectively.

Note: Consult your Lucent Technologies Account Executive for availability.

13.4.19.4 Feature Environment

This feature is provided on a per-office basis.

13.4.19.5 Feature Operation

This enhancement requires that an MSS feature be assigned to the secondary-only directory number which has call forwarding to the messaging system for coverage. The MSS feature that is assigned to the secondary-only directory number may only have the attendant coverage and the leave word calling outgoing capabilities. In addition, call forwarding must also be assigned to this secondary-only directory number.

13.4.19.6 User Operation

This feature allows a user with a secondary-only DN to forward incoming calls to the message service system.

13.4.19.7 Engineering

Not applicable.

13.4.19.8 Interactions

None.

13.4.19.9 Limitations

A Message Waiting Indicator is not assignable to a secondary-only DN.

13.4.19.10 Feature Implementation

The following RC views are used to assign this feature:

- On RC View 23.20 (PRIMARY OR SECONDARY-ONLY KEY SYSTEM), insert a secondary-only DN to share a call appearance with a digital subscriber.

- On RC View 12.37 (MESSAGE SERVICE SYSTEM FEATURE DEFINITION), define a feature with the attendant coverage parameter set to **Y**, Leave Word Calling set to **OUT**, and no MWIs. Also, assign the MSS group that is a client of the Message Service.

- On RC View 1.11 (BRCS FEATURE ASSIGNMENT [LINE ASSIGNMENT]), assign the newly defined feature to the secondary-only DN.

  Note: Assign a Call Forwarding feature to forward incoming calls to a message service.

- On RC View 4.37 (MESSAGE SERVICE SYSTEM GROUP PARAMETER), verify that the MSS group to be assigned to the MSS feature is a client of the Message Service that the secondary-only DN will be forwarding to (that is, the Multiline Hunt Group).

13.4.19.11 Administration

Not applicable.

13.4.20 Message Service System Call Forwarding Interaction

13.4.20.1 Description

[Custom]

The Message Service System Call Forwarding Interaction (MSSCFI) feature allows all lines with a Call Forwarding feature assigned to forward incoming calls to message service centers (MSCs) without having to be provisioned for the Message Service System (MSS) feature by the 5ESS(R)-2000 switch owner. The MSSCFI feature provides an option for MSS clients to change message service providers and have their Message Waiting Indicator (MWI) controlled by the new provider. These clients must be provisioned with the public business customer identification (BCID). Without this option, the switch owner must provision the client for MWI whenever the client's message service provider changes. Clients who do not require this option must be provisioned with the private BCID. If the private BCID client changes message service providers, the switch owner must reprovision the client's MWI for the new message service provider.

13.4.20.2 Cross References

The following cross references apply to the Message Service

System Call Forwarding Interaction feature:

- Feature number: 99-5E-1272
- NSEP number: Not available.

13.4.20.3 Background

The MSSCFI feature was developed to satisfy a 1A ESS(TM) switch to 5ESS(R)-2000 switch transparency inconsistency.

The MSSCFI feature allows MSS clients the option to change message service providers without having their MWI reprovisioned by the switch owner. This allows any message service provider serving the public business customer identification (BCID) to service any MSS client provisioned with a public BCID without the switch owner reprovisioning the client for MWI. Prior to the implementation of the MSSCFI feature, MSS clients had to have their MWI reprovisioned each time a change in message service providers was made.

Business and residential customers who require voice mail services, but who do not want MWI, can secure voice mail service from a message service provider and use a Call Forwarding feature to forward incoming calls to the voice mail. These clients must call the message service provider to retrieve their messages.

13.4.20.4 Availability

The MSSCFI feature is available with the 5E6 software release for Custom ISDN. However, this feature does not roll forward to the 5E7 software release. The MSSCFI feature is provisioned in the 5E6 software release such that when the office retrofits to the 5E7 software release, the Interswitch Voice Mail feature is used to provide the MSSCFI functionality.

Note: Consult your Lucent Technologies Account Executive for availability.

13.4.20.5 Feature Environment

The MSSCFI feature is optional on a per-office basis and is not active until it has been enabled. The enabling is done locally, and does not require assistance from Lucent Technologies. The option number for this feature is 539.

13.4.20.6 Feature Operation

The MSSCFI feature flow diagram is shown in Figure 110. When the switch determines a call is terminating to the MSC, the feature option bit is checked. If the feature is active, the check for attendant coverage and valid BCID is ignored and the call is allowed to terminate. The switch simultaneously formats a call information message and sends it to the AP or voice mail (VM) system via the data link.

The MWI control flow diagram is shown in Figure 111. If the client station has an MWI, the switch acts on an MWI activation/deactivation message from the AP or VM system if one of the following conditions exists:

- If the MSSCFI feature is active, and the client has the following:

  -- Only one MSS feature

  -- A common BCID matching the common BCID in the received message.

- If the MSSCFI feature is active, and the client has the following:

  -- More than one MSS feature

  -- A unique BCID matching the BCID in the received message

  -- An APID matching the APID in the received message.

If the MSSCFI feature is not active, the existing 5E6 software release feature is available.

13.4.20.7 User Operation

With the MSSCFI feature enabled, any 5ESS(R)-2000 switch line having an appropriate Call Forwarding feature [Call Forwarding Variable (CFV), Call Forwarding Busy Line (CFBL), or Call Forwarding Don't Answer (CFDA)] can be used to activate call forwarding to the MSC and redirect incoming calls to the MSC. The 5ESS(R)-2000 switch ignores checks for attendant coverage and valid business customer identification (BCID).

The MSSCFI feature is activated and deactivated through recent change. See "Feature Implementation," Section 13.4.20.12.

13.4.20.8 Engineering

13.4.20.8.1 Hardware Resources

A data link must exist between the switch and the applications processor (AP) or AUDIX(R) telecommunications software mail system to enable transmission of messages in both directions.

13.4.20.8.2 Software Resources

Not applicable.

13.4.20.9 Interactions

The MSSCFI feature interacts with the Electronic Directory Service (EDS) feature. If the client has only one MSS feature and the EDS feature, the BCID associated with each group must be the same. Hence, the common BCID must also be assigned to the

EDS group.

13.4.20.10 Incompatibilities

Not applicable.

13.4.20.11 Dependencies

The following dependencies apply for this feature:

- *Message Waiting Indicator Provisioning with Public BCID.*

  Each office must select a unique BCID as the public BCID and must locate all lines that will use the public BCID. It is recommended that the preconstructed feature /MSAAM be assigned to each line. The /MSAAM preconstructed feature must be associated with an MSS group that has the public BCID defined. The public BCID must also be assigned to the message service center (MSC) multiline hunt group that will provide service to the lines using the public BCID. A constructed Message Service feature may be used in lieu of /MSAAM. However, the MSS group associated with the constructed feature must have the public BCID defined.

- *Message Waiting Indicator Provisioning with Private BCID.*

  Each office must select a set of BCIDs as private BCIDs and must locate all lines that will use the private BCID. With the exception of the /MSAAM preconstructed feature, any Message Service feature may be assigned to the line. Multiple Message Service features may be assigned to the lines. The Message Service feature must be associated with an MSS group that has the private BCID defined. The private BCID must also be assigned to the MSC multiline hunt group that will provide service to lines using the private BCID. Multiple Message Service features may be assigned to lines using the private BCID. If a constructed feature is assigned to the line, the MSS group associated with the constructed feature must have the private BCID defined.

  Note: The same Message Service feature must not be used to provision MWI for a private BCID and a public BCID, since only one public BCID can exist in an office. The public BCID may vary from office to office. If the message service can serve multiple BCIDs (APs), then the system can serve clients using public and private BCIDs. If a voice mail system (VMS) is used, then one VMS is required to serve the public BCID and another VMS is required to serve the private BCID, since a VMS can service only one BCID.

Users who do not require MWI, need only a Call Forwarding feature. These users may be served by a VMS for either the public or private BCID.

The MSSCFI feature is designed for intra-office operation.

13.4.20.12 Feature Implementation

13.4.20.12.1 Office Data Administration Provisioning

Form 5713 (Secured Feature System Assignment) is used to enable/disable this optional feature. The corresponding view is Recent Change (RC) View 8.22.

13.4.20.12.2 Recent Change Provisioning

Recent Change View 8.22 (Secured Feature Upgrade) is used to enable/disable this optional feature.

The procedure to enable this optional feature for an office is as follows:

1. Select RC View 8.22.
2. Enter **u** for the update mode.
3. In the FEATURE ID field, enter **539**.
4. In the MODULE field, enter **OFC** (office).
5. The PASSWD field must be blank.
6. In the ACTIVE field, enter **Y** (yes).
7. Leave all remaining fields blank.
8. Enter **u** to update the data.

13.4.20.12.3 Customer Premises Equipment

No additional customer premises equipment (CPE) is required for the MSSCFI feature.

13.4.20.13 Administration

EXHIBITS

DAN 2, 3, 4

CONFIDENTIAL

33

ORIGINAL

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF

GREGORY R. FOLLENSBEE

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.
AND TCG SOUTH FLORIDA, INC.

DOCKET NO. 000731-TP

NOVEMBER 16, 2000

SUPRA EXHIBIT

DAN-5

00-1315

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF GREGORY R. FOLLENSBEE

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.

AND TCG SOUTH FLORIDA, INC.

DOCKET NO. 000731-TP

NOVEMBER 16, 2000

Q. PLEASE STATE YOUR NAME, ADDRESS AND EMPLOYMENT.

A. My name is Gregory R. Follensbee, and I am employed by AT&T Corp. ("AT&T") as a Director in its Law & Government Affairs organization, providing support for AT&T's regulatory and legislative advocacy in the nine states that make up AT&T's Southern Region. My office is at 1200 Peachtree Street, Suite 8100, Atlanta, Georgia 30309.

Q. PLEASE DESCRIBE YOUR BACKGROUND AND PROFESSIONAL EXPERIENCE AS THEY RELATE TO ISSUES IN THIS PROCEEDING.

A. I graduated from Florida State University in 1972 with a Bachelors of Science degree in accounting. I began work in August of that year as a field auditor with the Florida Public Service Commission. In 1976, I was promoted to Manager over the accounting group devoted to regulating electric and gas public utilities. In 1978, I was promoted to Manager over the

accounting for all public utilities regulated in Florida. In 1979, I was promoted to Director of the Accounting Department, which expanded my responsibilities to include all accounting matters for all public utilities regulated in Florida, which included auditing, cost of capital, and taxes. In 1980, the department was expanded to include Management Audits as well.

In October 1983, I left the Florida Commission and began work with AT&T. I was a District Manager in its State Governmental Affairs staff organization, supporting AT&T's advocacy of regulatory issues for its Southern Region. In 1990, I became the Assistant Vice President for State Government Affairs for the State of South Carolina. In 1995, I returned to Atlanta and was promoted to Division Manager, responsible for AT&T's regulatory and legislative advocacy in the nine states in AT&T's Southern Region.

Q. HAVE YOU TESTIFIED IN OTHER REGULATORY PROCEEDINGS IN THE PAST?

A. Yes. I have testified in Florida, Georgia, North Carolina and South Carolina.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I am testifying on behalf of AT&T Communications of the Southern States, Inc. and TCG South Florida (I will refer to these two companies as AT&T) on the following issues:

- the appropriate terms and conditions that should be applied when AT&T issues orders to migrate services to either network elements or combinations of network elements (Issue 6);
- how the FCC's decision on the availability of local circuit switching should be applied to serving customers with four or more lines through combinations of network elements (Issue 11);
- why voice calls over Internet Protocol should not be treated as long distance and why switched access charges should not apply (Issue 16);
- why the alternative dispute resolution process should be an option for resolving disputes arising under AT&T's interconnection agreement with BellSouth (Issue 27); and,
- the terms and conditions that should apply when AT&T purchases a loop/port combination and wishes to share the spectrum on a local loop for voice and data purchases (Issue 33).

Q. WERE YOU PART OF THE TEAM FROM AT&T NEGOTIATING WITH BELLSOUTH ON THE INTERCONNECTION AGREEMENT THAT IS THE SUBJECT OF THIS PETITION?

A. Yes.

Q. WHO ELSE WAS PART OF THE AT&T TEAM?

A. The AT&T negotiating team consisted of two commercial attorneys, a lead negotiator, and two support personnel. From time to time, both AT&T and BellSouth would include subject matter experts in the negotiations to help reach resolution on a particular issue.

Q. WHAT WERE YOUR RESPONSIBILITIES DURING THE NEGOTIATIONS?

A. Because I was involved in the negotiations of the existing interconnection agreement arbitrated by this Commission in 1996, I provided information on what was discussed and agreed to or arbitrated previously in 1996. In addition, I provided input on state and Federal Communications Commission (FCC) regulatory issues that impacted the negotiations.

Q. WHO DID YOU NEGOTIATE WITH AT BELLSOUTH?

A. BellSouth's team consisted of two commercial attorneys, a lead negotiator, one support person and one person from its regulatory group.

Q. WAS AT&T ABLE TO REACH AN AGREEMENT WITH BELLSOUTH ON ALL ISSUES?

A. No. While the vast majority of issues were resolved through negotiations, as can be seen from the agreement attached to AT&T's petition, several issues are still unresolved, and must be arbitrated by this Commission. The issues

currently before this Commission for arbitration are ones where the parties "disagree" on the resolution.

Q. WHAT AT&T WITNESSES WILL BE ADDRESSING THESE REMAINING ISSUES?

A. The witnesses supporting AT&T's arbitration petition are as follows:

- Greg Follensbee
- Joe Gillan
- Jay Bradbury
- Ron Mills
- Ron Lindemann
- Dave Talbott

ISSUE 6: UNDER WHAT RATES, TERMS, AND CONDITIONS MAY AT&T PURCHASE NETWORK ELEMENTS OR COMBINATIONS TO REPLACE SERVICES CURRENTLY PURCHASED FROM BELLSOUTH TARIFFS?

Q. EXPLAIN THE ISSUE PERTAINING TO THE APPROPRIATE TERMS AND CONDITIONS THAT SHOULD BE APPLIED WHEN AT&T ISSUES ORDERS TO MOVE TARIFFED SERVICES PURCHASED FROM BELLSOUTH TO EITHER NETWORK ELEMENTS OR COMBINATIONS OF NETWORK ELEMENTS?

A. There are two remaining areas of disagreement pertaining to AT&T converting tariffed services to network elements. Since the FCC issued its Supplemental Order Clarification in CC Docket 96-98 on June 2, 2000 ("Supplemental Order Clarification"), most of the disagreement between the parties has been resolved and the parties have reached agreement on the process for submitting requests for conversions. Thus, the two remaining areas that this Commission needs to address are as follows:

1. The appropriate rate BellSouth should charge AT&T for converting services to UNEs, which has already been addressed in Docket No. 990649-U; and
2. The application of termination liability charges to services converted to either unbundled network elements or combination of unbundled network elements, which I will address below.

Q. WHY IS THERE AN ISSUE ON CONVERTING TARIFFED SERVICES TO NETWORK ELEMENTS?

A. In the past AT&T purchased tariffed services from BellSouth to provide local service to customers in Florida. As a result of the Telecommunications Act of 1996 and several FCC orders implementing that Act, AT&T is able to convert these services to network elements, including combinations of network elements. The FCC issued an order outlining certain criteria AT&T would have to meet in order to obtain these conversions from Bellsouth. The issue that BellSouth has raised is whether BellSouth should be allowed to

charge AT&T any cancellation charges for converting these tariffed services to network elements.

Q. WHAT CANCELLATION CHARGES ARE INVOLVED?

A. While the exact charges that may apply are dependent upon the specific service purchased by AT&T from BellSouth's tariffs, generally cancellation charges are assessed whenever tariffed services are purchased under some term or volume plan, and the purchaser decides to cancel the service before the end of the term of the plan. In this case, the service is completely terminated and not replaced with another service.

Q. TO WHAT NETWORK ELEMENTS OR COMBINATIONS OF NETWORK ELEMENTS WOULD THE TARIFFED SERVICES BE CONVERTED?

A. Predominantly, AT&T is looking to convert special access services to either unbundled loops or loop/transport combinations (commonly known as Enhanced Extended Links or EELs) that begin at a customer's premise and terminate into AT&T collocation space in a BellSouth central office, where AT&T then terminates the trunk in one of its switches used to provide local service.

Q. WHAT IS AT&T PROPOSING?

A. AT&T is proposing that it should not be assessed any cancellation charges when requesting to convert services originally purchased from BellSouth's tariffs to network elements or combinations of network elements. AT&T originally purchased these tariffed services mainly because BellSouth was unwilling to provide combinations of network elements in lieu of special access. Rather than wait for the issue to be fully resolved either through regulatory proceedings or litigation, AT&T utilized the only option it had available. AT&T and its customers should not be penalized for BellSouth's refusal to provide combinations of network elements. Furthermore, the FCC did not state or even imply that ILECs were free to impose a penalty upon ALECs for such conversions. What BellSouth seeks to do contravenes the clear intent of the FCC. If this Commission approves BellSouth's proposal, then BellSouth ultimately ends up with what it wanted all along - ALECs would not be able to use network elements to serve customers who are currently served through special access service. The Commission should not allow ALECs to be penalized when converting the purchase of special access services to network elements.

Q. IS AT&T CANCELING SERVICE PURCHASED FROM BELLSOUTH?

A. No. AT&T is seeking to convert the existing tariffed services to network elements or combinations of network elements. The customers will still

receive the same service from AT&T and the service provided by BellSouth to AT&T will remain the same.

Q. WHAT IS AT&T ASKING THIS COMMISSION DO?

A. AT&T requests that this Commission order that no cancellation charges will be applied when AT&T requests to convert services purchased out of BellSouth's tariffs to network elements, including combinations of network elements.

ISSUE 11: SHOULD BELLSOUTH BE ALLOWED TO AGGREGATE LINES PROVIDED TO MULTIPLE LOCATIONS OF A SINGLE CUSTOMER TO RESTRICT AT&T'S ABILITY TO PURCHASE LOCAL CIRCUIT SWITCHING AT UNE RATES TO SERVE ANY OF THE LINES OF THAT CUSTOMER?

Q. DESCRIBE THE UNRESOLVED ISSUE PERTAINING TO USE OF LOCAL SWITCHING IN PROVIDING EXCHANGE AND EXCHANGE ACCESS SERVICE TO CUSTOMERS?

A. As a result of the Supreme Court's decision in AT&T Corp. v. Iowa Board of Utilities, 525 U.S. 366 (1999), the issue of network elements was remanded to the FCC with instructions to review its decision on what network elements must be provided by ILECs. As part of this remand, the FCC determined that ILECs need not provide alternative local exchange carriers (ALECs) with

local circuit switching capability where the ALEC intends to serve customers who have four or more voice grade (DS0) equivalents or lines and, (i) the affected local circuit switches are located in one of the top 50 Metropolitan Statistical Areas (MSAs) in density zone 1, and (ii) the incumbent LEC provides access to combinations of unbundled loops and transports throughout density zone 1, as defined as of January 1, 1999.

Q. WHAT IS A LOCAL CIRCUIT SWITCH?

A. A local circuit switch is the type of switch deployed by telecommunications carriers to provide dial tone to a customer so the customer can receive local service.

Q. WHAT IS A METROPOLITAN STATISTICAL AREA?

A. This is a geographic area within a state as defined by the United States Government Office of Management and Budget. MSAs are often used to administer federal programs. Presently, there are 258 MSAs in the United States. In Florida, the MSAs affected by the FCC rules are Ft. Lauderdale, Miami and Orlando.

Q. WHAT LIMITATION IS BELLSOUTH PROPOSING ON THE USE OF LOOP/SWITCH COMBINATIONS TO SERVE CUSTOMERS IN THE FLORIDA MSAS?

A. BellSouth is proposing the following limitation on the use of loop/switch combinations in the Florida MSAs:

- If a customer has multiple locations throughout the MSA, receives one bill from BellSouth for all lines, and the total number of lines from all locations is more than three, none of the lines at any location could be served using the loop/switch combination at cost-based rates.

Q. DOES AT&T AGREE WITH THIS RESTRICTION?

A. No. BellSouth's interpretation of the FCC's rule is unreasonable. Furthermore, BellSouth's proposed restriction impedes competition. Additionally, some customers may actually want to have some lines served by one carrier and some lines served by another. This option of choice of carriers allows the customer to take advantage of service offerings from various companies and protect their business/home telephone service from disruption if there is a problem with one company.

Q. IN THE FCC'S UNE REMAND ORDER, THE FCC DECIDED THAT AN ILEC COULD CEASE PROVIDING LOCAL CIRCUIT SWITCHING AT COST-BASED RATES IF THE ILEC PROVIDES ACCESS TO ENHANCED EXTENDED LINKS THROUGHOUT THE MSA. WHY ISN'T THE USE OF SUCH COMBINATIONS OF

NETWORK ELEMENTS PRACTICAL TO SERVE A CUSTOMER IN THIS SITUATION?

A. The use of an enhanced extended link makes sense if the customer has more than two lines at one location. In its Remand Order, the FCC used four lines as the economic cut-off between using individual lines and high capacity trunks such as a DS1. AT&T has requested that the FCC reconsider four as the appropriate cut-off, but for purposes of this arbitration AT&T is agreeing to the four line limitation. Clearly less than four lines is not the appropriate number of lines a customer would use make a decision as to whether to buy, for instance, flat rated business service versus PBX service.

Furthermore, BellSouth is proposing that even though no one customer physical location has more than three lines, if a customer receives one bill from BellSouth or AT&T that aggregates service across the MSA and the total number of lines on the bill from multiple locations exceeds three, then all lines could not be served by use of a loop/port combination at cost-based rates.

Q. WHAT IS AT&T ASKING THIS COMMISSION DO?

A. AT&T is asking that this Commission order that any local line limitation that applies to the use of local switching in the three specific MSAs in Florida apply to each physical location where AT&T orders local switching from

BellSouth, and not to a specific customer with multiple locations on the same bill.

ISSUE 16: WHAT IS THE APPROPRIATE TREATMENT OF OUTBOUND VOICE CALLS OVER "INTERNET PROTOCOL ("IP") TELEPHONY?

Q. DESCRIBE THE ISSUE THAT BELLSOUTH HAS RAISED CONCERNING INTERNET PROTOCOL TELEPHONY?

A. BellSouth proposed the following language to AT&T during negotiations to address this issue:

> The origination and end point of the call shall determine the jurisdiction of the call, regardless of transport protocol method. Unless expressly agreed to by the Parties in this Agreement, neither Party shall represent as Local Traffic any traffic for which access charges may be lawfully assessed. The Parties have been unable to agree as to whether "Voice-over Internet Protocol" transmissions ("VOIP") which cross LATA boundaries constitute Switched Access Traffic. Notwithstanding the foregoing, and without waiving any rights with respect to either Party's position as to the jurisdictional nature of VOIP, the Parties agree to abide by any effective and applicable FCC

rules and orders regarding the nature of such traffic and the compensation payable by the Parties for such traffic, if any. Until such time as there is an effective and applicable FCC Rule or Order, VOIP traffic which crosses LATA boundaries will be considered switched access traffic.

AT&T proposed that this language not be included in the interconnection agreement.

Q. WHY IS BELLSOUTH'S PROPOSAL INAPPROPRIATE FOR THE REGULATION OF INTERNET PROTOCOL TELEPHONY?

A. BellSouth's claim that Internet Protocol telephony or VOIP is simply "plain old telephone service" that should be subject to payment of switched access charges is a continuation of a monopoly trying to hold on to its monopoly service. IP telephony is in its infancy. There is no need for, and this Commission should not, stifle its innovation by imposing burdensome regulatory rules that in fact may not even work. The nature of Internet Protocol could make enforcement of traditional regulatory classification next to impossible. While BellSouth argues that there is no service distinction involved between Internet Protocol and circuit-switched networks, Internet Protocol technology blurs traditional distinctions between local and long distance service and between voice, fax, data, and video services, thereby making "one-size fits all regulation" a difficult proposition. The fundamental

design of Internet Protocol networks converts all forms of information into indistinguishable packets of digital bits. Packets are routed through networks based on a non-geographical, non-hierarchical addressing scheme that allows packets to follow several possible routes between network nodes. At any given node, it is impossible to determine the geographic origin of an incoming packet, or its destination.

Q. WHAT DOES VOICE OVER INTERNET PROTOCOL MEAN?

A. The FCC has described IP Telephony or VOIP as "services that enable real-time voice transmission using Internet protocols." The FCC has observed that the service can be provided through "gateways" that enable applications originating and/or terminating on the public switched telecommunications network. The gateways are computers that transform the circuit-switched voice signal into Internet Protocol packets and vice versa, and perform associated signaling, control and address translation functions. (Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Report to Congress, FCC 98-67, ¶ 84 (rel. April 10, 1998) ("Report to Congress").

The phrase "Voice over Internet Protocol" can encompass a wide variety of services. For instance, a voice call using Internet Protocol could be phone-to-phone, computer-to-phone, phone-to-computer, or computer-to-computer. In some cases it could be a voice call delivered to a World Wide Web address.

In other cases it could be a voice call delivered to a North American Numbering Plan number or to an Internet Protocol address not on the World Wide Web. Since all of these services make use of Internet Protocol technology in handling the voice call, under BellSouth's proposal, switched access charges would apply if the voice call crosses LATA boundaries.

Q. WHICH TYPE OF CALL IS BELLSOUTH ADDRESSING?

A. Although BellSouth has indicated in testimony in other states that it is only addressing phone-to-phone Voice over Internet Protocol calls, its proposed language makes no such delineation.

Q. DOES AT&T AGREE WITH BELLSOUTH THAT SWITCHED ACCESS CHARGES SHOULD APPLY AT LEAST TO PHONE-TO-PHONE INTERNET PROTOCOL TELEPHONY?

A. No. AT&T's position is that Internet Protocol telephony, including phone-to-phone Internet Protocol telephony, should not be subject to switched access charges.

Q. HAS THE FCC EXPRESSLY DECLINED TO CLASSIFY PHONE-TO-PHONE INTERNET PROTOCOL TELEPHONY AS A TELECOMMUNICATIONS SERVICE, AND AS A RESULT EXEMPTED SUCH CALLS FROM SWITCHED ACCESS CHARGES?

A. Yes. On several occasions over the last two years, the FCC has taken the position that phone-to-phone Internet Protocol telephony voice calls are not traditional telecommunications services and should not be treated as such. In its Report to Congress issued April 10, 1998, the FCC declined to classify phone-to-phone IP telephony as a telecommunications service. Report to Congress, ¶ 90. In April 1999, the FCC declined to act on US WEST's petition asking the FCC to declare phone-to-phone Internet Protocol telephony a telecommunications service.

Q. HAS THE FCC ISSUED ANY POLICY STATEMENTS ABOUT THE TREATMENT OF INTERNET PROTOCOL TELEPHONY?

A. Yes. The Chairman of the FCC has stated that he "does not want to impose 'legacy' telephone regulations on any part of the Internet, including Internet telephony." He further stated:

> [I]t's important to recognize that legacy regulation is not necessarily appropriate to emerging network technologies, so when people start asking 'when are you going to regulate IP telephony,' my answer is always the same – never.[1]

[1] *Kennard Pledges No Regulation for Internet Telephony*, WARREN'S WASHINGTON INTERNET DAILY, Vol. 1, No. 3, May 25, 2000, at 1

The Chairman reiterated this position in a speech delivered on September 12, 2000. FCC Chairman Kennard urged regulators to decline imposing existing regulatory schemes on new technologies:

> [D]uring this transition, the answer is not to saddle nascent technology with the increasingly obsolete legacy regulations of he past. Their architectures fundamentally differ, and so should their rules. In short, one-size regulation does not fit all. It just doesn't make sense to apply hundred-year old regulations meant for copper wires and giant switching stations to their IP networks of today. And I oppose any plan to levy any new fees or taxes on IP telephony.[2]

Chairman Kennard's statements not only support the conclusion that the FCC has not found IP telephony to be the same as switched access traffic, but they further indicate that the FCC believes there is good reason to reject labeling this technological development by reference to older categories of service. Accordingly, although Internet Protocol telephony provides voice calling capability, BellSouth's argument that "if it looks like a duck, it must be a duck" and similar comparisons should not be accepted as justification for classifying new services as telecommunications services subject to applicable regulation.

Q. WHAT DOES AT&T PROPOSE THIS COMMISSION DO?

A. AT&T recommends that the Commission find that Internet Protocol telephony is not subject to switched access charges, and that BellSouth's proposed language be rejected.

ISSUE 27: SHOULD THE COMMISSION OR A THIRD PARTY COMMERCIAL ARBITRATOR RESOLVE DISPUTES UNDER THE INTERCONNECTION AGREEMENT?

Q. EXPLAIN THE ISSUE CONCERNING ALTERNATIVE DISPUTE RESOLUTION?

A. BellSouth proposes to eliminate the ability for either party to make use of a third party arbitrator in order to settle disputes arising from interpreting or implementing the new interconnection agreement.

Q. WHAT IS AT&T'S PROPOSAL?

A. AT&T had originally proposed the use of third party arbitrators as the preferred means for dispute resolution. Recently AT&T proposed language to BellSouth that would allow the dispute to go to the Commission if both parties agree and also request the Commission to hear the dispute on an

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[2] Remarks by FCC Chairman Kennard before the Voice Over Net Conference, Atlanta,

expedited schedule. Alternatively, AT&T's language proposes that the dispute can go to the alternative dispute resolution process if both parties agree. If there is not agreement among the parties, then the aggrieved party can choose the method of resolution. BellSouth has indicated, however, that AT&T's proposed language is still unacceptable, and still prefers to have this Commission resolve all disputes arising from a disagreement on what the interconnection requires. AT&T's proposed language states, in part:

> Upon agreement of both parties, disputes arising out of this Agreement will be submitted to the Commission and both parties will request the Commission to resolve the dispute on an expedited schedule. An expedited scheduled request would require the Commission to hear the Complaint within 60 days of filing. In the alternative and upon the agreement of both parties, disputes arising under this contract may be resolved through a dispute resolution process as outlined below. If there is no agreement between the parties regarding an expedited schedule for disputes submitted to the Commission or for the dispute to be resolved through the dispute resolution process, then the aggrieved party may choose the method of resolution.

Q WHAT IS THE PURPOSE OF AT&T'S PROPOSAL?

A. The purpose of AT&T's proposed language is the expeditious resolution of disputes. If a dispute can be resolved quicker through the alternative dispute resolution process, then AT&T would prefer the use of that method of resolution. On the other hand, if a dispute can be resolved more quickly through the Commission, then AT&T would want the Commission to hear the dispute. In fact, as I have similarly testified in the arbitration proceedings in both Georgia and North Carolina, if this Commission had rules established for hearing cases on a expedited basis, or a "rocket docket", then AT&T would agree to BellSouth's proposal to take all disputes to the Commission.

Q. WHY SHOULD THE COMMISSION ADOPT AT&T'S, AS OPPOSED TO BELLSOUTH'S PROPOSAL?

AT&T's proposal is a more reasonable and realistic approach to dispute resolution. It allows both parties a vote in whether the dispute goes to alternative dispute resolution or to the Commission. If one party votes for the dispute to go to the Commission and the other for alternative dispute resolution, then the aggrieved party can choose. AT&T's proposal also allows for the quickest resolution of the dispute. Often, service affecting disputes arise under these interconnection agreements that require immediate resolution. In such circumstances, it may not be feasible to take the dispute to the Commission if the Commission has a full calendar and would be unable to have a hearing for nine to twelve months. Accordingly, BellSouth's proposal that all disputes go to the Commission results in too

much uncertainty as to when a final decision would be reached on any given dispute.

Q. IS AT&T OPPOSED TO HAVING THE COMMISSION ADDRESS ALL COMPLAINTS ARISING FROM DISPUTES BETWEEN AT&T AND BELLSOUTH CONCERNING THE INTERCONNECTION AGREEMENT?

A. No. However, AT&T is aware that this Commission has already decided that it will not adopt a separate expedited process to resolve such disputes. In responding to an ALECs petition filed on December 10, 1998, requesting among other things the initiation of a rulemaking proceeding to establish expedited dispute resolution procedures, the Commission denied that request, stating:

> We agree with BellSouth that parties already have the opportunity to file petitions with requests for expedited treatment. Also, we agree that the expedited processes requested would deprive us of the discretion to exercise our jurisdiction as we see fit and would entitle ALECs to special treatment that other entities who come before us do not receive.[3]

[3] Order No. PSC-99-0769-FOF-TP issued April 21, 1999 in Docket No. 981834-TP.

As AT&T increases its entry into the local market, it is in the best interest of the parties and the Commission that the parties resolve commercial operational disputes as quickly as possible.

Q. WHAT DOES AT&T PROPOSE THIS COMMISSION DO?

A. AT&T requests that this Commission adopt AT&T's language allowing the parties an option of submitting disputes arising under the interconnection agreement to the Commission or to an alternative dispute resolution process.

ISSUE 33: SHOULD AT&T BE ALLOWED TO SHARE THE SPECTRUM ON A LOCAL LOOP FOR VOICE AND DATA WHEN AT&T PURCHASES A LOOP/PORT COMBINATION AND IF SO, UNDER WHAT RATES, TERMS, AND CONDITIONS?

Q. WHAT IS THE FUNDAMENTAL ISSUE THAT AT&T SEEKS TO RESOLVE IN THIS ARBITRATION WITH RESPECT TO ACCESS TO THE HIGH-FREQUENCY SPECTRUM PORTION OF THE LOOP?

A. AT&T seeks, through its proposed contract language on this issue, to gain reasonable and nondiscriminatory access to the "high frequency spectrum" portion of the local loops that AT&T leases from BellSouth to provide services to customers based upon the UNE-P and UNE-L architectures. Such access includes the ability for ALECs to purchase line splitters and avail

themselves of the same associated ordering, provisioning and maintenance functions that BellSouth provides to itself.

Q. WHY SHOULD BELLSOUTH'S POSITION ON THIS ISSUE BE A MATTER OF CONCERN TO THE COMMISSION?

A. UNE-P is a key mechanism for rapid and broad market entry for an ALEC seeking to compete with BellSouth for the mass market. It is clear from press reports and pronouncements by the ILECs themselves that advanced services based on DSL technology are a prime source of both potential "new" revenues and a means to retain current customers. For instance, BellSouth is currently advertising its FastAccess Internet Service, and comparing its price to existing Internet service handled through a second telephone line. These DSL technologies were developed to utilize the high frequency spectrum of a traditional local loop and permit advanced services, such as asymmetrical high-speed Internet access, to operate on the same line and at the same time as POTS. Advanced services are attractive to a crucial segment of the market for local telecommunications services. Residential customers would only need one line instead of two when purchasing this service. Because of their importance, the manner in which advanced services are deployed will also affect the potential for competition in markets for traditional telecommunications.

Thus, regardless of whether AT&T deploys its own xDSL assets (such as DSLAMs and packet switches) or makes the service available to customers via arrangements with third party contractors, it's ability to compete will be significantly constrained unless BellSouth is required to implement nondiscriminatory line splitting procedures that enable it to add, modify, or remove xDSL capabilities operating in the high frequency portion of the loop of a new or already operating UNE loop. It is also important that AT&T not be denied the opportunity to migrate existing BellSouth customers to a UNE-P architecture simply because BellSouth or its data affiliate provides advanced data service on the high frequency portion of the loop.

Q. PLEASE EXPLAIN WHAT YOU MEAN BY THE "HIGH FREQUENCY PORTION OF THE LOOP" AND DESCRIBE HOW IT IS USED IN THE PROVISION OF SERVICES TO CUSTOMERS.

A. Advanced services or xDSL technologies take advantage of the ability to split a loop into separate high frequency and low frequency components. The low-frequency portion is used to provide voice services, and the high frequency portion may be used for high-speed digital data services. The xDSL technologies are uniquely capable of supporting efforts to provide voice and high-speed Internet access efficiently to customers over the existing wireline loop infrastructure.

Q. PLEASE EXPLAIN THE TERMS USED TO DESCRIBE THE VARIOUS CIRCUMSTANCES IN WHICH MULTIPLE PROVIDERS PROVISION SERVICE ON A LOOP SIMULTANEOUSLY.

A. ILECs today are required, under the FCC's "line sharing" order, to provide access to the high-frequency portion of the local loop to a requesting ALEC. FCC order 99-255, issued in Docket Nos. 98-147 and 96-98, released December 9, 1999. BellSouth has chosen to interpret the FCC's order on line sharing to mean that only BellSouth can be the voice provider in these circumstances. Under this line sharing arrangement, BellSouth inserts a "splitter" on the line and a data ALEC may then use the high frequency spectrum to provide advanced services, leaving the voice service with ILEC. What AT&T in this arbitration seeks is what I refer to as "line splitting." From a technical viewpoint, "line sharing" and "line splitting" are identical, as I will discuss. Line splitting is distinct in one important respect, however. Under line splitting, BellSouth would not be the voice provider. Instead, AT&T would acquire the loop via the UNE-Platform (UNE-P) arrangement, and in turn would provide both the voice and data services, either by itself or in conjunction with another data carrier.

Q. HAS BELLSOUTH BEEN WILLING TO NEGOTIATE WITH AT&T TO PROVIDE ACCESS TO THE HIGH-FREQUENCY SPECTRUM OF A UNE LOOP WHEN THE LOOP IS PART OF A LOOP/SWITCHING COMBINATION?

A. No. BellSouth refuses to provide the capability to perform line splitting. AT&T has requested a line splitting capability that, as I have indicated, would allow AT&T to gain access to the high frequency spectrum portion of the loop for UNE-Loops purchased as a part of the UNE-Platform. BellSouth has been unwilling to negotiate any practical ability by AT&T to gain access to the high frequency portion of the loop under UNE-P. Where UNE-P is involved, BellSouth has indicated that it will deny access to a BellSouth splitter. Instead, BellSouth has proposed that AT&T be required to purchase collocation space in every central office, add its own line splitters, and order and combine loops and switch ports in an uncoordinated manner in order to gain access to the high frequency portion of the loop. In other words, the restrictions insisted upon by BellSouth in negotiations would, as a practical matter, preclude a provider from using the UNE-Platform to provide voice and advanced data services.

In taking this position BellSouth has chosen to ignore the FCC's First Report and Order in the Local Interconnection proceeding (FCC Order No. 96-325 issued Docket No. 98-96, released August 8, 1996), which provides that a ALEC is entitled to utilize all functions and capabilities of the UNE element – in this case, the entire high- and low-spectrum capability of the UNE Loop – which the ALEC has bought and paid for. An ALEC is also entitled to avail itself of any equipment that allows the UNE element to be used to its fullest capability – in this case, the splitter. Moreover, BellSouth is refusing

to provision UNE-P in the same manner that it makes loop capabilities available to data ALECs. This discriminates against one class of carriers (i.e., UNE-P ALECs) in favor of another (data ALECs). BellSouth's position would ensure that it remains the voice provider with the data ALEC's advanced data service offerings, while precluding AT&T from providing voice and advanced data services utilizing the UNE-P architecture. This is clearly anticompetitive.

Q. OPERATIONALLY, HOW WOULD BELLSOUTH PROVIDE LINE SPLITTING HIGH FREQUENCY PORTION OF THE LOOP ACCESS ON A UNE-P LOOP?

A. Operationally, BellSouth would provide ***line-splitting*** high frequency portion of the loop access on a UNE loop in much the same way it provides ***line sharing*** with data ALECs when BellSouth provides the underlying local voice service. BellSouth needs only to simply insert a high frequency portion of the loop line splitter to the UNE-P loop/port combination, and wire the high-frequency output of the splitter to the designated collocation point of interconnection (POI) for the data ALEC.

Q. WHY SHOULD BELLSOUTH BE REQUIRED TO DEPLOY THE LINE SPLITTERS FOR UNE-P ALECS?

A. First, as the FCC has made clear, when AT&T buys a loop, the ILECs are obligated to provide access to all of the functionalities and capabilities of that

loop, including associated electronics (such as the line splitter). In fact, it appears that BellSouth agrees with this, per the testimony of BellSouth witness Ms. Cox in North Carolina. (NCUC Docket No. P-100, SUB 133d) Second, having the ILECs furnish the line splitter as an integral part of the loop electronics is the only way to allow high frequency portion of the loop access to be delivered in an UNE-P architecture in a manner that is efficient, timely, and minimally disruptive to the retail customer. It is also important to note that the line splitter is NOT a separate UNE itself. It is a part of the associated loop electronics that allows access to the high frequency portion of the loop of the loop. Without the option of an ILEC-furnished line splitter, an ALEC provider must, in every end office, purchase collocation space, deploy its own splitter, and go through a non UNE-P provisioning process that is lengthy, cost prohibitive, and unduly disruptive to the customer. Thus, any failure by the ILECs to deploy line splitters effectively destroys the utility of UNE-P as a viable means of competing for residential customers who want advanced services.

Q. YOU MENTIONED PREVIOUSLY THAT BELLSOUTH'S PROPOSAL FOR ALLOWING ACCESS TO THE HIGH FREQUENCY PORTION OF THE LOOP WOULD IN FACT RENDER THE HIGH FREQUENCY PORTION OF THE LOOP UNAVAILABLE, AS A PRACTICAL MATTER. PLEASE EXPLAIN.

A. Because BellSouth refuses to provide line splitters to UNE-P ALECs like they do for other data ALECs, UNE-P providers cannot provide service without first obtaining collocation space and installing their own line splitters in every central office. BellSouth's method would require AT&T to incur intolerable delays and significantly greater costs to provide both voice and advanced services to its customers. Moreover, AT&T customers would be subject to an unnecessary "hot-cut like" process, because AT&T would have to coordinate the combining of the loop and port elements. The BellSouth process is inconsistent with the concept of UNE-P, whereby the ILEC provides all of the contiguous elements and where the ALEC is not required to install its own equipment to provide service.

Q. IN YOUR VIEW, IS BELLSOUTH USING ITS DOMINANT POSITION IN THE LOCAL MARKET TO GAIN A COMPETITIVE ADVANTAGE IN THE ADVANCED SERVICES MARKET?

A. Yes. Even as it continues to refuse to cooperate in enabling ALECs to add advanced service capabilities to the voice services they provide via UNE-P, BellSouth is racing ahead with its own advanced service deployment and marketing. BellSouth is rolling out advanced services to retail customers at breakneck speed.

Of course, BellSouth's remarkable progress in rolling out its advanced service offering would not have been possible if the company's retail

operation had encountered the same kinds of delays that competitors have faced in obtaining high frequency portion of the loop access. While BellSouth has every right to try to win customers for its bundled local voice and data services, it cannot, at the same time, foreclose competition by denying competitors nondiscriminatory access to xDSL loops or preventing them from adding xDSL to UNE-P lines.

Q. WHAT DOES AT&T RECOMMEND THE COMMISSION DO ON THIS ISSUE?

A. AT&T asks that the Commission find that Bellsouth must provide line splitting as requested by AT&T, to be used when AT&T purchases loop/port combinations from BellSouth.

Q. CAN YOU SUMMARIZE YOUR TESTIMONY?

A. Yes. AT&T requests this Commission to order the following:

- no cancellation charges will be applied when AT&T requests to convert services purchased out of BellSouth's tariffs to network elements, including combinations of network elements. (Issue 6);
- any local line limitation that applies to the use of local switching in the three specific MSAs in Florida apply to each physical location where AT&T orders local switching from BellSouth, and not to a specific customer with multiple locations on the same bill. (Issue 11);

- Internet Protocol telephony is not subject to switched access charges, and that BellSouth's proposed language be rejected. (Issue 16);
- the parties will be allowed the option of submitting disputes arising under the interconnection agreement to the Commission or to an alternative dispute resolution process. (Issue 27); and
- BellSouth must provide line splitting as requested by AT&T, to be used when AT&T purchases loop/port combinations from BellSouth. (Issue 33).

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

SUPRA EXHIBIT
DAN - 6
00-1305

July 11, 2001

O. A. Ramos
Supra Business Systems
2620 SW 27th Avenue
Miami, Florida 33133

RE: BellSouth Tariffed Digital Subscriber Line ("DSL") Service on Unbundled Network Element – Platform ("UNE-P") Loops

Dear Olukayode:

BellSouth has recently discovered that, as a result of a recent failure of a systems edit, BellSouth is currently providing its tariffed Asymmetrical Digital Subscriber Line ("ADSL") service to certain Internet Service Provider ("ISP") customers on one or more UNE-P loops purchased by your company. (A list of the affected telephone numbers is attached hereto.)

Since your company owns all features and functionalities of unbundled loops purchased from BellSouth, BellSouth does not have access to the high frequency spectrum on those loops for purposes of providing tariffed ADSL to its ISP customers. BellSouth thus intends to notify the affected ISPs, within twenty (20) days of the date of this letter, that it will be discontinuing tariffed DSL service on the affected lines. (The affected ISPs include BellSouth® Internet Services.)

To the extent your company desires to have ISPs continue to provide tariffed DSL on the affected lines, those lines could be converted to resold lines. On a resold line, BellSouth would continue to have access to the high frequency spectrum, as your company is only purchasing the low frequency spectrum in a resold situation. Unless we hear to the contrary within twenty (20) days of the date of this letter, the DSL will be disconnected.

Very truly yours,

Gregory R. Follensbee

Attachment

#252061

Offices for disconnected service

This Report based upon the following Total Data

BellSouth Total Customesrs (1999)	6,176,497
Supra Total Customers	33,804
Total Lost Dialtone Customers	80

Report Region	FLORIDA
Total Lost Dialtone CustomersReport Offices	ALL
MaxPercent Deviation Tolerated	2

ConvDate	*Earning Num*	*PON*	*ServiceOrder*	*Dispatch*	*IWM*	*Comments*

Office BCRTFLBT BCRT BOCA TEECA *MSA* WPBHFL

BellSouth Total Customesrs	41,832	0.68%
Supra Total Customers	188	0.56%
Total Lost Dialtone Customers	1	1.25%

4/24/01	(561) 989-0871	STICVR75590 12 11	CRL6G311	Yes	No	

Office BCRTFLSA BCRT SANDALFOOT *MSA* WPBHFL

BellSouth Total Customesrs	71,505	1.16%	Unacceptable
Supra Total Customers	541	1.60%	Unacceptable
Total Lost Dialtone Customers	3	3.75%	

3/ 6/01	(561) 488-0888	STICHR56787	CRCKF5T9	Yes	No	
5/ 4/01	(561) 558-0061	STICVR82641	CR54V384	Yes	No	Om itted SEQ1X / added NMC
5/ 4/01	(561) 558-0061	STICVR82641	CR54V384	Yes	No	Om itted SEQ1X / added NMC

Office BLGLFLMA BELLE GLADE MAIN *MSA* WPBHFL

BellSouth Total Customesrs	10,545	0.17%
Supra Total Customers	20	0.06%
Total Lost Dialtone Customers	1	1.25%

5/14/01	(561) 993-5843	STINQTB435	NRC78W70	Yes	No	

Office DRBHFLMA DEERFIELD BEACH MAIN *MSA* FTLDFL

BellSouth Total Customesrs	69,780	1.13%
Supra Total Customers	377	1.12%
Total Lost Dialtone Customers	1	1.25%

5/ 2/01	(954) 425-4522	STICVR95610	CR7Q42B2	Yes	No	

Office FTLDFLJA FTLD JACARANDA *MSA* FTLDFL

BellSouth Total Customesrs	76,522	1.24%	Unacceptable
Supra Total Customers	667	1.97%	
Total Lost Dialtone Customers	3	3.75%	

4/ 4/01	(954) 474-4547	STICVR67868	CRBPHR64	Yes	No	
5/ 2/01	(954) 423-4260	DISC IN ERR BY BST	NR9YW7W5	Yes	No	

Office FTLDFLMR FT LAUD MAIN RELIEF *MSA* FTLDFL

BellSouth Total Customesrs	91,501	1.48%
Supra Total Customers	354	1.05%
Total Lost Dialtone Customers	1	1.25%

4/19/01	(954) 525-7065	STINQAL7065	NR6KB6J0	Yes	No	

Office FTLDFLOA FTLD OAKLAND *MSA* FTLDFL

BellSouth Total Customesrs	71,803	1.16%	Unacceptable
Supra Total Customers	396	1.17%	Unacceptable
Total Lost Dialtone Customers	4	5.00%	

3/ 2/01	(954) 485-2433	STICHR54426	CR048HV1	Yes	No	
4/17/01	(954) 731-5348	STICVR77111	CRF7GYN1	Yes	Yes	
5/ 1/01	(954) 733-5557	STICVR82248	CRV1V026	Yes	No	Om itted SEQ1X / added NMC

SUPRA EXHIBIT
DAN - 7
00-1305

ConvDate	Earning Num	PON	ServiceOrder	Dispatch	IWM	Comments

Office FTLDFLPL FTLD PLANTATION **MSA** FTLDFL

BellSouth Total Customesrs	68,367	1.11%
Supra Total Customers	439	1.30%
Total Lost Dialtone Customers	2	2.50%

4/13/01	(954) 792-6080	STIPIC6080	CR8FPV06	Yes	No	pic CHANGE only!!!
4/26/01	(954) 792-8724	STICVR82917	CRMWM562	Yes	No	

Office FTLDFLWN FTLD WESTON **MSA** FTLDFL

BellSouth Total Customesrs	30,433	0.49%
Supra Total Customers	604	1.79%
Total Lost Dialtone Customers	1	1.25%

5/ 3/01	(954) 385-3907	STICVR87834	CR7BL0M5	Yes	No	/NMC Twice T/C

Office HLWDFLHA HLWD HALLANDALE **MSA** FTLDFL

BellSouth Total Customesrs	33,359	0.54%	Unacceptable
Supra Total Customers	486	1.44%	Unacceptable
Total Lost Dialtone Customers	3	3.75%	

4/29/01	(954) 458-6933	STICVR88938	CR9DXFV5	Yes	No	/NMC Twice T/C
5/ 3/01	(954) 454-7900	STICVR91911	CRFKK5J5	Yes	No	Om itted SEQ1X / added NMC
5/ 8/01	(954) 455-3435	STICVR106966	CR6YL8W9	Yes	No	

Office HLWDFLPE HLWD PEMBROKE PINES **MSA** FTLDFL

BellSouth Total Customesrs	115,773	1.87%	Unacceptable
Supra Total Customers	3,137	9.28%	
Total Lost Dialtone Customers	7	8.75%	

11/ 7/00	(954) 434-3720	STICHHG3720	CRV95800	Yes	No	
2/19/01	(954) 434-2246	STICHAB2246	CR4WJC46	Yes.	No	
2/19/01	(954) 433-0073	STICHAE0073	CRJTD834	Yes	No	
3/20/01	(954) 434-2408	STICHR64866	CRCVCH87	Yes	No	
3/20/01	(954) 434-7216	STICHR64871	CR8H6PM6	Yes	No	
4/ 1/01	(954) 432-7374	STICVR102118	CRBHF2R2	Yes	No	

Office HLWDFLWH HLWD WEST HOLLYWOOD **MSA** FTLDFL

BellSouth Total Customesrs	98,894	1.60%	Unacceptable
Supra Total Customers	1,836	5.43%	
Total Lost Dialtone Customers	4	5.00%	

11/22/00	(954) 963-5385	STICVR09134A	CR7B9PX5	Yes	No	Om itted SEQ1X / added NMC
1/22/01	(954) 961-5797	STICHR26064A	CR82K5Q3	Yes	No	
4/25/01	(954) 962-9622	STICVB84155	CR7244R5	Yes	No	
5/ 4/01	(954) 893-5354	STINQTB33023	NRY42676	Yes	No	

Office KYLRFLMA KEY LARGO MAIN **MSA** OSMSFL

BellSouth Total Customesrs	9,918	0.16%
Supra Total Customers	76	0.22%
Total Lost Dialtone Customers	1	1.25%

5/ 2/01	(305) 853-9396	STICVR85379	CQT6M694	Yes	No	

Office MIAMFLAE MIAM ALHAMBRA **MSA** MIAMFL

BellSouth Total Customesrs	77,907	1.26%
Supra Total Customers	792	2.34%
Total Lost Dialtone Customers	2	2.50%

5/ 2/01	(305) 461-5165	STICVR87732	CQ7K24C7	Yes	No	/NMC Twice

Office MIAMFLBA MIAM BAYSHORE **MSA** MIAMFL

BellSouth Total Customesrs	37,220	0.60%
Supra Total Customers	406	1.20%
Total Lost Dialtone Customers	1	1.25%

ConvDate	Earning Num	PON	ServiceOrder	Dispatch	IWM	Comments
10/ 4/00	(305) 856-4846	STICVR09161	CQ0TD406	Yes	No	

Office MIAMFLBR MIAM BEACH *MSA* MIAMFL

BellSouth Total Customesrs	57,662	0.93%	
Supra Total Customers	554	1.64%	
Total Lost Dialtone Customers	1	1.25%	

5/ 2/01	(305) 673-6747	STICVR93764	CQCHK5F7	Yes	No	

Office MIAMFLCA MIAM CANAL *MSA* MIAMFL

BellSouth Total Customesrs	110,179	1.78%	Unacceptable
Supra Total Customers	1,542	4.56%	Unacceptable
Total Lost Dialtone Customers	6	7.50%	

11/14/00	(305) 227-7990	STICVR20909	CQ3NQCV9	Yes	No	Om itted SEQ1X / added NMC
12/12/00	(305) 559-2914	STICVR28984	CQ9H7DF2	Yes	No	
5/ 2/01	(305) 207-1188	STICVR88196	CQ3N41R1	Yes	No	
5/ 3/01	(305) 221-9687	STICVR91924	CQ4J7667	Yes	Yes	
5/ 3/01	(305) 553-3066	STICVR95341	CQ9LH4X9	Yes	No	
5/10/01	(305) 221-2397	STICVR108982	CQC6WD56	Yes	No	

Office MIAMFLGR MIAM GRANDE *MSA* MIAMFL

BellSouth Total Customesrs	58,336	0.94%	
Supra Total Customers	198	0.59%	
Total Lost Dialtone Customers	1	1.25%	

5/ 8/01	(305) 358-6566	STICVR107402	CQ462JP7	Yes	No	

Office MIAMFLHL MIAM HIALEAH *MSA* MIAMFL

BellSouth Total Customesrs	121,403	1.97%	Unacceptable
Supra Total Customers	2,434	7.20%	
Total Lost Dialtone Customers	5	6.25%	

10/18/00	(305) 825-4467	STICVR10790	CQC9CLB7	Yes	No	
1/31/01	(305) 829-1955	STICVR39893	CQB4TRW5	Yes	Yes	
3/27/01	(305) 512-5070	STICVB66418	CQHDG827	Yes	No	Restored in 2 hours
3/31/01	(305) 825-1342	STICVR65601	CQBNJT26	Yes	No	Om itted SEQ1X / added NMC
4/ 9/01	(305) 826-0681	STICVR75693	CQWRP066	Yes	No	

Office MIAMFLME MIAM METRO *MSA* MIAMFL

BellSouth Total Customesrs	21,884	0.35%	
Supra Total Customers	162	0.48%	
Total Lost Dialtone Customers	1	1.25%	

5/10/01	(305) 545-6730	STICVR97940	CQ4CT4C6	Yes	No	

Office MIAMFLOL MIAM OPA LOCKA *MSA* MIAMFL

BellSouth Total Customesrs	35,206	0.57%	
Supra Total Customers	538	1.59%	
Total Lost Dialtone Customers	1	1.25%	

4/18/01	(305) 953-0699	STICVR78818	CQ04QKR6	Yes	No	

Office MIAMFLPB MIAM POINCIANA *MSA* MIAMFL

BellSouth Total Customesrs	48,006	0.78%	
Supra Total Customers	412	1.22%	
Total Lost Dialtone Customers	1	1.25%	

4/20/01	(305) 885-9217	STINQIVB1717	NQ9H0PQ9	Yes	No	

Office MIAMFLSH MIAM MIAMI SHORES *MSA* MIAMFL

BellSouth Total Customesrs	40,871	0.66%	Unacceptable
Supra Total Customers	493	1.46%	Unacceptable
Total Lost Dialtone Customers	6	7.50%	

10/11/00	(305) 751-4344	STICVR08906	CQXJ6630	Yes	No	

ConvDate	Earning Num	PON	ServiceOrder	Dispatch	IWM	Comments
10/17/00	(305) 754-8613	STICVB08916A	CQBP1CP0	Yes	No	
10/24/00	(305) 756-0882	STICVB14784	CQYCY384	Yes	No	
4/24/01	(305) 751-8534	STINQTB8534	NQWL7081	Yes	No	
4/28/01	(305) 756-5009	STICVR85998	CQCT72M1	Yes	No	
5/ 2/01	(305) 756-1366	STICVR87766	CQ5X96J5	Yes	No	BST Claimed Cable Failure in area

Office MIAMFLSO MIAM SILVER OAKS *MSA* MIAMFL

BellSouth Total Customesrs	0	0.00%	
Supra Total Customers	834	2.47%	
Total Lost Dialtone Customers	1	1.25%	

5/10/01	(305) 598-3211	STICVR105302	CQ1BHLW4	Yes	No	

Office MIAMFLWD MIAM W. DADE *MSA* MIAMFL

BellSouth Total Customesrs	60,845	0.99%	Unacceptable
Supra Total Customers	1,150	3.40%	
Total Lost Dialtone Customers	4	5.00%	

4/18/01	(305) 387-2575	STICVR81114	CQ9G7D71	Yes	No	
5/ 4/01	(305) 382-0315	STICVR98141	CQYNH326	Yes	No	
5/ 7/01	(305) 387-1410	STICHGGCE6718	CQ4Y7113	Yes	No	

Office NDADFLAC NDAD ARCH CREEK *MSA* MIAMFL

BellSouth Total Customesrs	48,000	0.78%	
Supra Total Customers	717	2.12%	
Total Lost Dialtone Customers	2	2.50%	

3/14/01	(305) 945-7312	STICVR60604	CQBQPX73	Yes	No	Om itted SEQ1X / added NMC
5/ 2/01	(305) 948-8925	STINQHG2589	NQ287LY9	Yes	No	

Office NDADFLGG NDAD GOLDEN GLADES *MSA* MIAMFL

BellSouth Total Customesrs	37,324	0.60%	Unacceptable
Supra Total Customers	828	2.45%	Unacceptable
Total Lost Dialtone Customers	8	10.00%	

4/26/01	(305) 493-3413	STICVB67999	CQ2L8J39	Yes	Yes	
5/ 2/01	(305) 249-8877	STICVR89105	CQFLWV60	Yes	No	
5/ 2/01	(305) 651-5053	STICVR94096	CQNLL839	Yes	No	
5/ 2/01	(305) 770-1153	STICVR97977	CQM2M642	Yes	No	Om itted SEQ1X / added NMC
5/ 7/01	(305) 493-0415	STICVR101413	CQ2RQMG4	Yes	No	
5/ 7/01	(305) 653-2332	STICHRTM2332	CQCKY7G9	Yes	Yes	

Office NDADFLOL NDAD OLETA *MSA* MIAMFL

BellSouth Total Customesrs	49,616	0.80%	
Supra Total Customers	679	2.01%	
Total Lost Dialtone Customers	1	1.25%	

4/30/01	(305) 682-8857	STICHR91417	CQ66XXK1	Yes	No	

Office PMBHFLCS PMBH CORAL SPRINGS *MSA* FTLDFL

BellSouth Total Customesrs	83,135	1.35%	
Supra Total Customers	882	2.61%	
Total Lost Dialtone Customers	2	2.50%	

4/ 5/01	(954) 340-8193	STINQR0088	NRP3N249	Yes	No	
5/ 2/01	(954) 753-6442	STICVR94719	CR5DRL27	Yes	No	

Office PRRNFLMA PERRINE MAIN *MSA* MIAMFL

BellSouth Total Customesrs	111,943	1.81%	
Supra Total Customers	1,526	4.51%	
Total Lost Dialtone Customers	3	3.75%	

1/23/01	(305) 238-4996	STICHR39108	CQRWJ917	Yes	No	
2/19/01	(305) 235-5502	STICHB0204	CQ1YLY65	Yes	No	
4/23/01	(786) 242-8019	STICVR81243	CQ0YDC65	Yes	No	

June 4, 2001

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SUPRA EXHIBIT
DAN-8
00-1305

SUBJECT: Minutes of the InterCompany Review Board Meeting held May 29, 2001.

An InterCompany review board meeting was held telephonically on May 29, 2001. Attendees from Supra Telecom were Kay Ramos, David Nilson, Adnet Medacier, Esq. And Paul Turner, Esq. Attendees from BellSouth were Parkey Jordan, Esq., Marcus Cathey, Patrick Finlen, and Charlotte Donlon. Other BellSouth personnel who signed on or off during the meeting were not identified.

The agenda followed was as distributed by Mr. Medacier prior to the meeting. The issues are:

I **xDSL.**
(1) BST Clarifications of Supra's LSR for the conversion of BellSouth's end-users with xDSL service on their customer service record.
(2) BST is advising their customers that they will lose their xDSL service and /or BellSouth will increase their xDSL service rate if they switch to Supra.
(3) Supras (in)ability to "switch-as-is" customers with BellSouth's xDSL service.

II **Inside Wire Maintenance (Loss of Dialtone).**
(1) Converted customers who do not purchase inside wire maintenance plans are being unlawfully disconnected by BellSouth for the stated reason that Supra ordered disconnection.

III **Clarifications.**
An inordinate amount of LSRs are being clarified by BellSouth's OSS systems. These clarifications are not caused by Supra, and a re being clarified for reasons previously unseen.

IV **Follow-On Interconnection Agreement.**
All Issues

I **xDSL.**

BellSouth told Supra they could not convert-as-is xDSL customers as that would be the same as reselling the xDSL service and Supra was not entitled to that . Mr. Cathey indicated that since Supra had not signed a UNE-P agreement, Supra could not resell xDSL under any circumstances. While Supra disagreed, BellSouth went on to state that Supra could collocate equipment and buy xDSL compatible UNE Loops provisioned to its collocation space.

Mr. Ramos responded that BellSouth STILL had no effective means for Supra to order UNE combinations, that BellSouth had still failed to productionize the UNE combinations in the current contract between the parties, and that orders submitted last week according the written instructions given us by the account team (Charlotte Donlon and Marcus Cathey) were still failing. Supra has no means for ordering UNEs to this date. Supra again requests that proper USOCs and instructions for the ordering of all UNEs be provided to Supra, along with an assurance that Supra's OSS profile will be updated so as to allow Supra order all UNEs.

Parkey Jordan went on to explain that complaints she had worked on with Supra's Ann Shelfer were not even BellSouth.net customers, but Mindspring customers.

Mr. Nilson clarified the fact that any conversations Parkey Jordan had had with Ann Shelfer were regarding the resolution of Florida PSC complaints against Supra, caused by BellSouth, but were not yet part of the xDSL issue as delineated by the agenda. Nor was the issue of Supra reselling BellSouth xDSL part of xDSL issue 1.

Mr. Nilson explained that this issue strictly dealt with the fact that if a customer wishes to change their local service to Supra Telecom, and they happen to also have xDSL service from BellSouth.net, BellSouth Telecommunications will refuse to convert the customers voice service to Supra until the customer contacts BellSouth Retail (not the LCSC) to have the DSL service removed. When the customers attempt to do this they are often given bad information such as the DSL cannot be removed, their service will be terminated altogether, or that their rates will be increased (Sub issue #2).

Mr. Cathey expressed suprise that the Supra Customers had to Call BellSouth Retail. He also stated that what was happening was that the new Supra customer had to make alternate billing arrangements with BellSouth. Mr. Nilson requested an explanation from BellSouth as to why the simple conversion of voice services from BellSouth Telecommunications to Supra should do anything to disturb the customers billing arrangements with BellSouth.net. No one from BellSouth offered an explanation. Mr. Nilson stated that Supra customers should not be forced to call BellSouth Retail to separate non regulated services from their bill and be subjected to winback tactics just to change local service providers.

BellSouth expressed dissatisfaction that they had not been previously informed of this through the account team. Supra representatives each expressed that this issue had been taken to the account team on numerous occasions, along

with similar issues with customers of BellSouth's Paging, dial-up Internet and wireless services, but that the account team had been unable to come up with any solution other than the Supra customer calling BellSouth Retail to get the items removed from the Bill. When prompted, Charlotte Donlon wasn't sure which issue we were discussing. Mr. Nilson clarified they were the same issues Supra had brought to her since last year, customers with Internet, paging, or wireless in addition to their local bill are automatically clarified by BellSouth OSS systems, and Supra can do nothing to remove these items, as we can with regulated services, to make the conversion order flow through. The customer MUST call BellSouth themselves.

BellSouth agreed to look into this issue, again, if Supra would provide PON numbers. Both Mr. Finlen and Mr. Cathey stated there should be no reason that this causes an order to be clarified.

Regarding the third xDSL sub-issue, Mr. Cathey pointed out that BellSouth policy is that Supra cannot resell xDSL services, and Parkey Jordan expressed that Supra was free to buy xDSL service from the Tariff. Mr. Ramos reminded BellSouth that both Pat Finlen and Marc Cathey had refused to sell this service to Supra without Supra first signing a volume commitment contract ,with penalties if the volume is not met, before even allowing Supra to view the potential circuits that were eligible for xDSL, much less actually provisioning the service.

Both Mr. Finlen and Ms. Jordan made further statements that xDSL is not in the Contract, and can only be purchased from the FCC Interstate tariff. Supra maintained that based on the FCC's Advanced Services Order (ASO), the fact that BellSouth sells xDSL transport service to its affiliate BellSouth.net, and the forward looking provisions of the contract that set forth the need and right of Supra to add new network elements added to the interconnection agreement, and to combine them in any manner, even if it replicates a retail service BellSouth is obligated to provide such services to Supra. Mr. Kay Ramos, at BellSouth's demand, cited sections 1A, 1.1, 7.2 and Section 30 of the General Terms and Conditions as a partial, but not complete list of contract citations that entitle Supra to purchase xDSL service from the Interconnection Agreement.

BellSouth countered that Supra could buy the "xDSL service" from the FCC Interstate Access tariff. Parkey Jordan went on to state that Supra could purchase xDSL loops (omitting to mention the need to collocate equipment in each office) as an alternative to the Interstate tariffed service. Supra re-iterated its right to have the full xDSL transport service, including DSLAMs as a UNE. At various points BellSouth argued that couldn't be done, or welcomed the opportunity to negotiate this with Supra, depending upon the BellSouth respondent.

Discussion on sub-issue three was terminated, temporarily, so that the meeting could proceed to sub-issue 2.

Moving on to the second sub-issue of xDSL, Mr. Cathey again explained that Supra's customers must call BellSouth to arrange a new billing relationship

with BellSouth prior to their telephone service being converted. At several points the following questions were asked which were not answered by BellSouth:

1. Why the conversion to Supra had to be delayed, for any reason, while BellSouth and the customer entered into a new relationship. Why BellSouth would adopt this position for any reason other than to exert anti-competitive pressures on the end user customer.

2. Why the conversion of some BellSouth voice services to Supra Telecom should in any way disturb the billing arrangements already in place with the customer for the existing services.

3. Why BellSouth Telecommunications was delaying executing its fiduciary responsibility regarding converting a customer to Supra, so that a proper billing arrangement between the customer and BellSouth.net could be arrived at. Whether or not there was ANY structural separation between BellSouth and BellSouth.net as required by law.

4. What was the specific relationship between BellSouth and BellSouth.net.

5. Why should a Supra customer be subjected to a winback opportunity for BellSouth retail (A sales and quota driven organization) in order to complete the conversion to Supra Telecom. A customer dissuaded from being a Supra customer by whatever a BellSouth Retail CSR chooses to tell the customer becomes a "winback" for the BellSouth retail CSR, as the customer conversion LSR has already been placed. Thus the BellSouth Retail CSR is financially motivated by the winback program to lie to the customer to keep the customer who wishes to separate DSL from their bill.

6. Why the customer has to be involved at all. Why a Supra order cannot be processed for a DSL customer as it is for a non-DSL customer - without any customer to BellSouth direct contact?

None of these questions were ever answered.

BellSouth did not deny the winback tactics that are being used upon Supra's customers, the existence of their official winback campaign or any other issue Supra stated in this regard.

Mr. Cathey was, however, most emphatic that this situation could only exist under resale. If the customers were provisioned under UNE-P (assumedly encompassing ALL UNE combination programs), BellSouth would not line share at all.

Mr. Ramos stated that BellSouth owed Supra linesharing charges for all xDSL customers that had Supra as a local provider. That BellSouth had unlawfully collected revenue from the xDSL provider (or its affiliate), and had also collected the full rate from Supra. Parkey Jordan responded by saying that under resale BellSouth would pay no one any line sharing charges. That under UNE combinations they would be required to pay linesharing charges. Mr. Cathey re-iterated that under UNE, BellSouth would NOT line share. A discussion ensued between Parkey Jordan and Mr. Ramos which ended with Parkey Jordan stating "BellSouth, or rather BellSouth.net would have to evaluate the situation of paying Supra Line sharing charges on a case by case basis. We might just decide to discontinue service to the customer."

Thus BellSouth exposed its basic anti-competitive stance regarding using its xDSL customers to prevent those customers from converting to CLECs. At this point the meeting had to move on due to the gulf separating the parties.

II Customer lost dialtone requiring a premises visit. Customers who dropped Inside Wire Maintenance.

In the past 30-45 days Supra has experienced a growing instance of customers who lose all dialtone shortly after converting Supra. In most cases these customers have dropped the inside wire maintenance plan with BellSouth as a function of their conversion to Supra. In all cases, BellSouth has insisted that an inside premise visit is required to restore service. When such visits are authorized at Supra's expense, the customer has been placed back in service in minutes, much too fast for a truck roll. In more than one case the BellSouth technician has called Supra to get authorization for a truck roll to repair "an open on the frame". When Supra argues with BellSouth that we should not be required to authorize a repair to a BellSouth fault inside the central office, the technician responds "Well do you want it fixed or not?"

In response to BellSouth's requests for data, Supra informed them that they already had the data, but Supra would supply examples of at least 10 of the 50 that have occurred in the last 30-45 days. Mr. Cathey expressed that 50 lost dialtone customers in 30 days was "way unacceptable" and that they would investigate. BellSouth claimed they could discuss the incidents no further without at least 10 examples to investigate. A letter documenting 15 incidents, including customer telephone number, Supra PON, and BellSouth Service orders was supplied within 24 hours of the call. The current number of instances has risen to 80.

III Clarifications.

BellSouth then reported on the six (6) LSRs that had been transmitted via Mr. Medacier's May 9th letter. Of the six, BellSouth admitted that three should never have been clarified. They were BellSouth errors.

Of the remaining three BellSouth has attempted to blame Supra for all three. Two were clarified for not having a Call Forwarding Number (CFN) supplied and no Memory call provisioned. Since it normally takes at least a two day delay to

provision Voicemail, and Supra is constrained to use several "workarounds" to get voicemail at all, Supra is investigating to see if this isn't a BellSouth system error after all, as we have maintained all along. The final clarification was an address didn't match error. Somehow the address on the converted customers BellSouth data record was no longer acceptable to be their address on a Supra data record. Supra is further investigating this issue as well.

Mr. Ramos wanted an explanation from BellSouth as to why Supra could not purchase all of BellSouth's voicemail products, only the most expensive ones. Parkey Jordan maintained that BellSouth is no obligated to sell any of its voicemail products, and chooses to sell just some of them. The rational for this is the BellSouth claims voicemail is an enhanced service and they are not required to resell it. Mr. Nilson inquired if BellSouth was familiar with the Florida orders regarding voicemails status as a telecommunication service, not an enhanced service[1]. Mr. Finlen acknowledged he was, and Ms. Jordan asked to move on to the next issue.

IV Follow-On Interconnection Agreement.

BellSouth immediately began by once again stating they could not understand the requirement of the template from the interconnection standard[2] they were a signatory to, and that nothing could move forward because of this. Certainly BellSouth must understand some of what they agreed to in signing the "Increased reliability Task Force II" document, and is stalling giving the requested information to Supra. However Mr. Nilson stated he had once again attempted to clarify the requested information and that a five page letter had been faxed to Ms. Jordan earlier in the afternoon. Mr. Nilson suggested that BellSouth read the latest attempt by Supra to explain to BellSouth what data BellSouth and the rest of the industry agreed should be exchanged between carriers in negotiating an interconnection agreement that leads to a higher reliability interconnection process.

Supra does not believe that the Interconnection group at BellSouth would have any trouble understanding what data was being requested. BellSouth has not made it clear that anyone outside the group mentioned above has ever been consulted regarding the data, or whether BellSouth unilaterally decided not to provide the information, if possible, by "not understanding" it.

Mr. Finlan offered to meet with Supra, Mr. Ramos and Mr. Nilson to explain the current interconnection draft BellSouth wishes to ratify. At this point is wasn't clear that BellSouth understood Supras position on the need for this documentation.

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[1] PSC-97-0294-FOF-TP in Docket 961230-TP "Based on our interpretation of Sections 3(51) and 3(48) of the Act, we believe that voice mail meets the definitions of "telecommunications" and "telecommunications service" under the Act. Voice mail is a transmission between or among points specified by the user. The transmitted information is of the sender's choosing and does not change in form or content when sent or received. Accordingly, Sprint is required to offer voice mail for resale to MCI."

[2] Increased Interconnection Task Group II Report - Network Reliability Council.

In an effort to get BellSouth to understand, Mr. Nilson explained it wasn't a question of needing drafted paragraphs explained, but that it was one of accurately understanding the requirements so they may be negotiated and properly documented. He went on to state that the existing interconnection agreement was never specific on this issue containing "initial", "interim", and "final" interconnections schemes that were added to the agreement, as an amendment, a full year after the agreement was first signed. Mr. Nilson stated that his experience in dealing with the interconnection groups at BellSouth was that they had no intention of following the contract, but rather had tried to get Supra to follow their own internal policies and procedures. Those policies and procedures have changed repeatedly over the past three years, sometimes simplifying the process, sometimes complicating it, but always it comes as an unannounced suprise to the CLEC.

Supra additionally pointed out that there were numerous leaps in technology over the years, and Supra has constantly been presented with "its not in your agreement, you cant have it." Supra needs to know what BellSouth intends to expect as a matter of interconnection, Supra is entitled to negotiate over details, elements and costs related to such interconnection. At this point Supra wants the discovery it is entitled to, that BellSouth agreed they should be entitled to, in order to make sure that the required interconnection elements, processes, procedures, standards are properly documented to support Supra's collocation plans.

Supra still has no mechanism for ordering UNE combinations contained within its contract. Supra demands that BellSouth provide USOCs and ordering guides / instructions that will actually work immediately.

The parties agreed to meet telephonically at 4:00 PM on Monday, June 4, 2001. The meeting adjourned at approximately 7:00 PM EST.

Thank You

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SUPRA EXHIBIT
DAN-9
00-1305

SUBJECT: Minutes of the InterCompany Review Board Meeting held May 29, 2001.

An InterCompany review board meeting was held telephonically on June 4, 2001 which began at 4:00 PM EST. Attendees from Supra Telecom were Kay Ramos, David Nilson, Adnet Medacier, Esq. And Paul Turner, Esq. Attendees from BellSouth were Parkey Jordan, Esq., Marcus Cathey, Patrick Finlen, and Charlotte Donlon. Other BellSouth personnel who signed on or off during the meeting were not identified.

I Customer Lost Dialtone after Conversion

Mr. Cathey reported on the information he had been able to come up with to explain the incidents in Supras May 30 letter on this subject. His findings are listed in Table 1. In each and every case, BellSouth Repair department insisted that the circuit tested good to the demarc point, and an inside customer premise visit was required to repair the problem. Yet only 3 of 14 calls actually support that conclusion, which in itself indicates a problem. These calls were all confirmed no dialtone / inside visit required by BellSouth repair prior to dispatch.

Number	Conv Date	PON #	Serv. Ord. #	Finding
9544343720	11/7/00	STICHHG3720	CRV95800	CPE
3055125070	3/27/01	STICVB66418	CQHDG827	CPE
3058251342	3/31/01	STICVR65601	CQBNJT26	BST Cable Problem
3058260681	4/9/01	STICVR75693	CQWRP066	Tested OK
3059530699	4/18/01	STICVR78818	CQ04QKR6	Tested OK
3057565009	4/28/01	STICVR85998	CQCT72M1	Tested OK
3056515053	5/2/01	STICVR94096	CQNLL839	BST Cannot explain
3056736747	5/2/01	STICVR93764	CQCHK5F7	Tested OK
3052071188	5/2/01	STICVR88196	CQ3N41R1	BST Cable Problem
3055533066	5/3/01	STICVR95341	CQ9LH4X9	BST Cable Problem
3053586566	5/8/01	STICVR107402	CQ462JP7	BST Shut off Service
9544553435	5/8/01	STICVR106966	CR6YL8W9	BST Cable Problem
3055983211	5/10/01	STICVR105302	CQ1BHLW4	CPE
3052212397	5/10/01	STICVR108982	CQC6WD56	No Repair Report Found

Table 1 Customers Lost Dialtone after conversion

Mr. Cathey was unable to obtain complete analysis, or all of the data requested due to time limitations. Mr. Cathey also indicated that he needed to do further analysis to determine whether customers had a history of CPE related complaints, a history of cable related failures, and whether other customers were affected by cable problems attributed to conversions above. Mr. Cathey also expressed a need to get further clarification on the 305-651-5053 repair as he was unable to explain the data that had been presented to him, and 305-221-2397 for which no report was located.

Eight of the 14 calls were either "No Trouble Found" or "BellSouth Cable Problem". This nebulous description does not explain why a perfectly good BellSouth Retail circuit suddenly found itself in a bad cable, unless the customer was switched to a different loop as a function of the conversion process.

Mr. Nilson re-iterated the request from Supra's May 30 letter for copies of the repair tickets, trouble clearing times, or trouble start/finish times and circuit ID's.

Discussion followed, as it had on 5/29, regarding the reason Supra needed circuit ID's. While Mr. Cathey was unsure whether or not he objected to providing Supra this information, he stated he felt there may be CPNI issues over giving out circuit ID's that were in place before the conversion. Mr. Cathey offered to provide, at least , the circuit Id's for which the circuit ID changed as result of the conversion process. Mr. Ramos stated that once the customer had signed an LOA with Supra, and prior to BellSouth processing the LSR, the customer was a Supra customer, and he was using the same circuit ID that the customer used as a BellSouth customer, so there should be no reason to deny Supra the requested information.

In response to a direct question from Mr. Cathey, Mr. Nilson explained that Supra needed the information to determine whether the circuit had been changed, moved or other wise disturbed during the conversion process. Mr. Ramos told BellSouth that they needed to enable Supra's OSS profile so that our CLEC TAFI would display the circuit ID history window, just as BellSouth's TAFI does.

Supra has CLEC TAFI which has certain features of BellSouth's TAFI disabled. One of these features is the circuit ID history window. Mr. Nilson explained that in troubleshooting a newly acquired circuit, it is important to know if any changes have been made to the customers loop since they were a BellSouth customer. Supra want to be able to know if the circuit is the same of different than what was used to provision the customer under BellSouth retail. Knowing this information, one way or the other, affects decision making in the troubleshooting process. By not having this information, the ability to resolve problems expeditiously is impaired. BellSouth apparently agrees with Supra as BellSouth provides itself this circuit ID history for the purpose of Trouble Analysis - the TA in TAFI.

BellSouth acknowledged this, and Ms. Jordan stated that she wasn't really sure if there was a CPNI or any other legal reason not to supply Supra with this information. Like the meeting on the 29th, BellSouth agreed to discuss this offline and give Supra an answer. Mr. Turner requested this be made part of Ms. Jordan's letter to Supra

6/5/2001, which was agreed. Supra requested that Ms. Jordan address the dates Supra will receive the information resulting from Mr. Cathey's deeper investigation information.

II Inability to convert customers with xDSL service.

Ms. Jordan reiterated that BellSouth believed that there should be no reason why these orders get clarified because of xDSL service on the line and Mr. Finlen agreed. The switch-as-is orders "should have worked and should not have been clarified." However Ms. Jordan indicated she was getting some conflicting information on this issue and was going to have to track some things down further. For example, she said that a person high up in the LCSC, Monica Gilbert, had told her that Supra needed to file switch with change orders, not switch as is orders. Ms. Jordan committed to supplying Supra a memorandum 6/5/2001 with explicit instructions for conversion of customers that also have DSL, so that all orders may flow through without further clarifications. Ms Jordan expressed her intention was to give Supra what it wants on this issue and make Supra happy. Mr. Ramos reminded Ms. Jordan that meant that BellSouth must convert the customer as is xDSL service along with the voice service. BellSouth disagreed that they would convert xDSL service to Supra.

Mr. Finlen presented his analysis of the rejected PONs' referencing a six-digit number rather than the full PON.

Reference #	Reason
105441	Clarified in error by LCSC. Switch as is should have worked
126572	Clarified in error by LCSC. Switch with Changes to remove voice features. Should not have been clarified for ADSL.
104127	Clarified in error by LCSC. Switch as is should have worked
107405	Clarified Correctly. Other orders pending.
124939	Clarified Correctly. Other orders pending.
104442	Clarified Correctly. Other orders pending.
108867	Clarified Correctly. Other orders pending.
106229	Clarified Correctly. Other orders pending.

Table 2 - PONs Clarified due to xDSL transport on CSR

Mr. Finlen was unable to explain what other orders were pending due to the unavailability of Supra's CSM, Rita Barrett. He was unable to determine if there were other orders pending to install DSL service, for BellSouth to deny service, other Supra orders pending, or other CLEC orders pending. Mr. Turner requested that Ms. Jordan define the timeframe needed for BellSouth to answer these issues in her letter 6/5/2001. Ms Jordan expressed concern that she would not be able to answer this in that short time frame. Supra reminded her that all Mr. Turner asked was for a commitment date as to when the answers would be provided.

Regarding the possibility that orders were pending for DSL, and Supra's request to identify the DSL provider for these circuits (which will illuminate the clarifications), Charlotte Donlon indicated that the engineer that had been helping Supra's Ann Shelfer with the PSC complaints of Mindspring customers, had a way to get the DSL provider from he CSR. Ms. Donlon was to contact Hank to get the needed information and report back.

At this point Marcus Cathey and Charlotte Donlon left the conference call.

III The Increased Reliability Interconnection Template.

Mr. Finlen reported that they had read the template explanation written by Mr. Nilson that had been faxed to BellSouth on May 29th, and now understood what Supra wanted from the process. He reported that he letter had been sent out to various SMEs and that some had begun forwarding the required documents back to Mr. Finlen. Mr. Ramos reminded BellSouth that Mr. Nilson had provided an explanation of the template, but that Supra's data request, dating back well over a year to April 26, 2000 regarding information on BellSouth's network, was what Supra still wanted. Mr. Nilson's explanation did not change Supras request. Supra needs, and is entitled to information on BellSouth's network, not just information on what BellSouth provides to CLECs.

Mr. Finlen stated that his understanding was that the template was limited in scope to only interconnection of a CLEC switch to an ILEC switch. While Supra does not dispute that is part of the template, both Mr. Nilson and Mr. Ramos were quick to point out that it applies to much more, including all facilities based provisioning, UNE combinations, and OSS interfaces, among other issues. Ms. Jordan then stated that OSS is not a UNE. Supra agreed to disagree on that statement. In response to Ms. Jordan's question regarding interconnection and UNE's, Mr. Nilson provided a simple POTS scenario to illustrate UNE interconnection, and Mr. Finlen described the methods for effecting that solution.

This led to a bit of digression regarding what was in the red-lined agreement given to Supra by Mr. Finlen, what had been read and understood, and what hadn't. As this discussion died down, Mr. Ramos stated that Supra's intention was to seek an agreement "of clarity and completeness." Mr. Nilson stated that too many times over the past three years, Supra has been told by Marc Cathey of Pat Finlen "We would love to sell you that but you don't have this in your contract so we cant..." and Supra wishes to eliminate those issues in this contract. Mr. Finlen agreed he did as well.

Ms. Jordan asked the question "what is wrong with the draft agreement?" Mr. Nilson illustrated out Supra's position by asking Ms. Jordan "what is missing from the agreement?" After making sure it was understood that was not a specific request for information from Ms. Jordan, Mr. Nilson went on to explain that it is impossible to use the draft agreement as a reference document to check itself for completeness. Only by

seeing the internal specification, network layout, forms, applications, and procedures could Supra begin to evaluate the completeness of the draft agreement.

That type of information needs to come from discovery. Mr. Nilson expressed that the previous interconnection agreement was never specific on technical aspects of interconnection, that the internal BellSouth policies on interconnection and the interconnection process were different each and every time Supra had contacted its interconnection project manager, Wanda Godfrey. To Supra this has been an evolving process that can now be better documented and controlled by the interconnection agreement.

Mr. Finlen represented that these details needed to be covered by languages stating "The parties will work together to arrive at a mutually agreeable..." Once that "mutually agreeable" language was worked out, that the details were established on a case by case basis. Mr. Nilson stated that was once the process, but that there were now some standard policies and procedures, forms, data requests, etc established and that the interconnection group could supply all this baseline information in sufficient detail that the parties could agree to right now and get on with the process. Mr. Finlen requested specific language and Supra replied it was working on specific language changes, but needed the template information to complete the process.

At this point specific questions regarding Supras written explanation of the template was discussed. Mr. Finlen wanted clarification of item #7 on Mr. Nilson's May 29 explanation. Supra responded that they were looking to establish Service Level Agreements documenting specific performance requirements of the two parties. BellSouth acted as if they still didn't understand the concept of service level guarantees. Mr. Ramos stated that Supra wanted the service level agreements that were presented to the FPSC and FCC. BellSouth countered that they would provide the service level *measurements* provided to regulators. This has been a long-standing disagreement between the parties. BellSouth has long claimed it cannot be held accountable for provisioning delays and other issues in the current agreement because the current contract contains only *measurements* not *guarantees.* In an industry that effectively invented Service Level Agreements, Supra expects more than just measurements, Supra expects BellSouth to be accountable. Without such guarantees there is insufficient motivation for BellSouth to improve its service to Supra.

Mr. Finlen requested clarification on #13 - Explicit Forecasting Information, stating "CLECs provide BellSouth with forecasting information, BellSouth does not provide forecasting information. Forecasting information is proprietary." A discussion ensued that showed BellSouth was looking at this issue from a central office to customer premise perspective. Mr. Nilson explained that the template requirements were for a) Direct Traffic, i.e. transport capacity forecasting between offices, and b) Subtending / transiting traffic at Tandems. That while trunking capacity would need to be forecasted, the main thrust of this item was to forecast transport capacity between offices and to the BellSouth tandems in such a fashion as to identify trunking or transport hot spots, potential hot spots, and alternate methods of transporting traffic around hot spots, or to eliminate creating facilities shortage hot spots in the first place.

Once explained, Ms. Jordan appeared to be comfortable with the idea of providing the data to Supra, and committed that BellSouth would talk offline on this issue and present their position. Mr. Turner requested that this be included in Ms. Jordan's letter due 6/5/2001.

Mr. Finlen asked for clarification on #19 - Pre-Cutover Inter-network Connectivity testing, stating that ". Pre-Cutover testing was the responsibility of the CLEC, not BellSouth." Mr. Nilson explained that BellSouth's Interconnection group has very specific expectations and rules regarding interconnection, what must be accomplished before BellSouth will allow CLEC traffic to transit the network, etc. These requirements are not defined by the contract, and have been vague at times. Supra wants these requirements defined and documented in the interconnection agreement, to avoid future issues between the parties, and to allow Supra to roll-out its collocation plans with minimum setbacks which affect costs for both parties.

IV UNE Combination ordering.

Supra, in the minutes to the May 29 InterCompany Review Board (ICRB) meeting, raised the issue that UNE combination ordering is still not possible for Supra. USOCs and ordering instructions given to Supra by the account team[1], USOCs used in the UNE combinations test that began February 24, 2000, USOCs in the BellSouth Document "CLEC USOC Guide", are still being rejected by BellSouth OSS systems. It seems that only Supra's CSM, Rita Barrett can effect UNE combo orders for Supra, as orders routed normally through the LCSC on a weekly basis are being rejected. Supra provided the reference to an LCSC supervisor, Ms. Lawson to document Supra's most recent attempt to order UNE combinations and the rejections issued by Ms. Lawson.

Ms. Jordan expressed that BellSouth was unprepared to discuss this since the Account Team was no longer present on the conference call. However, discussion on the issue continued. Supra requested USOCs and ordering information sufficient to allow supra to place UNE combination orders through the LCSC. Supra also requested a copy of its OSS profile, including all resale and UNE (and other) OSS profile data from BellSouth. Ms. Jordan requested clarification of the term "OSS profile" Once the term was explained, and Mr. Turner made references to the testimony of Mr. Ron Pate in Arbitration I, BellSouth understood what data Supra was requesting. Pat Finlen said he would arrange to send a copy of Supra's OSS profile. Mr. Turner requested that Ms. Jordan provide a date this information would be provided in her letter to Supra 6/5/2001.

V Follow-on agreement.

At this point, Ms. Jordan expressed a desire to discuss the list of 56 issues raised by Supra in response to BellSouth's request for arbitration. Given the lateness of

[1] Charlotte Donlons April 9, 2001 letter to Nilson.

the hour (6:30 PM, 2.5 hours after the start of the call) and the fact that BellSouth had still not provided any of the requested template data, Supra declined to discuss these issues at that time. Supra stated its willingness to discuss all such issues, including issues that arise from the template data, once such data is received and reviewed.

Thank You

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