

BELLSOUTH REPLY COMMENTS

**WC Docket No. 04-313
CC Docket No. 01-338**

October 19, 2004

Attachment 3

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554**

In the Matter of)	
)	
Unbundled Access to Network Elements)	WC Docket No. 04-313
)	
Review of the Section 251 Unbundling)	CC Docket No. 01-338
Obligations of Incumbent Local Exchange)	
Carriers)	

REPLY AFFIDAVIT OF ERIC FOGLE

1. My name is Eric Fogle. I am employed by BellSouth Resources, Inc., providing support to BellSouth Telecommunication Inc. ("BellSouth"). My business address is 675 West Peachtree Street, Atlanta, Georgia 30375. I am a Director in BellSouth's Interconnection Services Organization and have over 6 years of service with experience in new product development, project management, and business development. Since June 2003, my primary responsibilities have been to develop BellSouth's policies and position with regard to fiber and broadband technology and services deployment, including line-sharing, line-splitting, VoIP, and other next generation services, architectures and platforms in connection with BellSouth's regulatory proceedings. I have a Masters degree in Business Administration from Emory University in Atlanta, Georgia in 1996 and a Masters of Science degree in Electrical Engineering from the University of Missouri in Columbia Missouri in 1993. I have personal knowledge regarding the matters described in this Affidavit.

2. My Affidavit responds to comments of Covad Communications Company (“Covad”) and the Joint Declaration of Stephan Derodoff, Patrick Bennett, and Mark Richman on behalf of Covad (“Joint Declaration”), Earthlink, Inc. (“Earthlink”), NuVox, Inc. (“NuVox”), the Association of Local Telecommunications Services and listed companies (“ALTS”), the Loop and Transport CLEC Coalition and listed companies (“Loop/Transport Coalition”), as well as other parties that advocate for the reinstatement of line sharing. This Affidavit will reply to the comments concerning line sharing, as well as comments concerning intermodal broadband competition, fiber to the home (“FTTH”), fiber to the curb (“FTTC”) and hybrid fiber/copper facilities (collectively, “Broadband Deregulation”).

The Commission Should Not Reinstate Line Sharing

3. Covad and other parties attempt to portray a bleak picture of broadband competition. Such claims are simply wrong. There are numerous examples of cable companies and other carriers developing and delivering VoIP and other broadband services. In fact, Covad can look to its own CEO for information concerning its successful VoIP deployment. The October 2004 issue of America’s Network Magazine includes a discussion in which Mr. Hoffman, Covad’s CEO, discusses Covad’s VoIP and wireless broadband initiatives.¹ The same magazine contains an article that discusses the implementation and success of Cox Communication’s (a cable company) voice services. The article notes that Cox has “expanded voice services to 13 markets across the country, reaching 1.1 Million customers, and has grown into the nation’s 12th largest

¹ See Reply Exhibit EF-1.

telephone company,” and also states “Cox has been especially successful with its telephone service offerings and has signed up 40% or more of its cable customers in the markets it serves.” In addition, “[Cox’s] recent entry into VoIP seems likely to provide additional cost savings and efficiencies.”²

4. Covad also attempts to justify its claims by pointing to alleged actions taken by AT&T and MCI. Covad ignores the fact that both carriers have aggressive VoIP plans. Covad is uniquely positioned, as a stand-alone broadband service provider with significant experience in ordering UNE-loops, to benefit from both carriers’ strategies. Specifically, AT&T’s VoIP service requires an existing broadband service, and broadband services that do not require an underlying voice service to provide the transmission facility are the most likely candidates to be bundled with AT&T’s VoIP offering. Broadband service without an underlying voice service is exactly what Covad has been ordering for years to support its symmetrical DSL products.
5. Covad repeatedly refers to the success of the Japanese and Korean broadband markets, where “carefully crafted unbundling rules” create a competitive market for DSL service among multiple DSL service providers. Contrary to Covad’s claims, this success cannot be attributed to these countries unbundling schemes. Korea invested \$1.5 billion (US) in backbone infrastructure and another \$1 billion (US) in low interest loans for providers in rural areas,³ and others (including Thomas Hazlett, a senior fellow at the Manhattan Institute, who

² See Reply Exhibit EF-2.

³ Asia-Pacific 3G Update and Korea’s Infrastructure Based on Broadband and Wireless, Yankee Group, Nov 4, '03.

formerly served as chief economist of the Federal Communications Commission) suggest that this investment, the largely unregulated Korean advanced telecom market, as well as cultural conditions unique to Korea, assisted in the growth of DSL.⁴ Covad also fails to mention that 65% of Koreans live in high rise buildings, which make deployment of high speed DSL much easier than the relatively spread out living conditions in the United States. In addition, in stark contrast to the competitive situation in the United States, DSL penetration leads cable modem penetration in both Korea and Japan.

6. In addition, Covad suggests line sharing will avoid a “cable-ILEC duopoly” and “will deter the emergence of VoIP voice services.” Both claims are false. Covad’s access to line sharing over five years has resulted in a gain of approximately 5% of all DSL subscribers, which is less than 3% of all broadband subscribers. This market position mirrors penetration rates of Satellite Broadband service, which Covad claims is not a viable intermodal alternative. Even with the expected phase out of line sharing, numerous cable modem and DSL providers have continued actively promoting and adding innovative features to their broadband products.⁵
7. Covad also suggests line sharing will facilitate a transition from monopoly residential voice service to VoIP. This claim makes no sense. Line sharing was

⁴ See Reply Exhibit EF-3.

⁵ On 7/27/04, Comcast announced an increase in download speed from 3Mbps to 4Mbps. On, 4/6/04, Charter Communications announced increasing download speed from 2M to 3M (at the same price) and increased security features like parental controls, firewall improvements to prevent hacking, and blocking of junk email. On 7/26/04, Time Warner Cable introduced a 6Mbps download speed at \$69.95 if the customer also has video, and for only \$64.95 if the customer has both video and Digital Phone.

eliminated because the Commission determined CLECs were not impaired without unbundled access to the HPFL because purchasing a stand-alone loop would suffice. The Commission looked at all potential revenues from entering a market. It is clear that use of the entire loop allows the provision of rich applications including Voice over DSL (VoDSL), which Covad and others can offer through VoIP technology. Line sharing is neither necessary nor required for this technology to flourish.

8. Moreover, Covad's attempt to obtain a second "transition" mechanism is nothing more than a red herring. The same market conditions exist today that resulted in the Commission's decision to eliminate line sharing. CLECs can buy an entire loop and provide numerous broadband services over it, including VoIP. There is no need to add to the three year transition period, which Covad is effectively extended in any event by continuing to order new line sharing arrangements, and by refusing to incorporate the Commission's transition plan into its interconnection agreement.⁶
9. Covad also suggests it is not capable of duplicating the nationwide loop plant. A carrier does not have to duplicate the local loop plant to obtain access to the HFPL.⁷ Covad and other carriers are free to use a narrowband copper loop, the availability of which is not at issue in this or any other proceeding. Covad can

⁶ See BellSouth Reply App. at 7-8 for the relevant excerpts of the agenda sessions from the Florida and Georgia commissions addressing this issue.

⁷ In fact, Covad has a viable plan to deploy its own alternative last mile broadband transport option. See Reply Exh. EF-1. Although the Joint Declaration states "offering broadband services over wireless is not an alternative to DSL for several reasons," this is contradicted by information contained within America's Network magazine by one of the Joint Declarants (Patrick Bennett) as well as Covad's CEO.

use these loops in any fashion, including dividing the frequencies, or using the loop for voice, data, video, or VoIP (in any combination).

10. Covad claims it is inefficient to lease the entire loop and provide a data only service, citing to the vacated Line Sharing Order. Covad's claim has already been rejected, and there is no reason to reverse course now.
11. Likewise, Covad erroneously suggests it does not have access to workable OSS for line splitting. This claim cannot stand. On March 5, 2002, the Georgia PSC filed a Consultative Report with the FCC in connection with BellSouth's application for in-region, interLATA authority in Georgia and Louisiana, CC Docket No. 02-35, in which the Commission found (p.17) that BellSouth had deployed electronic ordering of Line Splitting on January 5, 2002 "consistent with the Commission's 271 Order." This and other evidence of the progress and efforts of BellSouth to provide electronic ordering for line splitting are contained in the, Stipulation of Facts Concerning Electronic Ordering of Line Splitting.⁸
12. Covad also puts forth a novel argument that Line Sharing provides a transition mechanism for VoIP to reach mass market penetration. Covad's purely self serving argument that line sharing is somehow necessary for the transition to mass market VoIP service is clearly flawed. What Covad fails to mention is that VoIP service can be implemented over any broadband connection; consequently, the millions of end-user customers who currently have a broadband connection can easily take advantage of VoIP service without the need for line sharing. In fact, the availability of cable modem broadband service

⁸ See Reply Exhibit EF-4.

as a platform for VoIP (without an underlying voice service) represents a market size that is over twenty times the limited market opportunity that CLECs using line sharing represents. Subsequently, there is no need to extend the transition plan for line sharing. Further proof that a longer transition is not needed appears in Covad's comments regarding their innovative VoIP product as well as the comments of their CEO in America's Network magazine.

13. Moreover, it is worth noting that Covad states it plans to offer combined voice and data services to residential and business customers through VoIP that will utilize the entire loop facility. Covad has never needed line sharing to deliver VoIP to its customers. It can deploy VoIP over copper loops. For example, Covad describes a new Line Powered Voice ("LPV") VoIP product that it intends to deploy in early 2005. The introduction of such a product runs counter to Covad's claim that the removal of line sharing stifles innovation. The only network element that Covad needs to provide its LPV service in combination with its broadband service is a UNE loop, which remains available. Moreover, this new product offering eliminates the need for a local switch, because the next generation DSLAM fulfills that function for Covad's customers. This creative use of the full loop facility is exactly what the FCC expected when it removed access to line sharing as a UNE.
14. Covad claims that its LPV VoIP product is "significantly different than the VoIP offerings of the monopoly voice and cable companies." Covad implies it will be the only user of the next generation DSLAM equipment provided by Nokia, a position that Nokia would likely disagree with. Moreover, the LPV VoIP service

offering described by Covad is similar to a VoIP service offering planned by BellSouth, which BellSouth highlighted to the FCC in a recently filed ex parte.⁹ Covad continues, by describing (on page 22) the “uniqueness” of its broadband service, stating it is the only “DSL offering of its kind” with a maximum download speed of 6 Mbps. Covad fails to mention that cable modem providers also provide download speeds of 6 Mbps and that BellSouth also provides business class DSL service with download speeds up to 6 Mbps. Covad then states “[n]otably, four months after Covad’s announcement, BellSouth followed with its own announcement of a new 3.0 Mbps ADSL service offering.” Covad fails to mention that both Covad and BellSouth were responding to the true market leader (cable modem providers) which had already announced and were providing download speeds up to 3Mbps.¹⁰

15. On pages 23 and 24 of its comments, Covad denigrates the viability of cable modem service, stating “cable providers must offer essentially the same broadband service to all customers” and that most cable companies do not provide static IP addressing, as well as symmetric speeds for business customers. A cursory review of cable provider websites (Comcast, Charter, Cox, Time Warner, etc.) clearly shows that they offer different levels of service to different customers, as well as static IP and other enhanced service offerings like web hosting, email, etc. Significantly, when Covad compares the advantages of

⁹ See BellSouth Ex Parte filed in WC Dockets 04-36 & 03-211 on 10/7/04.

¹⁰ On 10/2/03 Comcast Communications increased speed from 1.5M to 3M at no additional charge, and Time Warner Cable increased its download speed from 2Mbps to 3Mbps in October of 2003.

its symmetrical data offerings to cable and other intermodal competitive alternatives, it is comparing its SDSL service, which utilizes the entire loop facility, and does not require line sharing. This apples to oranges comparison is misleading at best and does not support the supposed need for line sharing.

16. Covad also suggests that *USTA II* caused it damage. Covad's rhetoric is belied by reality -- when the TRO became effective in October 2003, BellSouth had 21,974 line sharing arrangements in place. As of September 2004, there were 22,174.
17. Covad asserts it needs a different type of hot-cut. It does not. Covad's LPV offering simulates the functionality of the ILEC circuit switch (allowing the end user to continue to use their analog handsets), thus the only transition needed is to connect an existing loop to a collocation space and moving cross connections from the ILEC switch to the CLEC collocation space, which is done today. BellSouth has hot-cut processes in place to accommodate changes from UNE-P to loops that terminate in CLEC collocation spaces. The process is the same for all loops. Covad is trying to create the illusion that loops containing VoIP based services would require a different hot-cut process. Specifically, Covad details a hot-cut procedure in BellSouth's territory (pp. 61-63). Many of the steps that Covad outlines are either completely unnecessary, or completely within the control of the CLEC. For example, the second step, where the CLEC "informs the customer that he will have to disconnect his RBOC voice service before the order for an xDSL capable loop can be placed with the RBOC" is completely unnecessary. The provision of a new xDSL capable loop can be accomplished

without disconnecting the existing service. The next six steps continue with the faulty logic that somehow the same facilities that are currently in use must be reused for the broadband service that will carry the VoIP service. The final step, “approximately 14 days later, the RBOC will port the original customer number to the DLEC...” can be completely avoided if the CLEC orders a coordinated hot-cut. The reality is that Covad could make the transition from ILEC based circuit switched voice to CLEC based VoIP in two easy steps completely within their control. Covad could ready their collocation facilities to accept the UNE-L (with both DSL and LPV VoIP service), and simply order the hot-cut from BellSouth’s switch to their collocation cage. With their LPV product (where the next generation DSLAM simulates the functionality of the traditional circuit switch), the end-user would not require any new voice equipment, and the voice service would have only a momentary disruption during the actual hot cut process.

18. In closing, CLECs are not impaired without access to line sharing. Covad attempts to perpetuate a need for line sharing while failing to recognize that competition for communications services occurs between numerous entities that can provide a wide array of broadband and voice services over a number of intermodal broadband opportunities.

Demonstration of Significant Intermodal Broadband Competition

19. Covad claims its service is the only competitive alternative to cable and ILEC broadband yet it offers no data to support this conclusion. Covad also contends that cable companies did not generally build their plant to provide access to business in commercial centers...” A recent Study by InStat/MDR shows this

statement to be false.¹¹ This study demonstrated that cable modem service is not only available to small business, but is leading the choice for broadband in both main and branch offices. For main offices surveyed, 43.7% used cable modem, followed by Fixed Wireless (22.3%), ADSL (19%), Full T1 (12.7%), Satellite (9.1%), Fractional T1 (8.6%), Gigabit Ethernet (7.8%), V/S/HDSL (7.2%), Centrex (6.1%), Integrated T1 (5.5%), Frame Relay or ATM (3.7%), and T3 (2.7%). In branch offices, the competition for broadband is even stronger. Of the branch offices surveyed, 39% used cable modem, followed by the use of Full T1 (27.4%), ADSL (18.3%), Fractional T1 (17.8%), Fixed Wireless (16.2%), Integrated T1 (13.1%), Gigabit Ethernet (12.9%), V/S/HDSL (11.6%), T3 (9.8%), Frame Relay or ATM (9.3%), Centrex (8.7%), and Satellite (7.4%). This survey provides strong evidence that businesses have many broadband options. Indeed, many customers indicated that they were using cable modem service as well as other types of broadband service at the same time.

20. This study is further supported by BellSouth' own research on cable modem availability to residential and small business customers. In the second half of 2003, BellSouth sampled end user telephone numbers and addresses (including business numbers and addresses) on major cable modem provider websites. This sampling consisted of inserting these telephone numbers or addresses into the cable companies' websites to determine whether the telephone number or address showed as qualifying for cable modem service. Once the telephone number or address was accepted as valid by the cable company, BellSouth

¹¹ Burney, Kneko and Colin Nelson, *Cash Cows say "Bye-Bye"*, In-Stat/MDR, December 2003.

identified the query as “accepted” or as an “accepted query.” 157,888 telephone numbers or addresses were accepted queries. Of these 157,888 telephone numbers or addresses, 85% were identified as qualified for cable modem service throughout BellSouth’s region. Additionally, in BellSouth’s most competitive central offices, 87% of these 157,888 telephone numbers or addresses were identified as qualified for cable modem service. 30,639 business telephone numbers or business addresses qualified for cable modem service out of a total 51,012 business numbers or business addresses regionwide. Stated differently, 60% of the business lines tested by BellSouth qualified for cable modem service. This is a conservative view of competitive cable modem availability since almost an entire year has passed since this study was completed and cable modem providers have added to their deployment and service capabilities during the interim. BellSouth attempted to update this information in order to provide this Commission with the more current data, however, cable companies’ websites now contain an acceptable use policy (which policies were not included when BellSouth’s original research was done) that prevents such an update.

21. Covad itself recognizes that there are multiple capabilities that can be used to offer broadband services. In the America’s Network article referenced previously, Covad outlines a three phase approach for deployment of wireless broadband, and highlights trials of WiMAX technology in Louisville, KY, and San Francisco, CA. “Covad’s second phase, expected to be up as early as October, will consist of building out entire wireless broadband regions as an overlay to existing footprint to offer portability in the short term, says Ron Marquardt,

Covad's director of product development." Patrick Bennett states "Should WiMAX not continue for some reason, Covad's strategies would remain the same." The article states "Covad executives hope to have a commercial deployment up and running by the spring or early summer of 2005." This contradicts the claim in the Joint Declaration that "offering broadband services over wireless is not an alternative to DSL"

22. Covad contends "there are no alternatives to the ILEC's loop plant" arguing that "contrary to the ILECs' arguments, cable, wireless and satellite facilities are not viable alternatives to DSL (for both residential and business customers)." The ability for Covad to implement its narrow business plan, however, is not the Commission's goal, nor what the law requires. The important consideration is whether consumers have a choice for broadband. There is significant competition in the broadband market for both residential and business consumers. Consumers can choose between cable modem service, DSL, wireless, and in some cases, power line broadband from power companies.
23. The Joint Declaration states that "most [satellite broadband] services are not two-way." This is not accurate; both of the leading providers of consumer focused satellite broadband service (DirecWay and Starband) offer two-way satellite based broadband service and do not rely on a dial-up return. Indeed, the InStat study cited above found satellite broadband had a 9% market share in main offices, and a 7% market share in branch offices. It is clear that small business consumers clearly believe that satellite broadband is a viable form of intermodal competition.

FTTC/FTTH and Hybrid/Fiber Unbundling Issues

24. Covad argues that deregulation of “loops that are already partly fiber, or somehow terminate in a packet switching fabric” will not encourage innovation. What Covad ignores is that its attempts and the attempts of other CLECs to unbundle ILEC packet switches caused BellSouth to “freeze” investment in some states for fear of having to provide its newest technology at or below its cost. Indeed, due to regulatory and legal uncertainty, BellSouth has been inhibited from investing in innovative technologies in its network. The attempts of Covad, the CLEC Coalition, and others to require ILECs to unbundle packet switching and next generation fiber technology should be rejected once again.
25. On page 26 of its comments, Covad states “The TRO decision to deny access to legacy hybrid fiber facilities took effect immediately, and immediately denied Covad and other CLECs access to tens of millions of existing subscribers serviced by these facilities.” Additionally, Covad suggests UNE-L access to “legacy hybrid facilities” should be required. Covad’s failure to define legacy hybrid facilities is simply an attempt to obligate ILECs to incorporate any packet switching capabilities as part of the unbundled access to UNE loops.
26. The comments of the CLEC Coalition (pages 143-150), seek to restrict broadband deregulation rules to require access to DS1 and DS3 circuits, regardless of the underlying technology being utilized. However, there is a significant difference to a Time Division Multiplexed (“TDM”) T1 that is used to aggregate voice and data services over traditional 64kb voice channels, and a packetized T1 that uses ATM, Frame Relay, SONET, IP, or other type of packet based technology to encapsulate and transport the customer’s data. The CLEC Coalition’s oversimplification that

both use “clocking” functions is analogous to a statement that a web page and a printed brochure both use colors and words and can look very similar, therefore both should be regulated in the same manner. The CLEC coalition continues, stating that BellSouth and SureWest are victims of an “overbroad interpretation” of the broadband deregulation rules. This is not accurate. Moreover, the clarification that BellSouth sought -- to treat FTTC and FTTH as equivalent technologies from a regulatory perspective -- has now been addressed by this Commission, which granted FTTC technology the same regulatory status as FTTH technology on October 14, 2004.

27. This concludes my Affidavit.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.



Eric Fogle
Director – Interconnection Operations

Subscribed and sworn to before me

This 11th day of October, 2004



Notary Public

HOLLIE B. BRAUNSCHWEIG
Notary Public - Notary Seal
State of Missouri
County of Callaway
My Commission Expires May 31, 2008

WC Docket No. 04-313
CC Docket No. 01-338

Fogle Reply Affidavit

Exhibit – EF - 1

Covad

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By NGUYET LE THOMAS

Wireless is set to become a bigger delivery platform for the resurgent last-mile provider

Few people can appreciate the highs and lows of a competitive telecommunications industry better than Covad

Communications. Growing into the only nationwide high-speed DSL network, surviving a bankruptcy and enduring each regulatory blow ushered on telcos since the Telecommunications Act of 1996, Covad has emerged wiser, profitable and focused on a new market: the broadband wireless space.

"One thing is for sure in this industry — you can't stay the same," says CEO Charles Hoffman. "As the regulatory climate changes and technology prove itself, we're going to get into more VoIP and eventually, WiMAX." "We've gone past the question of whether we're going to do it [offer wireless broadband]. We are," says Patrick Bennett, executive vice president of Covad. "This is about figuring out the best way to do it in the most cost-effective business model."

Unwilling to bet its future on the outcome of regulatory deal-making that is out of its control, Covad has spent the past 18 months restructuring itself in the hope that ultimately, it can differentiate itself from larger, better known competitors. The eight-year-old company took its first step in this direction in March, when it acquired a Silicon Valley start-up called GoBeam for \$48 million in stock.

The deal pushed Covad into the crowded VoIP arena, which larger competitors such as AT&T Corp., Sprint, MCI, giant cable companies and some RBOCs also play.

continued on page 24

WIRELESS GAMBLE

Now, Covad plans to enter the WiMAX arena, a move that is gutsy, daring and somewhat uncertain. But the company stands behind the promises WiMAX holds. Executives believe implementing the technology, which only recently achieved industry-wide agreement on technical specifications for developing products, will be one of its main goals in the next year. Currently, the regional Bells control the copper lines that Covad leases or buys for its DSL service. The company wants to replace that current last-mile copper loop with a wireless link, Hoffman says.

"It's not a great situation to have to rely on our chief competitors to deliver that last mile," Hoffman says. "We believe in wireless. We think WiMAX works. So the big promise is we don't want to rely on the Bells at all."

Covad was among the first companies to join the WiMAX Forum earlier this year. Since then, the company has remained relatively quiet about its WiMAX plans, instead focusing on forging its VoIP service into 46 markets

with plans to enter the top 100 cities by year-end. "No one else even comes close to that," Hoffman says. "VoIP and WiMAX are tools that complements what we've been doing all along."

"This is certainly a smart and aggressive move on their part," says Daryl Schoolar, senior analyst at In-Stat/MDR. "With the uncertainty in the regulatory area with line-sharing and line-splitting, they can't be at the mercy of the RBOCs anymore."

Understanding Covad's history makes its gamble into the wireless space all the more interesting. From its beginnings in 1997, Covad's business was dedicated to selling broadband DSL access to consumers and small companies. But its rise in the DSL market came fast and furious with little room to check on the viability of its business model. When the dot-com bust surfaced, Covad found itself with little capital, debt to the tune of \$1.4 billion and few choices but to file for Chapter 11.

But the story wasn't all bad. Covad emerged from bankruptcy in four

months, was able to keep its customers in a nationwide footprint in the top 100 markets and retained valuable infrastructure that no other company has. Today, the company focuses on selling wholesale DSL services to resellers such as AT&T and MCI.

In the DSL space, Covad is the largest of the non-RBOC competitors. It had 5.6% of total DSL subscriber market share in 2003, according to In-Stat/MDR. SBC leads with 37.6%, followed by Verizon with 24.7%. Covad even counts regional Bells among its customers, reaching a deal in April with Qwest Communications International Inc., which serves a 14-state western territory. And it's targeting the small and medium sized business (SMB) space rather than the consumer market, except through partnerships.

"Given what Covad has as assets, valuable central office equipment, a national

continued on page 26

Covad to rely on service provider partners

Once Covad launches its WiMAX service, expect the company to follow a similar sales model as it did with its DSL service, relying on reseller service providers to get the technology into customers' hands.

Covad says it has yet to finalize a reseller solution strategy, but a company spokesman says it will probably follow its DSL sales model. In that model, Covad relies on large wholesalers, resellers, agents — and, in some cases, its own direct channel — to sell the service. Covad cites service providers like AT&T, Earthlink, Sprint, New Age Networks and Speakeasy among its top DSL resellers. The sales model is

unlike its VoIP service model in which sales move only direct through Covad.

Covad has yet to start its commercial deployment of WiMAX, but the company expects the service to be available by next summer. Although current Covad partners and new resellers will be approached, don't expect to see exclusive contracts. In any given geographic market, several partners likely will be able to sell Covad's WiMAX technology, as long as each partner targets a different niche within the geography, says the spokesman. That should set the stage for targeted vertical sales by VARs, integrators and other solution providers. The company spokesman adds that Covad will most likely launch service

by market groups, much like it did with its VoIP service last June. The initial market areas targeted will probably be located on both coasts and then move to inland markets with no timeline confirmed.

Selling through partners could be a double-edged sword. On one hand, Covad's targeting of SMBs means that its brand awareness, sales and marketing costs can escalate, since it is trying to reach many small groups of potential customers. On the other hand, VARs and service providers that resell Covad's services can expose the company to markets it otherwise would not reach, and perhaps more cost efficiently. One complication: VARs typically target the same small business space that Covad wants to reach with its own sales force.

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footprint and a pretty good wholesale model, it's smart they didn't continue to push consumer and residential DSL," says Albert Lin, director of research at American Technology Research. "No one else is targeting the SMBs, so it has been pretty successful for them."

"They changed themselves from being a DSL provider to being a communications provider for the SMB market," adds Schoolar. "This is just another step in the right direction for them."

THREE-PHASE DEPLOYMENT

Covad is taking a unique approach with its wireless strategy. The company wants to own and manage its own network. This is Covad's way of controlling end-to-end traffic, quality and service, says Hoffman. The approach is unique because companies don't generally try to be the end-all, be-all unless they're trying to deploy a large-scale network — a strategy more common to the ILECs. But ILECs don't typically target the small and medium-sized

businesses, and that's the exact group Covad reaches.

Covad recently completed a preliminary deployment in Louisville, Ky. where it partnered with an established vendor to trial "WiMAX-compliant equipment," according to Bennett. Executives would not mention the name of the vendor because they decided not to follow through with the service. "We realized there was nothing they offered that we couldn't do ourselves," Bennett says.

Covad now is setting up its second trial in the San Francisco Bay area. Unlike the Louisville trial, which provisioned existing customers on the unnamed partner's network, the test bed for this trial — a mini version of what the company hopes to do nationwide — will be built by Covad from scratch.

Covad has a three-phase plan for



FAST FACTS: Covad goes wireless

- Major DSL partners include AT&T, Earthlink, Sprint, Speakeasy, MegaPath, MCI
- Completed trial of "WiMAX-compliant equipment" in Louisville, Ky
- Expects to begin second trial in S.F. area by year's end
- Commercial deployment planned for spring/summer 2005

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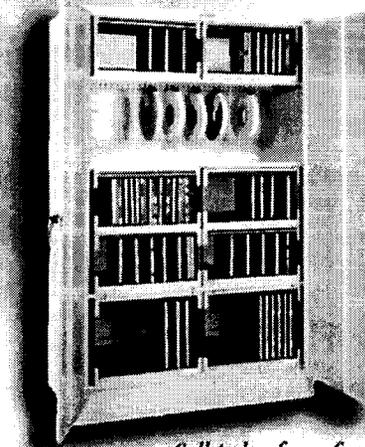
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"We've gone past the question of whether we're going to do [wireless broadband]. This is about finding the best way to do it in the most cost-effective business model."

—Patrick Bennett, executive VP, Covad

WiMAX. "In phase one, we put friendly customers on several vendors' equipment to test the performance and the key perimeters that are necessary to validate our business plan," Bennett explains.

Covad's second phase, expected to be up as early as October, will consist of building out entire wireless broadband regions as an overlay to its existing footprint to offer portability in the short-term, says Ron Marquardt, Covad's director of product development.

As for frequency, Marquardt says officials are looking to work on the 5.8Ghz unlicensed bandwidth, although they are not ruling out putting the network on a different unlicensed band. However, Marquardt says it will not likely use the 2.4Ghz band. "There's too much interference in there right now," he says.

If all goes well in the upcoming Bay area trial, Covad executives hope to have a commercial deployment up and running by the spring or early summer of 2005.

OVERCOMING OBSTACLES

In any ambitious venture, the question of financial viability looms. The problem with being smaller and targeting the small business market is the need for capital, something Covad lacks, says American Technology's Lin. "Instead of making a single sale to thousands of potential customers, they're winning customers about 40-

50 lines at a time, costing them more per line," he says.

Another issue Covad faces, according to Lin, is its strength in branding and awareness. Ultimately, does it have enough of a brand name to sell itself, Lin asks, because brand names like SBC, Verizon and Qwest are more recognizable?

There is also the related issue of whether the WiMAX standard will actually be completed by mid 2005 as planned. Would Covad's business strategy change if, for example, key players like Intel deserted the technology, or is there is a delay in the standard's ratification? Bennett says no. "Should WiMAX not continue forward for whatever reason, Covad's strategies would remain the same," he says.

The next year will be an investment period, says Lin. After that, it's critical to ask whether the company's value-added proposition ends up being as unique as it claims. Covad's bet is that owning and operating its own network is an advantage. But several issues need to be resolved before that is determined.

First, will Covad's customers really want a wholly owned controlled network? Also, what are its competitors planning for the same market space?

In the end, Covad's ability to change its business plan quickly is going to help the company grow significantly, says Lin. "Covad," he says, "is a transition story." **AN**

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WC Docket No. 04-313
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Fogle Reply Affidavit

Exhibit – EF - 2

inside case

Cox telephone gamble pays off as customer base soars

RBOC disenchantment is stoked by offering strong customer service, triple-play bundling and competitive pricing **BY AL SENIA**

When Cox Communications executives decided in 1997 to start offering telephone service to cable customers in affluent Orange County, Calif., the idea was viewed by many in the telephone industry with skepticism and uncertainty. After all, Pacific Bell had a loyal customer base in the area between Los Angeles and San Diego, and Cox had little experience in the phone business.

Seven years later, Cox has morphed into the 12th largest telephone company in the United States. Its initial phone experiment, bolstered with sophisticated marketing efforts, highly competitive pricing and a strong emphasis on customer service, has blossomed into a bonafide CLEC phone business that successfully competes head-on with incumbent Bell carriers around the country.

Cox has signed up more than 1.1 million wired phone customers in 5.2 million homes spanning 13 markets nationally and has become the leading phone provider in cities like Omaha, Neb. It passes more than 10 million homes with its cable footprint. Cox is planning to roll out phone service to the 11 remaining non-phone Cox markets within the next few years. The company offered its first VoIP telephone

service in Roanoke, Va. last December and will expand it to four new areas by year's end. In Orange County, Cox over the years wrested 121,500 homes away from SBC (which took over Pacific Bell), gaining about a 40% penetration rate in its cable service area.

"We've accomplished this with a strong emphasis on customer service," says Mike Pacifico, director of marketing, Cox Digital Telephone. "We've found there are plenty of customers who want to get away from the RBOCs. Our customer sign-up rate exceeded all our expectations."

SERVICE AWARDS

Cox has skillfully leveraged its cable, telephone and broadband services with its customer base and offered bundled discount pricing, convenient combined billing and easy, reliable customer service accessible by phone or online. In fact, Cox scored a real coup in July when J.D. Power and Associates gave its phone business the highest customer service ranking in the western United States for the second consecutive year. The company also was ranked first out of 15 in overall customer service satisfaction nationwide in the bundled service segment. Its residential long distance service was singled out for providing high clarity, easily understandable billing, flexible payment methods and a willingness to back up its customer service claims.

Cox has emerged as a highly visible and effective telephone provider. In Orange County, for example, Cox skillfully leverages its large cable customer base with offers to sign up for bundled services. A customer who signs up for the "Cox Digital Suite" of cable, phone service and Internet access can choose one of four options: a \$10 reduction in the monthly cable bill, free local phone service, free cable modem rental or free



Cox's existing telephone service utilizes coaxial cable, but the company is preparing to expand its VoIP efforts.

Cox phone market growth

Year	Customers	Phone Markets
1997	1,340	1
1998	27,700	4
1999	101,800	8
2000	244,600	9
2001	453,500	10
2002	718,400	10
2003	988,400	12
2004 thru 2Q	1,133,600	13

digital cable. (Each choice equates to about a \$10 monthly savings.) A bundle of basic cable, phone and cable modem service would cost a Cox customer about \$125 per month in Orange County. Pacifico notes that bundling services creates customer "stickiness" that lowers turnover. In fact, Cox' phone customer churn rate is running less than 3% annually.

In July, J.D. Power and Associates gave Cox phone service its highest customer service ranking in the western United States for the second consecutive year.

Cox also separately prices its phone service quite competitively. New residential customers can keep existing phone numbers and will get their first line activated free by Cox if they switch over. One especially popular feature from Cox is a second household telephone line priced at \$4.99 a month, less than half SBC's price. An SBC customer in Orange County with two

lines, unlimited local and long distance calling and several popular features like call waiting and voice mail pays about \$80 per month. A Cox phone customer pays about \$15 to \$20 less, if the service bundle discount is included.

Pacifico notes rates can vary among Cox' different service areas depending upon the competitive landscape. "We want the RBOCs' customers," he says. "We view ourselves as a CLEC."

One big advantage for Cox is that it routes the telephone calls over its cable footprint, which eliminates any dependence upon SBC or the other regional Bells. "We do have a line into the homes, and it is not theirs," notes Pacifico. "We route the calls through the coaxial cable."

Cox also is gaining new operating efficiencies through its recent entry into VoIP phone service. Cox is now convinced VoIP offers the same quality as its wired service and it markets both its wired and VoIP service as one Cox Digital Telephone product, so the type of service is transparent to residential end users. "We view VoIP as a technology not a service," Pacifico explains, noting Cox customers don't have to hassle with self-installation. The company plans to roll out its new phone service later this year. **AN**

Inside Sources

Project: Cable provider Cox Communication entered the telephone business in 1997 in Orange County, Calif., hoping to leverage its growing customer base and create new revenue streams. It has since expanded its service to half of its cable markets and plans additional telephone rollouts, viewing itself as a full-fledged CLEC.

Market Execution: The company has expanded telephone service to 13 markets across the country, reaching 1.1 million customers, and has grown into the nation's 12th largest telephone company. Rollouts to four additional markets are planned by year's end. Cox places a heavy emphasis on customer service, skillful marketing and product bundling. It was recently singled out by J.D. Power and Associates for its excellent customer service and bundling strategies.

Business Case: Cox made an early strategic decision to grab customers from RBOC competitors by underpricing them and offering bundled product discounts. Its recent entry into VoIP seems likely to provide additional cost savings and efficiencies. Cox phone prices typically undercut incumbent providers and it gains added leverage through triple-play bundling of voice, video and data.

Our Read: Cox has been especially successful with its telephone service offerings and has signed up 40% or more of its cable customers in the markets it serves. Churn rate is very low. Access to customer service representatives via phone or Internet is efficient and reliable. VoIP could provide a quality challenge, but Cox believes it has a reliable backbone in place. It also has gained sufficient telephone experience to leverage new technology successfully.

WC Docket No. 04-313
CC Docket No. 01-338

Fogle Reply Affidavit

Exhibit – EF - 3

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THE WALL STREET JOURNAL.

Broadband Miracle

August 26, 2004

By Thomas W. Hazlett

In the mid-1990s, Korean policy-makers set out to inject competition into local telephone service. They enacted rules allowing rivals to challenge the erstwhile state monopoly, Korea Telecom. Yet, by mid-2004, KT still accounted for 95% of local phone lines.

A failure? On the contrary, Korea's policy has proved a smashing success. Because, as an additional lure to attract phone entrants, the government ended regulation of advanced telecom applications. The result: While competitors largely avoided (regulated) voice services, they invested billions to create new (unregulated) high-speed Internet networks. The broadband technologies unleashed by telecom rivals forced KT to modernize its network, which now serves just half of the high-speed market.

And that's a big market: 78% of Korean households subscribe to broadband, the highest penetration rate in the world and well over twice that of the U.S. While broadband via standard cable modems and digital subscriber line (DSL) services are available for about \$27 a month, households paying about \$52 a month receive lightning fast 20 mbps VDSL service – connections sufficient to receive live high-definition TV. In short, the apartment dweller in Korea enjoys the same level of Internet service as the largest corporate customers in the U.S. All this in a country of 48 million which, in 1979, had just 240,000 phone subscribers.

Circle back to the government's original goal: introducing local phone competition. It flopped, at least in the way regulators expected. While minutes of use on KT's phone network declined by a stunning 12% last year, the primary reason is intermodal competition as consumers switch to mobile phones (with 36 million subscribers) and Internet substitutes. Given ubiquitous broadband, voice traffic is migrating to "Voice over Internet protocol" (VOIP) and e-mail.

U.S. policies and outcomes are different. The 1996 Telecommunications Act set about to introduce local rivalry just as the Koreans were making their policy moves. But while the Act struck down state franchise phone monopolies, going to competition cold turkey was considered too harsh. Regulators attempted to ease the transition with ambitious network sharing mandates. These allowed entrants to use the existing phone network facilities at prices set by regulators. (The rules are typically referenced as "unbundling," as they allow new retail service competitors to use various pieces of an incumbent's network.) Determining these complicated terms and conditions has taken more than eight years. And in June, federal rules lapsed after being overturned by the courts, leaving the entire regulatory arrangement in limbo.

Korea avoided this path. KT's new rivals Hanaro and Thrunet (among others) were denied the opportunity to use KT's network to deliver signals the "last mile." They scrambled for efficient alternatives. By using fiber-optic capacity leased from a power company, cable TV lines, and new transmission facilities built from scratch, competing networks emerged and broadband services took off.

Sang-Seung Yi, an economist at Seoul National University, explains that the "Korean broadband market succeeded because of fierce facilities-based competition among Hanaro, Thrunet and KT. This took place

not because of 'smart' government regulation such as unbundling, but because of the absence of regulation." Other factors feed the broadband miracle, of course. Koreans live in close proximity to one another, so the cost of building networks tends to be low. The Korean government has subsidized certain applications and invested public monies in broadband and wireless. And the fabled Korean demand for online gaming suggests a hunger for broadband applications.

But these alibis for why others do not do as well are overrated. Most Koreans do not live in apartments, and many parts of the U.S. are much more densely populated than many parts of Korea. Subsidies have been handed out in Korea, but the major network competitors depend on private capital markets. Thrunet reorganized under bankruptcy laws in 2003, and Hanaro reported its first profits only in mid-2004. The U.S. annually pours multibillion-dollar subsidies into network services, while even larger cross-subsidies are embedded in rates, all without seeming to gain any advantage in network growth. As for appetite, Korean demands were revealed only after Internet cafés – or "PC baangs" – dotted the country, luring customers to online games, music, and videos. Networks then built-out; subscribers followed.

One large disadvantage of broadband providers in the U.S. is rarely cited: cheap dial-up. Local phone service in most countries, including Korea, is metered; in the U.S., local residential calls are priced at zero. Even at \$25 a month, unlimited broadband is more expensive in America than most dial-up service (when a voice line is shared), whereas in Korea broadband is faster and less expensive. U.S. regulation of local rates inadvertently tips the scales against broadband.

But it is also crucial that Korea's deregulatory climate has protected investments in new infrastructure, inducing capital to flow freely into broadband. As Prof. Yi explains, "Because Hanaro could not 'free-ride' on KT's investments, they made massive investments in laying out fiber-optic cables. That, in turn, prompted KT to make its own massive investments. And it could realize 100% of its returns, because it had no unbundling requirements." A report issued by Korea's Ministry of Information and Communications likewise claims that the key to the broadband market is "facilities-based competition."

Traction in the broadband market powers virtuous circles. "Korea's VOIP production is by far the most advanced," writes one consultancy of technology solutions for the about-to-explode Internet telephony market. Overall, the Korean government reports that IT now accounts for 13% of GDP, easily above the U.S. level of 8%.

In campaign 2004, Americans have already been treated to the candidates jockeying over the broadband problem. President Bush stated the basic position of both candidates when he declared: "[W]e rank 10th amongst the industrialized world in broadband technology and its availability. That's not good enough for America. Tenth is 10 spots too low as far as I'm concerned." The policies are far more troubling than the rounding error. The lesson offered by the country in first place is that deregulation, cold turkey, may actually work a lot better than the alternative.

Mr. Hazlett, a senior fellow at the Manhattan Institute, formerly served as chief economist of the Federal Communications Commission.

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About Thomas Hazlett: articles, bio, and photo

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Exhibit – EF - 4



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Bennett L. Ross
General Counsel - Georgia

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August 6, 2004

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AUG 06 2004

EXECUTIVE SECRETARY
G.P.S.C.

DELIVERED BY HAND

Mr. Reece McAlister
Executive Secretary
Georgia Public Service Commission
244 Washington Street, S.W.
Atlanta, Georgia 30334-5701

Re: *Investigation of BellSouth Telecommunications, Inc.'s Provision of Network Elements for xDSL Service Providers; Docket No. 11900-U*

Dear Mr. McAlister:

Enclosed herein for filing in the above-referenced proceeding, please find an original and seventeen (17) copies, as well as an electronic version, of the parties' Stipulation of Facts concerning electronic ordering of line splitting. I would appreciate your filing same and returning the two (2) extra copies stamped "filed" in the enclosed self-addressed and stamped envelopes.

Thank you for your assistance in this regard.

Yours very truly,


Bennett L. Ross

BLR:nvd
Enclosures

cc: Jeffrey C. Stair, Esquire (via electronic mail)
Mr. Leon Bowles (via electronic mail)
Mr. Patrick Reinhardt (via electronic mail)
Parties of Record (via electronic mail)

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AUG 06 2004

EXECUTIVE SECRETARY
G.P.S.C.

BEFORE THE
GEORGIA PUBLIC SERVICE COMMISSION

In Re:)
)
Investigation of BellSouth Telecommunications,)
Inc.'s Provision of Unbundled Network Elements)
for xDSL Service Providers)
_____)

Docket No. 11900-U (Phase II)

STIPULATION OF FACTS

BellSouth Telecommunications, Inc. ("BellSouth"), AT&T Communications of the Southern States, LLC ("AT&T"), MCI metro Access Transmission Services, LLC and MCI WorldCom Communications, Inc. ("MCI"), and DIECA Communications, Inc. d/b/a Covad Communications Company ("Covad") (hereinafter referred to collectively as "Parties") stipulate to the facts set forth below. The inclusion of such facts in this Stipulation does not constitute an admission by any party that such facts, though accurate, are relevant to this proceeding.

1. In 2001 BellSouth organized a Line Splitting Collaborative, the kick off meeting for which was held on April 19, 2001. Subsequent meetings of the Line Splitting Collaborative were held in May and June 2001 and have continued to this day.

2. At the inception of the Line Splitting Collaborative, members of the Collaborative adopted a charter which provides, in relevant part, that "[t]he mission of the collaborative is to support the *development of, with the mutual agreement to, the processes and procedures required to jointly implement line splitting* in the UNE environment." It was understood and agreed by Collaborative members that all issues associated with the development of or modifications to BellSouth's Operations Support Systems ("OSS") to accommodate line splitting would be referred in the first instance to the Change Control Process ("CCP").

3. On August 13, 2001, BellSouth filed a letter with the Commission representing that "BellSouth can implement the full production of Line Splitting in December, 2001 but can only do so without the benefit of beta testing." In that letter, BellSouth provided a production deployment date, with beta testing, of January 7, 2002. A true and correct copy of the August 13, 2001 letter is attached hereto as Appendix 1.

4. On October 17, 2001, the Georgia Public Service Commission entered an order that, in relevant part, directed BellSouth to provide "electronic ordering for Line Splitting" by January 5, 2002 ("October 2001 Order"). A true and correct copy of the October 2001 Order is attached as Appendix 2.

5. Two Change Requests ("CRs") have been submitted to the CCP to implement electronic ordering for line splitting. The first -- CR0441 -- was submitted by BellSouth to the CCP on July 2, 2001, and the second -- CR1155 -- was submitted by MCI on April 1, 2003. CR0441 was implemented with Release 10.3 on January 5, 2002, and CR1155 is currently scheduled for implementation with the November 2004 release.

6. The line splitting scenario for which electronic ordering has been available since January 5, 2002 with the implementation of CR0441 is the situation in which a UNE-P customer is migrated to a line splitting arrangement with a splitter owned by a Data LEC ("DLEC").

7. CR0441 was discussed during a CCP meeting on July 25, 2001, at which representatives of Covad were present. CLECs participating in the CCP received draft user requirements for CR0441 on September 7, 2001, and BellSouth conducted a user requirements walk-through meeting on September 20, 2001. Although the minutes of this meeting reflect that Covad was not in attendance, representatives of both AT&T and MCI were present (as were representatives of other CLECs as well as the Florida Public Service Commission). During this

meeting, BellSouth led the review of the user requirements for mechanized line splitting. Two (2) minor corrections were noted, and final user requirements were distributed to the CLECs on October 8, 2001. The final user requirements also were posted to the CCP website.

8. Prior to the implementation of CR0441 on January 5, 2002, no CLEC objected to the scope of the line splitting electronic ordering functionality implemented with this change request, and no CLEC ever sought to modify CR0441 to include additional electronic ordering capabilities.

9. On February 1, 2002, BellSouth filed a letter with the Commission indicating: "consistent with the Commission's October 17, 2001 Order, BellSouth implemented the electronic ordering of Line Splitting on January 5, 2002". A true and correct copy of the letter is attached as Appendix 3.

10. On January 18, 2002, MCI filed a petition in Docket No. 6863-U requesting "expedited workshops or other proceedings" to address OSS, change management and data integrity issues, including BellSouth's compliance with the Commission's October 2001 Order. AT&T filed a motion in support of MCI's petition on January 23, 2002. True and correct copies of MCI's petition and AT&T's motion are attached as Appendices 4 and 5, respectively.

11. In response to MCI's petition, the Commission issued a notice dated February 18, 2002, directing that the parties to Docket No. 6863-U file comments addressing various issues raised by MCI and AT&T. A true and correct copy of the Commission's notice is attached as Appendix 6.

12. On March 5, 2002, the Commission filed a Consultative Report with the FCC in connection with BellSouth's application for in-region, interLATA authority in Georgia and Louisiana, CC Docket No. 02-35, in which the Commission found (p.17) that BellSouth had

deployed electronic ordering of Line Splitting on January 5, 2002 “consistent with the Commission’s 271 Order.” The 271 Order to which the Commission was referring is its October 2001 Order. True and correct copies of the relevant pages of the Commission’s Consultative Report are attached as Appendix 7.

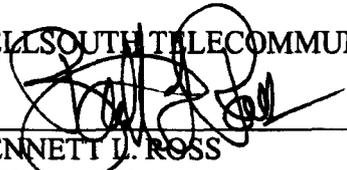
13. At present, there are 42 line splitting scenarios as defined by the Line Sharing Collaborative, in addition to the line splitting scenario for which electronic ordering was implemented on January 5, 2002. In this proceeding, Petitioners AT&T, MCI, and Covad are requesting that electronic ordering of those “options” prioritized 1-10 by the CLECs, which involve 29 of the 42 potential line splitting scenarios, be submitted to the CCP as Type 2 (Regulatory) changes, rather than as Type 5 (CLEC Initiated) changes.

14. Manual ordering with one Local Service Request (“LSR”) currently exists for 24 of these scenarios (although one of these scenarios is scheduled for electronic ordering in November 2004). There are three (3) scenarios that require two LSRs which are currently available with manual ordering (although two of these scenarios are scheduled for electronic ordering in November 2004). Of the 29 scenarios requested by Petitioners, two (2) are not available for ordering – either manual or electronic – as no product exists.

15. To the extent any CLEC was interested in expanded electronic ordering capabilities for line splitting beyond that currently available, it could have submitted a Type 5 change request. Under the CCP, a change request that is the result of a regulatory mandate (Type 2 CR) is given precedence over both BellSouth- or CLEC-initiated change requests (Type 4 and Type 5 CRs, respectively). There are numerous OSS enhancements requested by the CLECs, and every Type 5 CR must be prioritized by the CCP to determine which CRs will be implemented first.

Respectfully submitted, this 6th day of August 2004.

BELLSOUTH TELECOMMUNICATIONS, INC.

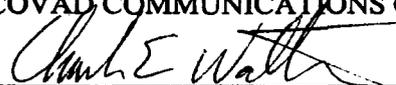

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CERTIFICATE OF SERVICE

This is to certify that on this 6th day of August, 2004, I served a copy of the foregoing upon known parties of record, via electronic mail as follows:

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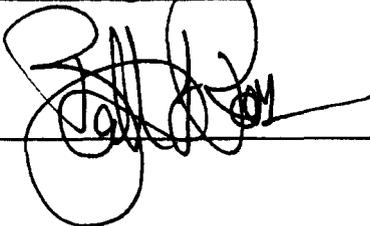
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BELLSOUTH REPLY COMMENTS

**WC Docket No. 04-313
CC Docket No. 01-338**

October 19, 2004

Attachment 4

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554**

In the Matter of)	
)	
Unbundled Access to Network Elements)	WC Docket No. 04-313
)	
Review of the Section 251 Unbundling)	CC Docket No. 01-338
Obligations of Incumbent Local Exchange)	
Carriers)	

**REPLY AFFIDAVIT OF W. KEITH MILNER ON BEHALF OF BELLSOUTH
TELECOMMUNICATIONS INC. ("BELLSOUTH")**

Being of lawful age, and duly sworn upon my oath, I do hereby depose and state:

Professional experience

1. My name is W. Keith Milner. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375. I am Assistant Vice President – Interconnection Operations for BellSouth. I prepared an affidavit submitted as part of these proceedings on October 4, 2004, before the Federal Communications Commission (“FCC”).
2. The purpose of this affidavit is to respond to claims made in the Declaration of Rainer Gawlick on behalf of Lightship Telecom (“Gawlick Declaration”) regarding the manner in which high capacity transport systems are constructed and utilized, which is attached as Appendix A to the Comments of the Association for Local Telecommunications Services (“ALTS”). I also respond to statements made in the Declaration of Keith Coker on behalf of Nuvox, Inc. (“Coker Declaration”) regarding the use of third-party provided transport. Finally, I will respond to statements made in the Joint Comments of the Loop and Transport CLEC Coalition (“CLEC Coalition Comments”) regarding so-called routine network modifications.

Response to Gawlick Declaration

3. In Paragraph 4 of his Declaration, Mr. Gawlick states, “When CLECs construct their backbone fiber networks, they initially deploy and operate an optical interface at a range of different capacities. An OC-3 capacity circuit has the identical capacity as three DS-3 circuits....”. I agree with Mr. Gawlick that fiber

optic systems allow a range of transmission rates given the application of different electronic equipment attached to the ends of the fiber optic strands. Said another way, the capacity of a working fiber optic system is in practice rarely limited to the maximum “throughput” of the fiber optic strands themselves (though theoretically possible) but rather by the maximum transmission speed of the attached electronics (Lasers, multiplexers and the like). This point is crucial in appreciating the wide array of service arrangements possible once the initial installation of the fiber optic cables themselves has been completed.

4. Carriers typically deploy fiber-optic facilities that can operate at a range of capacities determined by the electronics attached to them. For example, when laying fiber it makes sense to deploy high-capacity, “OCn” facilities so that there will always be enough bandwidth to handle the traffic on a given loop. The term “OCn” refers to Optical Carrier where “n” designates the optical carrier level. The optical carrier level “n” is directly related to the quantity of DS3 capacity units the system is capable of handling simultaneously. For example, OC48 systems provide capacity for 48 individual DS3 transmission “pipes”. The carrier can then attach electronics to subdivide (or “channelize”) the available capacity, activating the amount of capacity and number of channels needed along the loop. The electronics used to do this channelization of OCn facilities into DS1 or DS3 facilities are relatively inexpensive, are widely available, and can be quickly installed whenever the carrier has demand for DS1 or DS3 facilities.
5. Costs for network extension to serve additional buildings or locations along a fiber optic route consist of one-time capital expenditures as well as operating

expenses incurred on a recurring basis. These costs are incurred at three points in the network: at the newly connected building, at the currently collocated wire center or building that the new location is being connected to, and at a “node” along the fiber cable route itself. Light Guide Cross-connects (“LGX”) allows the attachment of individual fiber optic strands (via fiber optic “jumpers”) to connectors that allow the fiber strands to be interfaced with other electronics such as the multiplexers. The fiber optic “pipe” is then channelized into smaller DS1 or DS3 transmission paths (dependent on customer demand) via plug-in electronic cards and other cross-connect panels. At the customer’s premises, channel-bank equipment is utilized to convert the DS1 or DS3 pipes into individual channels (at DS0 level) via so-called D-4 channel bank or similar equipment. The intra-building network cables provides the inside wiring required to access the entire customer location.

6. Between the customer location to which the carrier’s network will be extended and the node on the carrier’s existing fiber-optic network is the fiber optic cable itself. Here, a carrier would incur the (distance-sensitive) material cost of the fiber-optic cable, as well as construction expenses and other fees that may be paid for use of poles, ducts or conduits. At the node location on the carrier’s fiber optic network, the carrier would incur costs for the same types of equipment needed at the customer’s premises (LGX bays, fiber jumpers, etc.)
7. As described above for loops, carriers typically deploy fiber-optic facilities that can operate at a range of capacities determined by the electronics attached to them. For example, when laying fiber it makes sense to deploy high-capacity,

OCn facilities so that there will be enough bandwidth to handle all traffic on a given route and leave additional capacity available for growth. The carrier can then attach electronics to subdivide (or “channelize”) the available capacity, activating the amount of capacity and number of channels needed along the route. The electronics used to do this channelization of OCn facilities into DS1 or DS3 facilities are relatively inexpensive, are widely available, and can be quickly installed whenever the carrier has demand for DS3 transport facilities. The fact that the capacity of the facility itself is at the OCn level is therefore independent of the carrier’s ability to provide a dedicated DS1 or DS3 transport route over that facility.

8. In Paragraph 9 of his Declaration, Mr. Gawlick states, “We are not aware of any alternate providers that offer DS-1 transport in our service areas.” If Mr. Gawlick means that no alternate provider in Lightship’s service area has built a fiber optic transport system capable of at most a single DS-1 transmission path between two points, then I am confident Mr. Gawlick is correct. However, modern Synchronous Optical Network (“SONET”) based fiber optic systems (such as those built by CLECs and other facilities based service providers) can and do allow the transport of DS-1 “envelopes” within higher speed transmission systems. Thus, it appears to me that what Mr. Gawlick is actually saying is that no service provider has offered Lightship single DS-1s. However, in cases where Lightship has the need for several DS-1s between two points, those DS-1s may be multiplexed together onto a DS-3 transmission facility, which may include a self-

provided DS-3 transport facility or transport facilities obtained from other carriers.

9. In Paragraph 11 of his Declaration, Mr. Gawlick states, “Carriers that deploy facilities must evaluate the density of traffic flowing in both directions, requiring that the offices on both ends of a route must generate substantial originating traffic to make self-deployment economic.” I disagree. Modern fiber optic transport systems are symmetrical in nature. That is, two transmit paths (which can be thought of as being a “send” path and a “receive” path) are established and both paths work at the same time. Further, each path has identical “bandwidth” or transmission speed. Thus, Mr. Gawlick’s suggestion that traffic levels must be substantially equal may be ignored.
10. A short example will establish the fallacy in Mr. Gawlick’s reasoning. For simplicity, assume the use of only voice grade equivalent transmission paths (operating at DS-0 transmission level) required between a pair of central offices – Central Office A and Central Office B. Assume further that there are 672 end users in Central Office A who simultaneously make calls to 672 end users in Central Office B. If the origination and termination ratios in each central office were perfectly matched (for example, half of the 672 calls (336 calls) were originated by end users in Central Office A at the same time 336 calls were originated by end users in Central Office B, a total of 672 discrete DS-0 paths would be simultaneously required, which would mean that a single DS-3 could handle the entirety of the traffic between the two central offices. Thus, even if all the traffic flows in one direction (that is, from Central Office A to Central Office

B), a single DS-3 is sufficient to carry those simultaneous calls. Indeed, a single DS-3 is sufficient to carry 672 simultaneous calls regardless of which end users originate the calls (whether served by Central Office “A” or Central Office “B”). So, rather than the directionality of the carried traffic, the significant factor is the maximum amount of transmission capacity simultaneously required in total between the end points rather than the direction of the traffic.

Response to Coker Declaration

11. In Paragraph 3 of his Declaration, Mr. Coker acknowledges that NuVox “currently utilizes third-party providers that have built into NuVox’s location and connected to NuVox’s switch,” but claims that “these providers are not utilized to provide DS1 transport for EELs.” While I have no reason to dispute the accuracy of Mr. Coker’s statement, it is revealing that Mr. Coker did not claim that NuVox could not utilize those transport facilities as one component of so-called Enhanced Extended Links (“EELs”) if NuVox chose to do so. This is because the interoffice component of the EEL is typically a high capacity transmission system that has been “channelized” into discrete DS-1 paths, which could readily be multiplexed into multiple DS3 paths. Indeed, earlier in that same paragraph, Mr. Coker states, “All of this third-party transport is provided either at the OC-3 level or higher, or, in some instances, at multiple DS3 capacity levels.” In other words, individual EEL transport components (that is, multiple DS-1 paths) may be multiplexed onto the “multiple DS3” paths, which NuVox can and does acquire from competitive providers in at least some instances.

12. In Paragraph 4 of his Declaration, Mr. Coker insists that while NuVox “frequently receives solicitations from third-party providers to provide transport services,” NuVox never receives offers “at the DS1 capacity level” and “currently obtains no DS1 level transport from third-party providers to reach customers.” It is not surprising that NuVox does not receive solicitations for DS-1 facilities given that it would be rare that a carrier building fiber optic facilities between two points would build those facilities in such a way as to only be able to transmit a single DS-1 (roughly 1.5 megabits per second). Instead, as discussed earlier in this Affidavit, once the fiber optic cables are installed, the attachment of electronic equipment to the ends of the fiber optic strands allows for very large transmission capacities, well in excess of DS-1. Mr. Coker admits that NuVox “has been able to obtain a handful of DS1 loop connections from third-party providers, but the number is minimal.” The point is that there are no technical constraints that would limit NuVox’s use of third party providers’ “loop connections” as NuVox has done precisely that, even if only in small quantities.
13. In Paragraph 8 of his Declaration, Mr. Coker claims that “significant barriers to using third-party providers” exists in reaching wire centers in which they are not already located, even if they have a fiber ring in the vicinity.” However, these alleged “barriers” are not technical in nature, as the remainder of Paragraph 8 makes clear. Instead, Mr. Coker describes a “certain level of capacity” to which NuVox will commit before the third party provider commences construction. Here again, Mr. Coker cites to no technical constraints that would prohibit third party provision of transport facilities.

14. In Paragraph 8, Mr. Coker also discusses what he describes as an “additional set of barriers” preventing third party providers from extending their respective networks into ILEC central offices. Among Mr. Coker’s list of “barriers” are splicing fiber, establishing diverse routes into a single building, and obtaining required permits. I would note that these same activities are required of any party constructing a fiber optic network, including ILECs. Moreover, these alleged “barriers” are routine challenges that must be dealt with by nearly every facilities-based carrier. Thus, there is nothing novel about these activities whether performed by an ILEC or a third party provider. Instead of referring to Mr. Coker’s listed items as “barriers”, I would describe them as “business as usual” for any facilities based provider of fiber optic transmission systems. Once again, Mr. Coker offers not even one technical constraint limiting a carriers’ construction and provisioning of high capacity transmission systems.
15. In Paragraph 11 of his Declaration, Mr. Coker states, “Although an EEL is legally defined as a combination of a loop and transport, in reality it is a single end-to-end circuit.” Mr. Coker is mistaken. An EEL consists of two separate facilities (that is, the loop facility and the transport facility), which must be connected in order to achieve continuity from the end user’s premises to the CLEC’s switch. This distinction is important because, as Mr. Coker makes clear, the loop portion could be replaced “with a new loop” though Mr. Coker surmises that such a replacement could potentially result “in a loss of service for the customer.” While Mr. Coker is correct that some temporary disconnection of the “old” loop is required as the “new” loop is being connected (a process which is analogous to

the “hot cut” process utilized to disconnect a loop from the incumbent’s switch and reconnection to the CLEC’s switch), with proper coordination, such a disconnection and reconnection of EEL components can be seamless from the customer’s perspective. Indeed, even a few common sense measures such as performing such rearrangements outside of normal business hours or on Saturdays would make that rearrangement even more transparent to the end user.

16. In Paragraph 12 of his Declaration, Mr. Coker discusses the work steps involved in replacing an incumbent’s loop facilities with a third party’s facilities and questions whether ILECs “have procedures in place to handle such orders.” BellSouth already offers CLECs precisely the functionality that Mr. Coker apparently desires. For example, BellSouth’s FCC Tariff No. 1 in Section 13.3.22 offers “Intra-Office Collocation Cross Connect Service,” which “provides for a collocator to interconnect its network with that of another collocator at the Telephone Company’s [that is, BellSouth’s] premises and to connect its collocated equipment to equipment of another collocated carrier with the same Telephone Company premises...” Alternatively, the CLEC could choose another offer found in that same Tariff, namely “Physical Access Cross Connect Service.” This offer is found in Section 13.3.23 and consists of “a one to one dedicated transmission path between the ordering customer’s tariffed service offerings or transport equipment located in the Telephone Company Central Office and the ordering customer’s own physically collocation arrangements or another telecommunications carrier’s (collocator’s) physical collocation arrangement.”

17. Mr. Coker discusses what he terms “[a]dditional management difficulties” when more than one supplier provides components of the EEL. I would note that telecommunications carriers have for many years cooperated in trouble isolation and repair activities. Indeed, high levels of communications and coordination have long been used between incumbents and Interexchange Carriers. Many times specific responsibilities are outlined in Operational Understandings between the parties such that confusion is eliminated as to which party should perform a given step such that overall outage time is held to a minimum. The supposed “difficulties” Mr. Coker raises in this part of his Declaration are in no way novel and are dealt with effectively daily between facilities based carriers as provisioning activities and trouble conditions are encountered.

Response to CLEC Coalition Comments

18. The CLEC Coalition, on page 122 of its Comments, suggests certain actions the Commission should take with respect to network modifications. For example, the CLEC Coalition suggests that the Commission “should clarify that the ILECs’ cost of providing routine network modifications are (or at least should be) already included in the recurring TELRIC-based rates for unbundled high-capacity loops.” To the extent the costs associated with specific work activities the ILEC performs in the provisioning of unbundled loops are included in the loop rates established by a state commission, BellSouth agrees that additional cost recovery from the requesting CLEC would not be necessary or appropriate. However, to the extent the CLEC Coalition is suggesting that if the cost of certain work

activities was not included in the ratemaking process but should have been, BellSouth disagrees with the notion that the ILEC is simply out of luck and may not seek recovery of the costs for those non-considered items from a requesting CLEC.

19. While the CLEC Coalition makes vague references to “one of the ILECs” and “certain carriers” and “such ILECs” whom the Coalition claims try to “levy new and additional charges”, the CLEC Coalition fails to back up its claims with one single example of the conduct about which it is complaining. If the situation were nearly as egregious as the CLEC Coalition’s sloganeering “anti-competitive ILEC schemes” would suggest, surely it could have provided the name of the ILEC in question and the facts such that a meaningful analysis and response could be developed, which the CLEC Coalition did not do. Absent concrete facts to support the CLEC Coalition’s claims, they should be summarily disregarded by the Commission.
20. The CLEC Coalition also demands (page 125 of its Comments) that the Commission “should make clear that ILECs may charge a separate fee for routine network modification only if they charge their own retail customers for such services in comparable situations.” First, and most apparently, incumbents do not make unbundled loops available to retail customers, thus it is unclear to what extent any “comparable situations” would exist, as the CLEC Coalition suggests. As I pointed out earlier in this Affidavit, BellSouth will seek recovery through means other than state Commission-set nonrecurring rates for unbundled loops only for the costs related to work activities not included in such non-recurring

rates. Thus, the CLEC Coalition's suggestion in this regard is, at best, an "apples to oranges" comparison. Here again, the Coalitions either have no facts regarding a situation in which they believe an incumbent has attempted to pass charges on to CLECs inappropriately or, for their own reasons, have declined from presenting them here. In either case, the Commission should reject the CLEC Coalition's proposal.

21. Further, the affiant sayeth naught.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.



W. Keith Milner
Assistant Vice President
Interconnection Operations

Subscribed and sworn to before me

This 18th day of October, 2004



Notary Public

Gay P. Ditz
Notary Public, DeKalb County
Georgia
My Commission Expires
February 09, 2007