

**COMMONWEALTH OF KENTUCKY**

**BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of: )  
)  
Petition Of Bellsouth Telecommunications, Inc. ) Case No. 2004-00427  
To Establish Generic Docket To Consider )  
Amendments To Interconnection Agreements )  
Resulting From Changes Of Law )

**REBUTTAL TESTIMONY OF EDWARD J. CADIEUX  
ON BEHALF OF COMPSOUTH**

**September 8, 2005**



1 Prior to my employment at NuVox, from 1996 to 1998 I was the Director, Regulatory  
2 Affairs—Central Region for Brooks Fiber Properties. I served as in-house regulatory  
3 counsel for that CLEC from its inception through its first three years of operation, and my  
4 duties included obtaining state public service commission certification and initial  
5 interconnection agreements with incumbent local exchange carriers. My responsibilities  
6 also included analyzing FCC decisions relating to interconnection, unbundled network  
7 elements and related matters. Prior to my employment at Brooks Fiber, I was employed  
8 as State Regulatory Counsel—Southwest Region for MCI from 1988 to 1995  
9 representing MCI in state commission proceedings affecting the company's long-distance  
10 business.

11  
12 Prior to entering the private sector, I served as an Assistant Attorney General for the  
13 Commonwealth of Massachusetts in the Public Utility Division in 1987. From 1980 to  
14 1986 I was employed by the Missouri Public Service Commission in various legal  
15 positions, including Administrative Hearing Officer and Deputy General Counsel.

16  
17 **Q. Have you previously testified before any regulatory or legislative body?**

18 A. Yes, I have previously testified before the Arkansas Public Service Commission, the  
19 Florida Public Service Commission, the Illinois Commerce Commission, the Indiana  
20 Utility Regulatory Commission, the Kansas Corporation Commission, the Mississippi  
21 Public Service Commission, the Missouri Public Service Commission, the Oklahoma

1 Corporation Commission, and the Tennessee Regulatory Authority. I have also have  
2 submitted *ex partes* and affidavits to the FCC.

3  
4 **Q. On whose behalf are you testifying?**

5 A. I am testifying on behalf of Competitive Carriers of the South, Inc. ("CompSouth").

6  
7 **Q. What is the purpose of your testimony in this matter?**

8 A. The purpose of my testimony is to respond to BellSouth's proposed contract language  
9 regarding the applicability of the DS1 transport cap.

10  
11 **II. DS1 Transport Cap**

12 **Q. Please describe the dispute regarding the DS1 transport cap.**

13 A. In the *TRRO* the FCC established a cap on the number of DS1 transport circuits that a  
14 CLEC can obtain as Section 251 UNEs. This dispute relates to scope of that limitation.  
15 CompSouth's position is that the 10-circuit limitation for DS1 transport applies only on  
16 those transport routes where DS3 transport is not available as a Section 251 UNE (i.e., on  
17 those routes where CLECs are not impaired with respect to DS3 transport). On the other  
18 hand, BellSouth's position as reflected in its proposed contract language is that the 10-  
19 circuit DS1 limitation applies to all transport routes.

20  
21 **Q. Is the CLEC position incorporated into CompSouth's proposed contract language?**

1 A. Yes, the CLEC position is incorporated into Section 6.2.4.1 of its proposed contract  
2 language, as follows:

3 BellSouth shall provide CLEC nondiscriminatory access to  
4 unbundled DS1 UNE Dedicated Transport on any Route  
5 connecting a pair of wire centers where both wire centers at the  
6 end points of the Route contain 38,000 Business Lines or four (4)  
7 or more Fiber-Based Collocators. In other words, BellSouth shall  
8 not be required to provide such unbundled DS1 UNE Dedicated  
9 Transport if both of the wire centers defining the CLEC requested  
10 Route are Tier 1 Wire Centers, as defined in this Attachment.  
11 *CLEC shall be entitled to obtain up to (10) DS1 UNE Dedicated*  
12 *Transport circuits on each Route where there is no unbundling*  
13 *obligation for DS3 UNE Dedicated Transport but for which*  
14 *impairment exists for DS1 transport. Where DS3 Dedicated*  
15 *Transport is available as UNE under Section 251(c)(3), no cap*  
16 *applies to the number of DS1 UNE Dedicated Transport circuits*  
17 *CLEC can obtain on each Route. (emphasis added).<sup>1</sup>*  
18

19 **Q. Did any of BellSouth's witnesses address this issue squarely in their direct testimony**  
20 **in this case?**

21 A. Yes, but only very briefly and in the most cursory manner. Beginning at page 23, line 23  
22 of her testimony, BellSouth witness Pamela Tipton simply asserts, "[f]or routes between  
23 wire centers that do not meet the FCC's thresholds [i.e., on all routes where CLECs  
24 continue to be impaired for DS1 transport], a CLEC may obtain unbundled access to no  
25 more than ten (10) DS1 dedicated transport circuits on such routes." That position is also  
26 reflected in BellSouth's proposed contract language that it has presented to the  
27 Commission.<sup>2</sup> I should note that CLEC witness Joseph Gillan anticipated this issue and  
28 addressed it to some extent in his direct testimony (at pages 32-36). My rebuttal

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<sup>1</sup> See Revised Exhibit JPG-1 to the rebuttal testimony of CompSouth witness Joseph Gillan.

<sup>2</sup> See Exhibit PAT-1 (Attachment 2, p. 52), Section 6.6 to the direct testimony of Pamela A. Tipton.

1 testimony on this issue is intended to address the issue in greater detail for the  
2 Commission in light of BellSouth's testimony and its contract proposal.

3  
4 **Q. What is the basis for the CLEC Coalition's position on this issue?**

5 A. The FCC addresses the cap both in its new rules and in the text of the *TRRO*. The  
6 applicable rule is 51.319(e)(2)(ii)(B).<sup>3</sup> While the rule provision does not explicitly  
7 address the limitation on the applicability of the DS1 transport cap, the related text of the  
8 *TRRO* does, and it does so in a clear and unambiguous fashion. Specifically,  
9 paragraph 128 of the *TRRO* states as follows:

10 Limitation on DS1 Transport. On routes for which we determine  
11 that there is no unbundling obligation for DS3 transport, but for  
12 which impairment exists for DS1 transport, we limit the number of  
13 DS1 transport circuits that each carrier may obtain on that route to  
14 10 circuits. This is consistent with the pricing efficiencies of  
15 aggregating traffic. While a DS3 circuit is capable of carrying 28  
16 uncompressed DS1 channels, the record reveals that it is efficient  
17 for a carrier to aggregate traffic at approximately 10 DS1s. When  
18 a carrier aggregates sufficient traffic on DS1 facilities such that it  
19 effectively could use a DS3 facility, we find that our DS3  
20 impairment conclusions should apply. (footnotes omitted)

21  
22 Thus, the FCC is absolutely explicit: the limitation of 10 DS1 UNE transport circuits  
23 only applies on those particular routes where the ILEC no longer is obligated to provide  
24 DS3 UNE transport but where impairment exists for DS1 transport. Under the FCC's  
25 new impairment test, that means that there is a 10 DS1 UNE transport circuit cap on all

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<sup>3</sup> 47 C.F.R. §51.319(e)(2)(ii)(B) Cap on unbundled DS1 transport circuits. A requesting telecommunications carrier may obtain a maximum of ten unbundled DS1 dedicated transport circuits on each route where DS1 dedicated transport is available on an unbundled basis.

1 routes where the end-points are either Tier 1 or Tier 2 wire centers.<sup>4</sup> But the cap does not  
2 apply on routes where either end-point is a Tier 3 wire center. BellSouth's position  
3 ignores paragraph 128, pretending as if it does not exist. In contrast, CompSouth's view  
4 is that the FCC's rule must be read, interpreted and applied in a manner that is consistent  
5 with that portion of the text of the TRRO that explicitly addresses the issue. Paragraph  
6 128 should not be ignored and must be given effect in the parties' interconnection  
7 agreements. Its meaning is clear – the limitation of 10 DS1 UNE circuits to a particular  
8 CLEC applies only on those routes where the unbundling obligation for DS3 UNE  
9 transport has been removed due to a finding of non-impairment, not on all transport  
10 routes.

11  
12 **Q. Is the FCC's general framework for assessing impairment/non-impairment for high**  
13 **capacity facilities relevant to this discussion?**

14 A. Yes. The FCC's discussion in the *TRRO* repeatedly describes its perspective on when a  
15 CLEC is impaired without access to the incumbent's network elements under Section 251  
16 and when it can be expected to turn to other sources of facilities, including self-  
17 deployment. From this perspective the FCC established certain thresholds that it  
18 concluded would indicate that a CLEC is not impaired without access to high-capacity  
19 loops and transport and dark fiber transport.

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<sup>4</sup> Pursuant to the FCC's new impairment rules, CLECs are not impaired with respect to DS3 transport on routes where the end-points are Tier 1 or Tier 2 wire centers; on the other hand, if either end-point is a Tier 3 wire center, impairment continues to exist for DS3 transport. For DS1 transport, impairment no longer exists on routes where both end-points are Tier 1 wire centers – i.e., if either end-point is a Tier 2 or Tier 3 wire center, impairment exists for DS1 transport. Thus, CLECs are impaired for DS1 transport on all routes where they are impaired for DS3 transport, plus on a large number of additional, less dense routes (i.e., where either end-point is a Tier 3 wire center).

1 **Q. How was this analysis applied to DS1 and DS3 transport?**

2 A. The FCC's analysis with respect to transport focused on when it would make economic  
3 sense for a CLEC to either construct a DS3 transport facility or be expected to be able to  
4 acquire a DS3 transport from a provider other than the incumbent LEC. The FCC  
5 concluded as a general matter that transport impairment is related to capacity and that it is  
6 economically feasible for the CLEC (or an alternative provider) to construct DS3  
7 capacity only on routes where both end-points are either Tier 1 or Tier 2 wire centers –  
8 i.e., on routes between relatively more dense wire centers. Conversely, the FCC found  
9 that on routes connecting to relatively less dense wire centers -- where either end-point is  
10 classified as Tier 3 – construction of alternative DS3 capacity is generally not  
11 economically feasible. Therefore, for this category of less dense routes a CLEC remains  
12 impaired in the absence of DS3 UNE transport and can still obtain DS3s as UNEs under  
13 Section 251.

14  
15 With respect to DS1s, the FCC conducted the same sort of analysis but recognized that  
16 alternative wholesale transport opportunities differed for DS3 level and DS1 level  
17 transport, concluding that construction of, or alternative provider availability of DS1  
18 transport is likely to be feasible only on routes between the most dense wire centers –  
19 i.e., those where both end-points are Tier 1 wire centers. As the FCC stated: “we find  
20 that alternative wholesale transport opportunities at the DS1 level are likely to exist or  
21 develop between two [Tier 1] offices. As described above, Tier 1 wire centers are those

1 characterized by very significant competitive facilities presence or potential, as measured  
2 by fiber-based collocation and business lines.”<sup>5</sup>

3  
4 **Q. Is the fact that there are different impairment standards for DS3 versus DS1**  
5 **transport relevant to interpreting the DS1 transport cap?**

6 A. Yes. Since DS3 is simply a larger digital capacity than DS1, there is some cross-over  
7 point at which the level of demand is sufficient that it theoretically could be served  
8 equally by a DS3 or multiple DS1s, depending in part on the relative pricing of DS3  
9 versus DS1 UNEs. In the *TRRO* the FCC found that a reasonable estimate of that cross-  
10 over point is 10 DS1 transport circuits. While a DS3 circuit can carry 28 DS1 transport  
11 circuits, the FCC estimated that it is economically efficient for a CLEC to move to a DS3  
12 transport circuit at the 10 DS1 transport circuit level. In other words, the FCC found that  
13 at or below the 10 DS1 circuit level, traffic aggregation is insufficient to justify a DS3  
14 transport facility. Conversely, above the 10 DS1 circuit level traffic aggregation is  
15 considered to be sufficient such that a single DS3 facility could be substituted for the  
16 multiple DS1 circuits. Whether one agrees or disagrees with the FCC’s judgment that the  
17 “magic number” is 10 circuits, the important consideration for purposes of this discussion  
18 is that the FCC entered into this analysis and did so in the context of its impairment  
19 framework.

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21  

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<sup>5</sup> *TRRO* ¶ 127.

1 **Q. Please explain.**

2 A. The capacity-basis of the transport impairment standard and the potential substitutability  
3 of multiple DS1 transport circuits for a DS3 facility led to a determination that a 10-  
4 circuit cap on DS1s was needed in order to protect the efficacy of non-impairment  
5 findings on DS3 transport. Consider a transport route where the wire center on one end is  
6 Tier 1 and the other wire center is Tier 2. Per the FCC's new rules there is non-  
7 impairment for DS3 transport – i.e., the ILEC is no longer obligated to offer DS3  
8 transport as a UNE on this route. If a CLEC has enough traffic to justify more than 10  
9 DS1 transport circuits on that route, the FCC's view is that the CLEC has enough traffic  
10 that it could substitute a DS3 facility for the multiple DS1 circuits. On routes where there  
11 is no longer impairment for DS3 transport, that substitution would create a potential  
12 “hole” in the DS3 non-impairment finding – i.e., the CLEC could continue to meet its  
13 transport needs via Section 251 UNEs (i.e., via multiple DS1 UNE circuits) even though  
14 its demand is what amounts to DS3 level demand. This “hole” only exists on routes  
15 where the Section 251 unbundling obligation has been removed for DS3 transport – i.e.,  
16 on routes where neither end-point is a Tier 3 wire center. A straightforward reading of  
17 paragraph 128 indicates that it is this potential “hole” that the DS1 transport cap is  
18 intended to plug.

19  
20

21 **Q. Does the *TRRO* make a direct connection between the DS1 transport cap and the**  
22 **goal of protecting impairment determinations?**

23

1 A. Yes. The linkage between the cap is made clear in the final sentence of paragraph 128  
2 which states, “[w]hen a carrier aggregates sufficient traffic on DS1 facilities such that it  
3 effectively could use a DS3 facility, *we find that our DS3 impairment conclusions should*  
4 *apply.*” (emphasis added) If the FCC had intended the cap to apply to all transport  
5 routes, it would have said just that and no more -- there would have been no reason to tie  
6 the DS1 transport cap to DS3 impairment conclusions. Moreover, as I noted at the outset  
7 of this testimony, the first sentence of paragraph 128 is unequivocal regarding the intent  
8 to limit the DS1 transport cap to routes where the DS3 transport obligation has been  
9 removed.

10

11 **Q. Is the rationale that underlies the cap applicable on routes where DS3 transport**  
12 **remains available as a UNE?**

13 A. No, it is not. On routes where DS3 transport remains available as a UNE, there is no  
14 concern that a CLEC might obviate DS3 non-impairment via use of multiple DS1 UNE  
15 transport circuits. In other words, where either wire center is Tier 3, DS3 transport  
16 remains available as a UNE (as does DS1 transport), so on those routes there is no  
17 opportunity for the CLEC to subvert a DS3 non-impairment finding. The regulatory  
18 purpose of the 10 DS1 transport cap is not operative on those routes.

19

20 **Q. Would there be any negative effect on competition if the DS1 transport cap were to**  
21 **be applied to all routes rather than just those where the DS3 unbundling obligation**  
22 **is removed?**

1  
2 A. Yes. If the DS1 transport cap is applied in an over-broad manner, it will have a negative  
3 effect on the use of DS1 EELs and on competition in the small and medium-sized  
4 business customer market where the use of DS1 EELs is most prevalent.

5

6 **Q. What are DS1 EELs?**

7 A. DS1 EELs are DS1 UNE loop/DS1 UNE transport combinations – i.e., DS1 loops that  
8 the ILEC cross-connects to DS1 UNE transport and which are provided at TELRIC  
9 prices. DS1 EELs are often used by CLECs to provide voice, broadband internet, and  
10 bundled voice/broadband internet services to small and medium-sized business  
11 customers. DS1 EELs allow CLECs to extend the geographic scope of their services  
12 beyond the most dense wire centers where collocations are often deployed to include wire  
13 centers with more moderate density.

14  
15  
16 **Q. What would be the impact on DS1 EELs if BellSouth’s position regarding the DS1  
17 transport cap is adopted?**

18  
19 A. If BellSouth’s position on this issue is adopted, the availability of DS1 EELs will be  
20 curtailed to a substantially greater degree than what is contemplated in the *TRRO*.

21

22 **Q. Please explain.**

23 A. If the DS1 transport is applied in the manner contemplated by the *TRRO*, a maximum of  
24 10 DS1 EELs would be available to a CLEC on a subset of the universe of transport

1 routes – i.e., on those routes where both end-points are either Tier 1 or Tier 2 wire  
2 centers. However, on all routes where either end-point is a Tier 3 wire center, the DS1  
3 transport cap would not apply and would not constrain the number of DS1 EELs a CLEC  
4 can deploy. On the other hand, if BellSouth’s position is adopted, a maximum of 10 DS1  
5 EELs would be available on *all* transport routes, including all routes where either end-  
6 point is a Tier 3 wire center. In other words, the incremental effect of BellSouth’s  
7 position is to limit the availability of DS1 EELs on a substantial number of transport  
8 routes serving moderate-to-less dense wire centers.

9  
10 **Q. If BellSouth’s position is adopted, would CLECs still be able to obtain similar**  
11 **facilities from BellSouth?**

12 A. Theoretically, yes, CLECs should be able to obtain a DS1 UNE loop commingled with a  
13 Special Access DS1 transport facility. But this arrangement is not an economically  
14 feasible alternative, particularly for serving small business customers, because ILEC DS1  
15 special access services are priced substantially above TELRIC DS1 transport rates.  
16 Moreover, it remains to be seen whether (and, if so, when) BellSouth will establish  
17 ordering and provisioning systems and processes for such commingled arrangements that  
18 will approach those that have been available for several years for DS1 EELs.

19  
20 **Q. Is BellSouth’s position consistent with the FCC’s policies regarding DS1**  
21 **impairment and regarding the benefits of EELs?**

1 A. No, it is not. With respect to impairment considerations, in the *TRO* the FCC found very  
2 little evidence of DS1 self-provisioning<sup>6</sup> and, regarding the wholesale availability of DS1  
3 transport, the FCC has held that “although competitive fiber has been deployed in many  
4 areas, DS1 transport is not generally made available on a wholesale basis.<sup>7</sup> A nationwide  
5 finding of impairment for DS1 transport was the result. As I have noted previously,  
6 while the FCC backed away from that nationwide finding in the *TRRO*, it did so only to a  
7 limited degree, holding that CLECs are not impaired in the absence of DS1 UNE  
8 transport only on routes where both end-points are the most dense (i.e., Tier 1) wire  
9 centers.<sup>8</sup> With respect to EELs, the FCC concluded among other things that the  
10 loop/transport combinations facilitate the growth of facilities-based competition in the  
11 local market, extend CLECs’ geographic reach and promote innovation.<sup>9</sup> BellSouth’s  
12 proposal to extend the DS1 cap to all transport routes would artificially constrain the  
13 availability of DS1 EELs and is inconsistent with the FCC’s policy favoring their  
14 availability.

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<sup>6</sup> Specifically, the FCC held that, “[a] carrier requiring only DS1 capacity transport between two points typically does not have a large enough presence along a route (generally loop traffic at a central office) to justify the high fixed and sunk costs of self-providing just that DS1 transport circuit. This is because a requesting carrier in need of DS1 capacity transport faces the same fixed and sunk costs as other carriers deploying transport or using alternatives, but faces substantially higher incremental costs across its customer base than a carrier requesting higher capacity transport.” *TRO* ¶ 391. (footnotes omitted)

<sup>7</sup> *Id.*, ¶ 392.

<sup>8</sup> *TRRO* ¶ 126.

<sup>9</sup> *TRO* at ¶ 576.

1 **Q. Are there other reasons why a CLEC might want to maintain more than 10**  
2 **DS1 transport circuits on a route where DS3 transport remains available as a**  
3 **UNE?**

4 A. Yes. It is important to note that converting from DS1 to DS3 transport requires  
5 physical disconnection and reconnection of circuits. That type of network  
6 grooming activity can require allocation of substantial CLEC (and ILEC)  
7 resources, particularly if the project involves a significant number of circuits  
8 across many transport routes. Moreover, where customer-serving circuits are  
9 being disconnected and reconnected, there is always the potential that inadvertent  
10 service outages may occur. There is no reason to force CLECs (and ILECs) into  
11 this type of activity on routes where both DS3 and DS1 transport continue to be  
12 available as Section 251 UNEs – i.e., where the 10 DS1 cap is not required to  
13 protect the efficacy of the FCC’s impairment/non-impairment findings.

14

15 **Q. Are non-recurring charges a factor in this analysis?**

16 A. Yes. BellSouth seeks to impose significant non-recurring charges associated with  
17 disconnecting DS1 transport circuits and establishing DS3 circuits. On routes where both  
18 DS3 and DS1 transport remain available as UNEs, there is no legitimate reason to impose  
19 costly non-recurring charges on CLECs, especially if the CLEC does not otherwise make  
20 the business decision to migrate the DS1 circuits to a DS3 facility.

21

1 **Q. Did the FCC establish a cap on the number of DS3 UNE transport circuits that a**  
2 **CLEC can obtain on a particular route?**

3 A. Yes, the FCC capped the number of DS3 UNE transport circuits that a CLEC can obtain  
4 on a particular route at 12 DS3s.

5  
6 **Q. If the DS1 transport cap applies only on routes where DS3 UNE transport is no**  
7 **longer available, would that create a loophole to the 12 DS3 transport cap?**

8 A. No. The capacity of 12 DS3s is so large relative to a DS1 (it would take 336 DS1s to  
9 equal the capacity of 12 DS3s), there is no practical ability to substitute multiple DS1s to  
10 exceed the 12 DS3 cap. The network inefficiencies that are inherent in that type of  
11 substitution are so enormous that it is not a realistic concern. Clearly the FCC did not  
12 consider this to be a concern, since it did not make any mention of the 12 DS3 cap in its  
13 paragraph 128 discussion.

14

15 **III. Conclusion**

16

17 **Q. Could you summarize your testimony on this issue?**

18 A. Yes. In translating the FCC's DS1 transport cap into the parties' interconnection  
19 agreements, the FCC's rule and relevant text must be read in tandem. Paragraph 128 of  
20 the *TRRO* uses explicit language and includes supporting explanation why this cap  
21 applies only on transport routes where the DS3 UNE obligation is removed. The  
22 regulatory purpose of this cap applies only on those (non-impaired) routes, and expansion  
23 of the cap to all routes (as advocated by BellSouth) is contrary to the FCC's evident

1 intent and would impose substantial additional and unnecessary burdens on CLECs and  
2 on competition.

3

4 **Q. What do you recommend?**

5 A. I recommend that the Commission adopt CompSouth's proposed language which  
6 correctly reflects the *TRRO*'s DS1 transport cap.

7

8 **Q. Does that conclude your rebuttal testimony?**

9 A. Yes, it does.

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a copy of the foregoing testimony has been filed electronically as permitted by the procedural order governing Case No. 2004-00427 this 8th day of September, 2005.

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Douglas F. Brent