

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of the Request of Southwestern	)	
Bell Telephone, L.P., d/b/a AT&T Missouri, for	)	Case No. TE-2006-0053
A Waiver of Certain Requirements of 4 CSR	)	
29.040(4).	)	

**AT&T MISSOURI'S PRE-TRIAL BRIEF**

PAUL G. LANE	#27011
LEO J. BUB	#34326
ROBERT J. GRYZMALA	#32454
MIMI B. MACDONALD	#37606

Attorneys for Southwestern Bell Telephone, L.P.  
d/b/a AT&T Missouri  
One AT&T Center, Room 3518  
St. Louis, Missouri 63101

April 13, 2006

## TABLE OF CONTENTS

	<u>PAGE</u>
EXECUTIVE SUMMARY .....	1
BACKGROUND.....	4
ARGUMENT.....	6
I.    RULE 29.040(4) DOES NOT REQUIRE CPN TO BE INCLUDED IN CATEGORY 11-01-XX BILLING RECORDS FOR WIRELESS- ORIGINATED CALLS.....	6
A.    The Rule Itself Contains No Requirement to Include CPN in Category 11 Records for Wireless-Originated Calls.....	6
1.    Rule 29.040(4) Contains No Such Requirement .....	6
2.    Rule 29.040(6) Does Not Apply .....	7
B.    The Commission’s Rules, Consistent with FCC Rules, Only Require CPN to be Transmitted with Each Call, Which is Significantly Different Than a Requirement to Include CPN in Billing Records.....	9
1.    The Missouri Commission’s Rule .....	9
2.    The FCC’s Rule.....	11
C.    Technical Industry Standards Recognized by the Commission’s Rule Do Not Require CPN to be Included in Category 11 Records for Wireless-Originated Calls.....	12
1.    Telcordia Standards Do Not Require Inclusion of CPN in the Originating Number Field for AMA Recordings for Wireless-Originated Calls .....	12
2.    The OBF EMI Standard Does Not Require Inclusion of CPN in Category 11 Records for Wireless-Originated Calls.....	13
3.    The Lucent Tandem Switches’ Technical Inability to Capture AMA on Wireless-Originated Calls Corroborates the Lack of Such a Requirement in the Telcordia and OBF EMI Standards .....	18

II.	THE FAILURE TO EXPLORE THE IMPACTS OF REQUIRING CPN TO BE INCLUDED IN CATEGORY 11 BILLING RECORDS FOR WIRELESS-ORIGINATED CALLS DEMONSTRATES THAT THE COMMISSION DID NOT INTEND RULE 29.040(4) TO IMPOSE SUCH A REQUIREMENT .....	19
A.	A Requirement to Include CPN in the Wireless Category 11 Records is Inconsistent with Industry Standards.....	20
B.	Carriers in Missouri and Other Parts of the Country Do Not Include CPN in Wireless Category 11 Records .....	21
C.	AT&T Missouri's Lucent Switches, without a \$1 Million Software Upgrade, are Technically Incapable of Capturing CPN in AMA Recordings, Making it Unavailable For Inclusion in Category 11 Records.....	22
D.	Terminating Carriers Do Not Need or Use CPN to Bill Terminating Charges for Wireless-Originated Calls.....	22
1.	All Carriers Use OCN -- Not CPN - to Identify the Appropriate Wireless Carrier to Bill .....	22
2.	CPN is Unreliable for Jurisdictionalizing Wireless Traffic and Commission Rules Prohibit Such Use.....	23
3.	Terminating Carriers have the Capability to Record CPN themselves if they have a Business Need for It. ....	23
CONCLUSION.....		24

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of the Request of Southwestern                     )  
Bell Telephone, L.P., d/b/a AT&T Missouri, for                     )           Case No. TE-2006-0053  
A Waiver of Certain Requirements of 4 CSR                     )  
29.040(4).                     )

**AT&T MISSOURI'S PRE-TRIAL BRIEF**

AT&T Missouri<sup>1</sup> respectfully submits this Pre-Trial Brief to assist the Missouri Public Service Commission ("Commission") with its determinations in this proceeding.

**EXECUTIVE SUMMARY**

As the Commission itself has acknowledged in a proceeding before the Cole County Circuit Court, Rule 4 CSR 240-29.040(4)<sup>2</sup> contains no obligation requiring carriers to include Calling Party Number ("CPN") in Category 11 billing records for wireless-originated calls. It merely states that:

When transiting traffic for any carrier other than an incumbent local exchange carrier, originating tandem carriers shall, for each compensable call, create and make the following available upon request by a terminating carrier, at no charge to the terminating carrier:

(A) A category 11-01-XX record or, if no Carrier Identification Code is available, a Missouri-specific Category 11-01-XX record.

The Commission's rules, consistent with Federal Communications Commission ("FCC") rules, only require CPN to be delivered with each call (i.e., signaled), which is significantly different than a requirement to include CPN in billing records, which are exchanged many weeks after the calls occurs. As the evidence will show, AT&T Missouri is in full compliance with these rules as it delivers the CPN with each wireless call in the Signaling System 7 ("SS7") call signaling

---

<sup>1</sup> Southwestern Bell Telephone, L.P., d/b/a AT&T Missouri will be referred to in this pleading as "AT&T Missouri." It previously conducted business as "SBC Missouri."

<sup>2</sup> This provision of the Commission's new Enhanced Record Exchange Rule will be referred to for purposes of brevity in this Brief as "Rule 29.040(4)."

stream when it is provided by the originating carrier. Thus, even though CPN is not provided in billing records on these types of calls, it is made available in signaling information on calls that cross AT&T Missouri's network and terminate to other carriers. Therefore, if a terminating carrier has a business need to do so, it could capture and record CPN itself at its own switch, which the evidence shows such carriers can do and have done.

The Commission's rules, as reflected in Section 29.020(5)(A), require Category 11 billing records to conform to technical telephone industry standards. These standards, however, do not require CPN to be included in Category 11 billing records for wireless-originated calls. First, Telcordia Technologies GR-1504, which provides the generic requirements for the generation of Automatic Message Accounting ("AMA") recordings by telephone company switches, requires that in place of CPN for wireless-originated calls, the "per trunk group billing number of the wireless carrier" is to be recorded by the switch in the Originating Number field for AMA data. As the population of the "From Number" in the Category 11 billing records is dependent on the Originating Number field in the AMA data recorded by telephone company switches, the absence of CPN in the Originating Number field makes CPN unavailable for inclusion in Category 11 EMI billing records on these types of calls.

In addition, the evidence will show that the Ordering and Billing Forum ("OBF") Exchange Message Interface ("EMI") guidelines, which provide the industry standards for the content of Category 11 billing records, show that CPN has never been a required field in the Category 11 record for wireless-originated calls. Rather, the guidelines reflect that such records are to include the responsible wireless carrier's Operating Company Number ("OCN"), which informs the terminating carrier of the appropriate wireless carrier to bill, which is fully consistent with the Commission's requirement to provide OCN, as is made clear in Section 29.020(5)(A) of

the Rule (the definition of the Missouri Category 11-01-XX record). AT&T Missouri's Category 11 record for wireless-originated calls contains the OCN and fully complies with these requirements to identify the responsible carrier.

The evidence will show that Lucent Technologies, the leading American manufacturer of telephone company switches, never designed the capability into its 5ESS tandem switches of capturing CPN on wireless-originated calls in the recorded AMA data. Certainly if applicable industry practices had required CPN to be included in this type of record (or in Category 11 billing records), Lucent would have built the capability to capture it in its tandem switch AMA recordings to use and populate in the Category 11 record. But it did not, and the evidence shows that it could cost upwards of \$1 million to develop new software to enable the switch to perform this function.

Moreover, no carrier operating in Missouri included CPN in its wireless Category 11 records until very recently, well after the Commission issued its Order of Rulemaking. It was only as a result of the Commission's Order that Sprint recently changed its record for wireless-originated calls, which shows that Sprint interprets industry standards as AT&T Missouri and CenturyTel do. AT&T Missouri and CenturyTel's records on these types of calls currently do not include CPN, which is consistent with how other major carriers across the country, such as BellSouth and Verizon have interpreted applicable industry standards.

And finally, the evidence will show that terminating carriers do not need or use CPN to bill terminating charges for wireless-originated calls. All carriers use the OCN -- not the CPN -- to identify the appropriate wireless carrier to bill. CPN cannot be used to bill because of a wireless customer's ability to roam across multiple jurisdictions and onto another wireless

carrier's network. Because of this, the Commission's own rules prohibit CPN to be used to jurisdictionalize wireless-originated calls.

The evidence demonstrates that the Commission could not have intended to impose a new requirement on carriers to include CPN in Category 11 billing records for wireless-originated calls. Had the proposed rule sought to impose a CPN requirement, the parties to the rulemaking would have submitted all of the evidence presented herein, as they do not hold back relevant evidence when a rule which could have significant economic and operational impact is being considered. Parties did not, however, precisely because the rule as proposed did not indicate any intent to impose a new requirement that CPN be provided in billing records. Nor did the Commission's fiscal note accompanying the proposed rule address the significant costs which the industry would incur had CPN been required in the billing records for wireless-originated calls, which certainly would have been required had the Commission intended such a requirement through Rule 29.040(4).

### **BACKGROUND**

1. Factual Background. In Missouri, multiple types of communications companies, such as wireless companies, IXC's and LEC's, utilize their own separate networks to offer services to customers. In order to permit customers of the different providers to communicate with customers of other providers, the networks must be interconnected.

In addition to allowing calls to be completed, the carriers must cooperate in exchanging billing records reflecting the calls that traverse the network. These records are usually exchanged weeks after a call occurs and facilitate a carrier's billing of appropriate charges to other carriers for the handling of that other carrier's call (i.e., "intercarrier compensation"). These intercompany billing records are created by large, computerized carrier billing systems

that utilize data captured from live calls as they flow through the network. The dispute in this phase of the proceeding focuses on whether Rule 29.040(4) requires the intercompany billing record for wireless-originated calls (i.e., a call from a cell phone) to include the Calling Party's Number ("CPN").<sup>3</sup>

2. Procedural Background. On February 26, 2003, Staff in Case No. TX-2003-0301 filed a Motion for Finding of Necessity for Rulemaking, noting that the Commission had ordered the implementation of an enhanced record exchange process for intercompany compensation billing records that the Commission anticipated would not only reduce the number of intercompany billing discrepancies, but also make it easier to resolve those that do arise. The Commission issued an Order Finding Necessity for Rulemaking on March 27, 2003.

The Commission published Notices of Proposed Rulemaking in the Missouri Register on January 3, 2005, with a February 2, 2005 comment date.<sup>4</sup> Comments were filed by SBC Missouri (now AT&T Missouri), the Missouri Independent Telephone Group ("MITG"), the Small Telephone Company Group ("STCG"), a group of three CLECs (Socket, XO and Big River), Sprint, Staff, and a group of wireless carriers. The Commission held a public hearing on the proposed rules on February 9, 2005, permitting various parties to provide sworn statements to the Commission and to answer questions from individual Commissioners. Under this procedure, no prefiled testimony was permitted and the parties were not allowed to cross-examine each other's representatives.

---

<sup>3</sup> To be clear, the dispute here involves the requirement to capture, record and populate CPN information into the intercarrier billing record. This dispute does not involve the passing of the CPN in the call signaling stream that accompanies a live call through the network, which enables downstream carriers to receive the CPN and display the calling party's telephone number on the receiving customer's Caller ID display.

<sup>4</sup> Proposed Rules, Mo. Reg. Vol. 30, No. 1 (January 3, 2005).

The Commission issued its Order of Rulemaking, which was published in the Missouri Register along with the final rules on June 15, 2005.<sup>5</sup> The rules became effective on July 30, 2005.

AT&T Missouri filed an Application for Rehearing and Alternative Request for Temporary Variance or Waiver on July 14, 2005, which the Commission denied on July 28, 2005. The Commission, however, granted AT&T Missouri a temporary wavier and established this proceeding to evaluate its request for a permanent variance or waiver.<sup>6</sup>

3. The Issue. In an Order issued March 1, 2006, the Commission bifurcated this proceeding into two phases. The first phase focuses on what Rule 29.040(4) requires and the second phase focuses on AT&T Missouri's request for a waiver or variance. The issue to be decided in this first phase of the proceeding is:

Does Rule 4 CSR 240-29.040(4) require the Calling Party Number for wireless-originated calls to be included in the billing record?

### **ARGUMENT**

#### **I. RULE 29.040(4) DOES NOT REQUIRE CPN TO BE INCLUDED IN CATEGORY 11-01-XX BILLING RECORDS FOR WIRELESS-ORIGINATED CALLS.**

##### **A. The Rule Itself Contains No Requirement to Include CPN in Category 11 Records for Wireless-Originated Calls.**

1. Rule 29.040(4) Contains No Such Requirement. Nothing in Rule 29.040(4) imposes an obligation requiring carriers to include CPN in billing records for wireless-originated calls. It merely states that:

When transiting traffic for any carrier other than an incumbent local exchange carrier, originating tandem carriers shall, for each compensable call, create and

---

<sup>5</sup> Orders of Rulemaking, Mo. Reg. Vol. 30, No. 12 (June 15, 2005) at pp. 1373-1401.

<sup>6</sup> Order Denying Application for Rehearing and Granting a Temporary Waiver, Case No. TX-2003-0301 (C.P. 716), issued July 28, 2005.

make the following available upon request by a terminating carrier, at no charge to the terminating carrier:

(A) A category 11-01-XX record or, if no Carrier Identification Code is available, a Missouri-specific Category 11-01-XX record.

Although never referenced in the proposed rule, the Commission in its Order of Rulemaking adopting Rule 29.040(4) stated that “transiting carriers shall include CPN as part of the Category 11-01-XX records created for wireless-originated traffic occurring over the LEC-to-LEC network.”<sup>7</sup> That single statement is the only reference supporting the claim that the rules requires inclusion of CPN in the billing record for wireless traffic. Subsequently, however, the Commission clarified this statement in a brief filed with the Cole County Circuit Court, stating:

The Commission concedes that the single sentence of which SBC Missouri complains is an incorrect statement of what Rule 4 CSR 240-29.040(4) requires. This is so because the Commission now believes that neither a “category 11-01-XX record” nor a “Missouri-specific category 11-01-XX record” must include the CPN for wireless-originated calls.<sup>8</sup>

Staff is in agreement with AT&T Missouri on this issue and has offered the following assessment:

SBC is correct. Nothing in the rules specifically requires that CPN be placed in the billing record of wireless originated calls. Rather, 4 CSR 240-29.040(4)(A) merely requires that a “category 11-01-XX billing record” be created.<sup>9</sup>

2. Rule 29.040(6) Does Not Apply. STCG and MITG claim that Rule 29.040(6) “specifically prohibits replacing the end-user’s originating number with some other number . . . in the Category 11-01-XX records. . . .”<sup>10</sup>

MITG and STCG are incorrect. First, they have misstated the rule. This rule is very focused in both its application and purpose, specifically prohibiting the substitution of the

---

<sup>7</sup> Order of Rulemaking Adopting 4 CSR 240-29.040, Mo. Reg. Vol. 30, No. 12 (June 15, 2005) p. 1389.

<sup>8</sup> MoPSC Brief, Cole County Case No. 05AC-CC00732, filed December 9, 2005, page 6.

<sup>9</sup> Constable Direct, p. 5, Staff’s August 11, 2005, Memorandum in response to the Commission’s Order, Case No. TE-2006-0053, p. 5.

<sup>10</sup> Schoonmaker Rebuttal, p. 5.

responsible end-user's "originating telephone number" with another "originating telephone number." Rule 29.040(6) states:

The originating telephone number shall be the telephone number of the end-user responsible for originating the telephone call. Under no circumstances in sections (1), (2), (3), (4) and (5) above shall any carrier substitute an originating telephone number other than the telephone number of the end-user responsible for originating the telephone call.<sup>11</sup>

Second, inclusion of the Billing Telephone Number ("BTN") in the "From Number" field in the Category 11 billing record on wireless-originated calls is exactly what GR-1504 directs the switch vendors to record in the Originating Number field for AMA recordings. Third, the intent of this rule, as Staff's comments on this section of the rule make clear, was to combat the fraudulent practice of replacing CPN on a long distance IXC-handled call with a local originating telephone number to make the call appear to be local in order to avoid the payment of access charges (which are much higher than local reciprocal compensation charges -- and which are zero within the MCA because MCA traffic in most cases is handled on a bill-and-keep basis):

The Staff opines that this section would prohibit the practice whereby unscrupulous carriers may engage in the practice of stripping the correct telephone number and inserting a jurisdictionally improper telephone number into the call path or billing records.<sup>12</sup>

Clearly, the concern Rule 29.040(6) was intended to address does not apply here. As AT&T Missouri witness Jason Constable explained, "no stripping" of CPN from the Category 11 billing record for wireless calls occurs because CPN is not available in the first instance as CPN was never captured in the AMA switch recordings on wireless-originated traffic. But AT&T does deliver CPN with each call in the network signaling it provides. Also, BTN is not "a jurisdictionally improper telephone number," as it is usable information that helps to correctly identify the wireless carrier that brought the call into the LEC-to-LEC network and is responsible

---

<sup>11</sup> 4 CSR 240-29.040(6).

<sup>12</sup> Order of Rulemaking Adopting 4 CSR 240-29.040, p. 1389.

for compensating all downstream carriers. Moreover, as AT&T Missouri witness Chris Read explains, a wireless telephone customer's ability to roam across multiple jurisdictions and onto other wireless carriers' networks make CPN unreliable for use in billing.<sup>13</sup> And for this very reason, the Commission's own rules prohibit CPN to be used to jurisdictionalize wireless-originated calls:

. . . We caution all terminating carriers that any attempt to use an OCN or CPN to determine the proper jurisdiction of wireless telephone calls on the LEC-to-LEC network is not permissible under our local interconnection rules. We recognize that this limitation contrasts with processes historically employed on the Interexchange Carrier network in which CPN is used to determine the jurisdiction of wireless calls. Again, we caution that our rules will not permit such practices on the LEC-to-LEC network.<sup>14</sup>

**B. The Commission's Rules, Consistent with FCC Rules, Only Require CPN to be Transmitted with Each Call, Which is Significantly Different Than a Requirement to Include CPN in Billing Records.**

1. The Missouri Commission's Rule. The only specific requirements in the Commission's Enhanced Record Exchange Rule to provide CPN appear in Sections 29.040(1) and (2) and require "originating caller identification" to be delivered with a call, which AT&T Missouri complies with.<sup>15</sup>

(1) All telecommunications companies that originate traffic that is transmitted over the LEC-to-LEC network shall deliver originating caller identification with each call that is placed on the LEC-to-LEC network.

(2) All telecommunications carriers that transit LEC-to-LEC traffic for another carrier shall deliver originating caller identification to the other transiting carriers and to terminating carriers.<sup>16</sup>

---

<sup>13</sup> Read Direct, pp. 11-12.

<sup>14</sup> Order of Rulemaking Adopting 4 CSR 240-29.010, Mo. Reg. Vol. 30, No. 12 (June 15, 2005) pp. 1377-1378.

<sup>15</sup> AT&T Missouri generally supported Rules 29.040(1) and (2) and recommended adding the following clarifying sentence because a transit carrier cannot deliver CPN to downstream carriers if it does not receive it from the originating carrier: "It is recognized that transiting carriers can only deliver caller identification to the extent it receives this information with the call." This suggestion, however, was not adopted. Constable Direct, pp. 14-15.

<sup>16</sup> 4 CSR 240-29.040(1) and (2).

The Commission's intent for its rules to require the transmission of CPN with the call -- and not as part of the Category 11 billing record -- is clear from the Commission's Orders adopting these rules. In response to comments received on Rule 29.040(1), the Commission in its Order of Rulemaking stated:

. . . we find that permitting incumbent carriers to transport telecommunications traffic without CPN denies terminating carriers the necessary information required to identify the proper responsible party. Such information is particularly important in an originating responsibility system, such as Missouri's LEC-to-LEC network business relationship. Moreover, failure to transmit calling party identification robs Caller ID consumers of what they are paying for - mainly, the calling party's telephone number. We again note that primacy of the FCC's emergency 911 standards for wireless carriers, phase 1 of which requires transmittal of Caller ID for wireless telephone calls. We find that our rules require nothing more than that which has previously been required by the FCC. . .

<sup>17</sup>

And in its response to comments received concerning Rule 29.040(2), the Commission stated:

there is simply no reason for calls traversing the LEC-to-LEC network to lack CPN. We encourage transiting carriers to require CPN from those with whom they interconnect and provide transiting services. If Sprint or any other carrier is utilizing inferior equipment that does not transmit CPN, those carriers are encouraged to petition the Commission for a variance from this rule.<sup>18</sup>

The requirement to deliver (i.e., to transmit) CPN with a call is far different from a requirement to include CPN in a Category 11-01-XX billing record for wireless-originated calls, which are exchanged many weeks after the calls occur. AT&T Missouri's network is configured to pass the CPN it receives from the wireless carrier's network in the SS7 signaling stream. Thus, AT&T Missouri signals the CPN in the SS7 call signaling stream, when AT&T Missouri receives CPN and where it is technically feasible for it to do so (e.g., where the terminating LEC uses SS7 trunks). However, delivering CPN in the call signaling stream, and including CPN in Category 11 billing records are two completely different functions, which are performed by

---

<sup>17</sup> Order Adopting Rule 4 CSR 240-29.040, p. 1387 (emphasis added).

<sup>18</sup> Order Adopting Rule 4 CSR 240-29.040, p. 1388 (emphasis added).

entirely different sets of telephone company systems and are governed by two completely different sets of industry practices.<sup>19</sup>

But just because AT&T Missouri does not provide CPN in its Category 11 records on these types of calls does not mean that CPN is unavailable to terminating carriers. AT&T Missouri delivers CPN over its SS7 signaling network on nearly all calls that cross its network and terminate to other carriers. Thus, if terminating carriers have a business need to do so, the small LECs could capture and record CPN at their own switches.<sup>20</sup> And as the MITG and STCG's own evidence shows, they have done that, both in network tests performed in Case No. TO-97-593 in July, 2000, and more recently in traffic studies performed by Mark Twain, Chariton Valley, Mid-Missouri and Northeast Missouri Rural Telephone Companies.<sup>21</sup>

2. The FCC's Rule. The FCC's rules only require CPN to be transmitted with the call in the SS7 signaling stream. They do not require CPN<sup>22</sup> to be included in intercarrier billing records for wireless-originated calls:

Except as provided in paragraph (d) of this section, common carriers using Signaling System 7 and offering or subscribing to any service based on Signaling System 7 functionality are required to transmit the calling party number (CPN) associated with an interstate call to interconnection carriers.<sup>23</sup>

In its discussion on Rule 29.040(1) concerning the transmission of CPN on wireless calls, the Commission stated that "We find that our rules require nothing more than that which has previously been required by the FCC."<sup>24</sup>

---

<sup>19</sup> Constable Direct, p. 13.

<sup>20</sup> AT&T Missouri cannot signal CPN in the relatively rare instances when it does not receive it, nor can AT&T Missouri pass CPN onto terminating carriers who utilize non-SS7 trunks (e.g., Multifrequency or MF trunks). Constable Direct, p. 14.

<sup>21</sup> Schoonmaker Rebuttal, pp. 14-15.

<sup>22</sup> The FCC has defined CPN as "the subscriber line number or the directory number contained in the calling party number parameter of the call set-up message associated with an interstate call on a Signaling System 7 [SS7] network." 47 C.F.R. Section 64.1600(c).

<sup>23</sup> 47 C.F.R. Section 64.1691(a),

<sup>24</sup> Order Adopting Rule 4 CSR 240-29.040, p. 1387.

C. **Technical Industry Standards Recognized by the Commission’s Rule Do Not Require CPN to be Included in Category 11 Records for Wireless-Originated Calls.**

1. Telcordia Standards Do Not Require Inclusion of CPN in the Originating Number Field for AMA Recordings for Wireless-Originated Calls. The Telcordia Technologies’<sup>25</sup> GR-1504 document titled “Generic Requirements for Wireless Service Provider (WSP) Automatic Message Accounting (AMA)” provides the generic requirements for the generation of switch AMA<sup>26</sup> records resulting from both switched Multi-frequency (“MF”) and Signaling System 7 (“SS7”) interconnection between the wireless carrier and the local exchange network.<sup>27</sup> For each use of a LEC service that is billable (e.g., terminating wireless, terminating IXC, local interconnection, directory assistance, coin), the standards prescribe what AMA data should be generated by the switch. And different standards exist for different types of traffic. For example, on calls terminating to the LEC network from an IXC, the standard calls for the IXC’s Carrier Identification Code (“CIC”) to be included in the AMA recording. But such information (i.e., the CIC code) would neither be available nor useful for a local call terminating from another LEC.<sup>28</sup>

Here, Telcordia GR-1504 states that in place of CPN for wireless-originated calls, “the Originating Number fields (Tables 13 and 14) in Structure Code 0625 shall contain the per-

---

<sup>25</sup> Telcordia Technologies is the telecommunications industry standards body that defines many of the standards switch vendors refer to in designing and building the end office and tandem switching equipment used by AT&T Missouri and many other carriers. Constable Direct, pp. 7-8.

<sup>26</sup> Automatic Message Accounting (“AMA”) is the network switch functionality that measures, collects, formats and outputs subscriber network-usage data to billing and other operations systems, i.e., generates call detail information. Once generated by the network, AMA data is fed into, and processed by, AT&T Missouri’s downstream billing systems to create EMI billing records, which carriers use to bill other carriers for their use of network services and capabilities. Constable Direct, pp. 8-9.

<sup>27</sup> Constable Direct, pp. 7-8.

<sup>28</sup> Constable Direct, p. 9.

trunk-group billing number of the WSP.”<sup>29</sup> In accordance with this standard, the AMA recording generated by AT&T Missouri’s switches populates the billing number of the WSP’s (i.e., the wireless carrier’s) trunk group in place of CPN for wireless-originated calls.<sup>30</sup>

STCG and MITG claim that other parts of Telcordia GR1504 require CPN to be included in “Module Code 164 of the AMA Record.”<sup>31</sup> The claim is demonstrably incorrect, as the Missouri Category 11-01-XX records have never included CPN on wireless-originated calls. It is also contradicted by how the manufacturers have applied this standard. Lucent, the leading American telephone switch manufacturer, has never even developed the software to incorporate this feature in its switches.<sup>32</sup> And even if it were to do so, it would not be consistent with industry practice, under which the wireless carrier’s trunk group billing number (required by GR-1504 to be recorded as the originating number in AMA) is placed in the “From Number” field in the Category 11 billing record.

2. The OBF EMI Standard Does Not Require Inclusion of CPN in Category 11 Records for Wireless-Originated Calls. The evidence demonstrates that CPN has never been a required field in the Category 11-01-XX record for wireless-originated calls.<sup>33</sup> Rather, it shows that OBF EMI industry standards call for such records to include the responsible wireless carrier’s Operating Company Number (“OCN”), which informs the terminating carrier of the appropriate wireless carrier to bill. This standard is fully consistent with the Commission’s requirement to provide OCN as set out in the definition of a Missouri Category

---

<sup>29</sup> Telcordia GR-1504 (Generic Requirements for Wireless Service Provider (WSP) Automatic Message Accounting (AMA), R3-85, Page 3-22. A copy of this document is attached to Mr. Constable’s Direct Testimony as Schedule 2(P).

<sup>30</sup> Constable Direct, p. 10.

<sup>31</sup> Schoonmaker Rebuttal, pp. 7-8.

<sup>32</sup> Constable Direct, p. 12; Read Rebuttal, p. 10.

<sup>33</sup> Read Direct, pp. 20-21.

11-01-XX record in Section 29.020(5)(A) of the rule. AT&T Missouri's Category 11-01-XX record contains the OCN and fully complies with these requirements to identify the carrier.

As recognized by Commission Rule 29.020(5), the standards for Category 11-01-XX billing records were developed and are maintained by the Ordering and Billing Forum ("OBF") of the Alliance for Telecommunications Solutions ("ATIS").<sup>34</sup> The OBF EMI guidelines prescribe different standards for different types of calls (e.g., wireline calls as opposed to wireless-originated calls) because different information is needed to bill different types of calls. In wireline billing, geographic location is critical for long distance billing. But in wireless billing, geographic location cannot be obtained due to the mobile nature of the wireless end of the call, and is therefore not used in billing.<sup>35</sup>

The OBF has also made clear in the documentation from Issue 2692 that "Exchange Message Interface (EMI) is based on what is recorded in Automatic Message Accounting (AMA) or derived data."<sup>36</sup> As the Telcordia GR-1504 document does not call for CPN to be included in the Originating Number field for AMA recordings for wireless-originated calls, CPN is not part of the AMA that is available to the billing processing systems for the creation of Category 11-01-XX records for wireless originating traffic.<sup>37</sup>

With respect to Category 11 EMI records for wireless-originated calls, the OBF EMI document specifically states:

To identify Cellular/Wireless originating and terminating traffic, the Type of Access Service (position 78-79) and Indicator 9 or 10 (position 90 & 91) should be populated.

---

<sup>34</sup> Read Direct, pp. 13-14. The ATIS-sponsored Ordering and Billing Forum (OBF) provides a forum for customers and providers in the telecommunications industry to identify, discuss and resolve national issues which affect ordering, billing, provisioning and exchange of information about access services, other connectivity and related matters. Read Direct, p. 15.

<sup>35</sup> Read Direct, p. 9.

<sup>36</sup> Read-Schedule 2(P), Part B, p. 1; Read Rebuttal, pp. 9-10.

<sup>37</sup> A copy of this Telcordia document is attached as Schedule 2(P) to Mr. Constable's direct testimony and he discussed it at pp. 7-11 of his testimony.

This information will positively identify the record as a wireless originating or terminating record. Also populated is the Operating Company Number (“OCN”) for originating calls (position 167-170), which will positively identify the originating wireless carrier.<sup>38</sup> AT&T Missouri’s Category 11-01-XX record for wireless originated calls follows the OBF record description on page 3-296 of the EMI document.<sup>39</sup>

Very extensive industry discussions were held at the OBF to address what information was needed in order to bill intercompany compensation on wireless-originated traffic.<sup>40</sup> These discussions, which were held among a cross section of wireless providers, incumbent LECs (both large RBOCs and small independent LECs), CLECs and vendors, took place over the course of three years and focused on identification of wireless traffic. As reflected in the documentation in these issues, there is no suggestion, much less a requirement, that wireless-originating CPN should be provided for wireless identification. Instead, the documentation reflects industry consensus that the OCN should be provided.<sup>41</sup>

The Category 11 records AT&T Missouri passes to terminating LECs contain the same information AT&T Missouri itself uses in its billing system for billing wireless-originated traffic.<sup>42</sup> In fact, AT&T provides this same type of record for wireless-originated calls in all five states in its Southwest region and is currently in the process of making software changes to

---

<sup>38</sup> Read Direct, pp. 18-19.

<sup>39</sup> Read Direct, p. 16. A copy of this record description is attached to Mr. Read’s Direct Testimony as Read-Schedule 7(P).

<sup>40</sup> These discussions were held and documented under Issues 2308 which was titled: “Need for Accurate Jurisdictional Information for Accurate Billing” and issue 2349 which was titled: “Impact of Wireless Number Portability on Wireline Service Providers.” Read Direct, p. 17. Copies of these documentation notes from OBF Issues 2308 and 2309 are attached to Mr. Read’s Direct Testimony as Schedules 8(P) and 9(P).

<sup>41</sup> Read Direct, p. 17. In fact, during Issue 2349, a question was asked of the industry, “will the EMI record reflect the current identification (OCN) of the wireless provider. . . ?” The response is from BellSouth, SBC, Sprint and Verizon stated, “yes, . . . we will continue to provide these records.” Impact of Wireless Number Portability on Wireline Service Providers, at p. 27. Read-Schedule 9(P).

<sup>42</sup> Read Direct, p. 21.

implement them in its Midwest region later this year, consistent with requests from carriers across the industry to bring consistency in its records across its regions. As reflected in the OBF documentation on Issue 2349, BellSouth, Verizon and Sprint also apply industry standards in this manner,<sup>43</sup> and CenturyTel also followed this process.<sup>44</sup>

STCG and MITG claim that the “From Number” field in positions 15-24 of the OBF EMI record is to contain “the 10-digits (NPA, NXX and line number) of the party that originates the call.”<sup>45</sup> MITG and STCG, however, have misread the OBF EMI record layout document. The record layout does not say that “From Number” is the “party that originates the call.” Rather, the layout simply shows that there is a “From Number” field in positions 15-24, that it is a numeric field, and that it is in NPA NXX LLLL format. As Mr. Read testified, however, it is inappropriate to make the leap from this information that the “From Number” should be populated with CPN:

. . . based on my firsthand experience in the standard-setting process at OBF concerning wireless records, I want to make it clear that the intent was never to populate this field with CPN. The industry realized that use of CPN in this field provides no added value to the record for wireless-originated traffic.<sup>46</sup>

MITG and STCG also misquote the definition of “From Number” when they claim that “for numbers within the North American Number Plan, it is the number from which the call originates.”<sup>47</sup> The actual text of the OBF’s definition for “From Number” does not say this. Rather, the first two sentences simply state:

**From Number**

A ten-position, left-justified, numeric field that ordinarily identifies the number from which the originating rate center is derived.

---

<sup>43</sup> Read Direct, p. 20; Read Rebuttal, p. 7 (when AT&T Missouri developed its wireless Category 11 record it consulted with BellSouth regarding the record BellSouth was providing on this traffic).

<sup>44</sup> Martinez Rebuttal, p. 3 (“CenturyTel follows the same practice as AT&T Missouri by placing BTN in the calling number field.

<sup>45</sup> Schoonmaker Direct, p. 12.

<sup>46</sup> Read Rebuttal, pp. 3-4.

<sup>47</sup> Schoonmaker Direct, p. 12.

For messages originating within the North American Numbering Plan, the From Number is in the format NPA NXX LLLL. . . .<sup>48</sup>

As Mr. Read testified, the “From Number” field is a generic field and the use of it will vary, depending on the type of record being exchanged:

The content of the field varies because the information needed to bill can vary and the information available on particular types of calls/traffic can also vary. For example, if the service being billed were a wireline-originated service, such as a LEC-to-LEC IntraLATA Toll Call, the use of CPN in the “From Number” field is critical to proper jurisdiction and rating of that call and it would be appropriate to populate the “From Number” field with it. But if the call is wireless-originating, CPN in the “From Number” field undermines the integrity of the billing process as it is unreliable for use in determining proper jurisdiction because of roaming. Identifying the interconnected company is the critical information in a wireless-originated record and this has nothing to do with use of CPN in the “From Number field.”<sup>49</sup>

In addition to OCN, AT&T Missouri provides the BTN in the “From Number” field of the Category 11 EMI record for wireless-originated calls. As Mr. Read testified, the BTN or BTN-like number is most appropriate for this field because it fully meets the standard definition of “From Number” and the standard Category 11 record by providing information on interconnected services. Specifically, it provides the receiving company with information regarding the company that purchased the trunk group from the tandem company and thus is financially responsible for traffic that terminated to a LEC end office. This is appropriate because it follows established industry practices, which are the implemented standards as followed by most companies in the industry (e.g., BellSouth, Verizon and CentryTel interpreted the field like AT&T did).<sup>50</sup> There has been no debate at the OBF that AT&T Missouri or these other carriers are incorrectly populating Category 11 records for wireless-originated calls. To the contrary, the evidence shows that all of the discussions at the OBF about CPN on wireless-

---

<sup>48</sup> The full text of this definition is attached to Chris Read’s Rebuttal Testimony as Schedule 1(P).

<sup>49</sup> Read Rebuttal, p. 5.

<sup>50</sup> Read Rebuttal, p. 7; Martinez Rebuttal, p. 3.

originated calls concerned its inadequacy for use in this type of record.<sup>51</sup> Further, AT&T Missouri cannot deviate from this process because the Commission's own rules require a Category 11-01-XX record that has been "developed in compliance with the Ordering and Billing Forum ("OBF") Exchange Message Interface ("EMI") industry guidelines."<sup>52</sup>

3. The Lucent Tandem Switches' Technical Inability to Capture AMA on Wireless-Originated Calls Corroborates the Lack of Such a Requirement in the Telcordia and OBF EMI Standards. The technical standards in the Telcordia and OBF EMI documents are reflected in the equipment AT&T Missouri and other carriers across the county use to provide service. The three Lucent 5ESS™ tandem switches used by AT&T Missouri (two in St. Louis with the third located in Moberly) were originally designed in accordance with industry standards to not capture and populate CPN in wireless-originated AMA records.<sup>53</sup> Certainly if the EMI guidelines required CPN to be included in the wireless Category 11 record, Lucent would have built the capability to capture CPN in its tandem switch AMA recordings to use in populating the Category 11 record. But as uncontroverted evidence shows, Lucent did not build this capability into its tandem switches.<sup>54</sup>

---

<sup>51</sup> For example, in a jurisdiction-related discussion in OBF issue 2349, page 43, the OBF acknowledged: "The CPN cannot identify the point of call origin for roamers." A full copy of the documentation notes from OBF Issue 2349 was attached to Mr. Read's direct testimony as Schedule 9(P). And the notes from OBF Issue 2697, which were attached to Mr. Read's Direct Testimony, also show that CPN is not expected on wireless-originated calls. Read-Schedule 2(P), at Part B, pp. 3 and 6.

<sup>52</sup> 4 CSR 240-29.020(5).

<sup>53</sup> AT&T Missouri's Nortel DMS-100/200™ tandems do contain a software feature that would allow AT&T Missouri to capture CPN in the AMA recordings they make for wireless-originated calls. However, this feature has never been activated or fully tested to ensure that the feature functions appropriately in capturing the CPN information and does not interfere with other data processing functions or adversely impact other AMA recordings. Constable Direct, pp. 10-11.

<sup>54</sup> Constable Direct, pp. 10-12; Read Rebuttal, p. 10.

**II. THE FAILURE TO EXPLORE THE IMPACTS OF REQUIRING CPN TO BE INCLUDED IN CATEGORY 11 BILLING RECORDS FOR WIRELESS-ORIGINATED CALLS DEMONSTRATES THAT THE COMMISSION DID NOT INTEND RULE 29.040(4) TO IMPOSE SUCH A REQUIREMENT.**

The evidence introduced in this proceeding will demonstrate that the Commission, in promulgating Rule 29.040(4), could not have intended to impose a new requirement on carriers to include Calling Party Number (“CPN”) in the Category 11-01-XX billing record for wireless-originated calls. The Commission does not make decisions in a vacuum or impose new requirements on an industry without gathering and considering evidence on the impacts of such a decision. Nor do parties to Commission rulemaking proceedings hold back relevant evidence when a rule which could have significant economic and operational impacts is being considered.

Here, Messrs. Constable, Read and Voight presented evidence (much of which STCG and MITG have sought to keep the Commission from seeing) that on such things as:

- Whether current industry standards require tandem switches to record CPN for Category 11 billing records for wireless-originated calls;
- Whether CPN is currently being provided in Category 11 billing records by carriers in Missouri and by carriers in other parts of the country (as opposed to being provided just in signaling information transmitted with the call);
- Whether carriers in Missouri are technically capable of providing CPN in this type of record, and if not, what cost would be imposed on carriers by a requirement to develop this capability; and
- Whether inclusion of CPN in Category 11 billing records is needed for terminating carriers to be able to bill wireless carriers for the completion of wireless-originated calls.
- 

The fact that the Commission did not gather and consider any evidence on these issues in the course of the rulemaking demonstrates that it had no intent to impose such a new requirement. It

is clear that the parties to the rulemaking proceeding would have submitted such evidence had the rule been written to impose such a requirement.

The parties did not present such evidence in the rulemaking proceeding precisely because the rule as proposed did not indicate any intent to impose a requirement that CPN be provided in the billing record. The fact that the Commission did not gather and consider the following evidence in the course of the rulemaking tends to prove that it had no intent to impose such a new requirement..

**A. A Requirement to Include CPN in the Wireless Category 11 Record is Inconsistent with Industry Standards.**

As set out in Section I(C) above, technical industry standards promulgated both by Telcordia Technologies and the Ordering and Billing Forum (“OBF”) do not require CPN to be included in the wireless Category 11 record. Finding Rule 29.040(4) to impose such a requirement would be inconsistent with these industry standards.

AT&T Missouri’s witnesses Constable and Read and MITG and STCG’s witness Schoonmaker have all presented evidence on these standards. The fact that this debate is only coming out now -- and not during the rulemaking -- demonstrates that the rule as proposed did not indicate any intent to impose a requirement that CPN be provided in the billing record for wireless traffic. No parties’ prefiled written comments during the rulemaking asserted a claim either that Rule 29.040(4) or applicable technical industry standards required the inclusion of CPN in Category 11 billing records for wireless-originated calls. It was only at the public hearing on the rule that any party claimed that the rule would require AT&T Missouri to deliver CPN in the wireless billing record, and that single comment was made in an off-hand and

unsupported fashion.<sup>55</sup> But had the rule been written to impose such a requirement, it is clear that the parties would have engaged in the full debate presented here and would have submitted such evidence with their written comments. But the parties did not present such evidence precisely because the rule as proposed did not indicate any intent to impose a requirement that CPN be provided in the billing record.

**B. Carriers in Missouri and Other Parts of the Country Do Not Include CPN in Wireless Category 11 Records.**

As set out in Section I(C)(2), no carrier in Missouri included CPN in the wireless Category 11 record they were producing prior to the adoption of the rule. Instead, the evidence will show that they all produced a record similar to that being produced by AT&T Missouri. While STCG and MITG attempt to highlight the fact that Sprint now includes CPN in their wireless Category 11 record, this fact actually supports AT&T Missouri's position that Sprint interpreted applicable industry standards just as AT&T Missouri and CenturyTel did: to not require CPN in such record. Sprint, which utilizes non-Lucent switching equipment, had to change its record process to provide CPN on wireless-originated calls after the order adopting the rule was issued, as it did not provide the information before. The evidence also will show that other carriers across the country, such as BellSouth, Verizon and CenturyTel also did not interpret applicable industry standards as requiring the inclusion of CPN in wireless Category 11 billing records.

This is the type of evidence that the parties would have presented and the Commission would have considered in the course of the rulemaking had the proposed rule evidenced an intent

---

<sup>55</sup> Case No. TX-2003-0301 T. 78. ("Generally, on behalf of the MITG, we would ask the Commission to adopt the Enhanced Record Exchange Rule. With respect to the wireless record, the rule would require Southwestern Bell to deliver us the Calling Party Number information, which we think is beneficial.")

to impose a new requirement that varied from current practices. The fact that this was not done demonstrates that there was no intent to impose such a new requirement.

**C. AT&T Missouri's Lucent Switches, without a \$1 Million Software Upgrade, are Technically Incapable of Capturing CPN in AMA Recordings, Making It Unavailable for Inclusion in Category 11 Records.**

As set out in Section I(C)(3) above, AT&T Missouri's Lucent 5ESS™ tandems do not have the technical capability to populate CPN in the AMA switch records for wireless-originated calls, making CPN unavailable for inclusion in the Category 11 billing record for this type of traffic. The evidence will show that Lucent Technologies would be required to develop this functionality as a new capability in its 5ESS™ switches at an estimated cost ranging from \$900K - \$1.3M, and with an estimated development time of 6-12 months from a signed agreement.<sup>56</sup> These costs do not include the additional costs that AT&T Missouri would incur to load and test the new software package, or the costs AT&T Missouri would incur in changing its internal data processing systems that would be needed to generate a wireless Category 11 record that includes CPN (if CPN became available in the AMA data).<sup>57</sup>

The fact that the Commission did not gather and consider such evidence in the course of the rulemaking shows the rule was not intended to impose such a new requirement. The parties would have presented, and the Commission would have considered, such evidence before a rule with such far reaching changes were adopted.

**D. Terminating Carriers Do Not Need or Use CPN to Bill Terminating Charges for Wireless-Originated Calls.**

1. All Carriers Use OCN -- Not CPN -- to Identify the Appropriate Wireless Carrier to Bill. The evidence will show that no carriers use CPN to bill other carriers

---

<sup>56</sup> A copy of Lucent's feature development estimate is attached to Jason Constable's Direct Testimony as Schedule 3(HC).

<sup>57</sup> Constable Direct, p. 12; Read Direct, pp. 23-29.

for the termination of wireless calls. Rather, all carriers use the OCN provided in the Category 11 record being provided by AT&T Missouri, CenturyTel and Sprint for wireless-originated traffic.<sup>58</sup>

Again, the parties would have presented, and the Commission would have considered, such evidence before a rule with such far reaching changes was adopted. The fact that this evidence was neither presented nor considered in the course of the rulemaking proves the rule was not intended to impose such a new requirement.

2. CPN is Unreliable for Jurisdictionalizing Wireless Traffic and Commission Rules Prohibit Such Use. The evidence shows that a wireless customer's ability to roam across multiple jurisdictions and onto other wireless carriers' networks makes the wireless end-user's CPN unreliable for use in intercarrier billing.<sup>59</sup> And for this very reason, the Commission's own rules prohibit CPN to be used to jurisdictionalize wireless-originated calls:

. . . We caution all terminating carriers that any attempt to use an OCN or CPN to determine the proper jurisdiction of wireless telephone calls on the LEC-to-LEC network is not permissible under our local interconnection rules. We recognize that this limitation contrasts with processes historically employed on the Interexchange Carrier network in which CPN is used to determine the jurisdiction of wireless calls. Again, we caution that our rules will not permit such practices on the LEC-to-LEC network.<sup>60</sup>

Again, the parties would have presented, and the Commission would have considered, such evidence before a rule with such far reaching changes was adopted. The fact that this evidence was neither presented nor considered in the course of the rulemaking proves the rule was not intended to impose such a new requirement.

3. Terminating Carriers have the Capability to Record CPN themselves if they have a Business Need for It. The evidence will show that just because AT&T

---

<sup>58</sup> Read Direct, pp. 7-9; Schoonmaker Direct, pp. 12-13.

<sup>59</sup> Read Direct, pp. 11-12.

<sup>60</sup> Order of Rulemaking Adopting 4 CSR 240-29.010, pp. 1377-1378 (emphasis added).

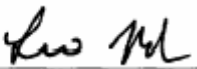
Missouri does not provide CPN in its Category 11 records on these types of calls does not mean that CPN is unavailable to terminating carriers. AT&T Missouri delivers CPN over its SS7 signaling network on nearly all calls that cross its network and terminate to other carriers. Thus, if a terminating carrier has a business need to do so, the small LECs could capture and record CPN at their own switches.<sup>61</sup> And as the MITG and STCG's own evidence shows, they have done that, both in network tests performed in Case No. TO-97-593 in July, 2000, and more recently in traffic studies performed by Mark Twain, Chariton Valley, Mid-Missouri and Northeast Missouri Rural Telephone Companies.<sup>62</sup>

### **CONCLUSION**

WHEREFORE, AT&T Missouri respectfully requests the Commission to enter an Order finding that Rule 29.040(4) does not require CPN for wireless-originated calls to be included in the billing record.

Respectfully submitted,

SOUTHWESTERN BELL TELEPHONE, L.P.  
d/b/a AT&T MISSOURI

BY   
\_\_\_\_\_  
PAUL G. LANE #27011  
LEO J. BUB #34326  
ROBERT J. GRYZMALA #32454  
MIMI B. MACDONALD #37606

Attorneys for AT&T Missouri  
One AT&T Center, Room 3518  
St. Louis, Missouri 63101  
314-235-2508 (Telephone)/314-247-0014(Facsimile)  
[leo.bub@att.com](mailto:leo.bub@att.com)

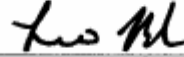
---

<sup>61</sup> AT&T Missouri cannot signal CPN in the relatively rare instances when it does not receive it, nor can AT&T Missouri pass CPN onto terminating carriers who utilize non-SS7 trunks (e.g., Multifrequency or MF trunks). Constable Direct, p. 14.

<sup>62</sup> Schoonmaker Rebuttal, pp. 14-15.

## **CERTIFICATE OF SERVICE**

Copies of this document were served on the following parties by e-mail on April 13, 2006.



Leo J. Bub

Keith R. Krueger  
General Counsel  
Missouri Public Service Commission  
PO Box 360  
Jefferson City, MO 65102  
[keith.krueger@psc.mo.gov](mailto:keith.krueger@psc.mo.gov)  
[gencounsel@psc.mo.gov](mailto:gencounsel@psc.mo.gov)

William R. England, III  
Brian T. McCartney  
Brydon, Swearngen & England  
312 E Capitol Avenue  
PO Box 456  
Jefferson City, MO 65102  
[trip@brydonlaw.com](mailto:trip@brydonlaw.com)  
[bmccartney@brydonlaw.com](mailto:bmccartney@brydonlaw.com)

Larry W. Dority  
James M. Fischer  
Fischer & Dority  
101 Madison, Suite 400  
Jefferson City, MO 65101  
[lwdority@sprintmail.com](mailto:lwdority@sprintmail.com)  
[jfischerpc@aol.com](mailto:jfischerpc@aol.com)

Michael F. Dandino  
Public Counsel  
Office of the Public Counsel  
PO Box 7800  
Jefferson City, MO 65102  
[mike.dandino@ded.mo.gov](mailto:mike.dandino@ded.mo.gov)  
[opcservice@ded.mo.gov](mailto:opcservice@ded.mo.gov)

Craig S. Johnson  
1648-A East Elm Street  
Jefferson City, MO 65101  
[craig@csjohnsonlaw.com](mailto:craig@csjohnsonlaw.com)