

BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

*In the Matter of*  
*The Missoula Intercarrier*  
*Compensation Reform Plan*

Docket 01-92

DA 06-1510

**COMMENTS OF FEATURE GROUP IP**

EXECUTIVE SUMMARY .....	2
I. DESCRIPTION OF FEATURE GROUP IP.....	3
III. ARGUMENT.....	5
A. There is no “phantom” but there is a specter.....	6
B. Missoula inhibits use – and punishes users – of new technology.....	9
C. Unreasonable restrictions on the form of interconnection.....	11
1. The proposal inappropriately requires all signaling to be SS7 based.....	11
a. Present interconnection methods.....	12
i. Type 1 interconnection.....	13
ii. Line side interconnection.....	14
b. Other technically feasible methods.....	15
2. ESPs use ISDN interconnection.....	16
3. The CPN requirement will maintain and exacerbate the underlying problem.....	16
4. The CPN requirement is arbitrary and unreasonable.....	
5. Traditional interconnection methods have always launched call sessions with no discernible originating “geographic location” and the sky did not fall.....	24
6. The calling party’s location has no relationship to the additional cost imposed on the terminating network.....	25
D. Missoula proposes to use CPN in a way it was never intended to be used.....	26
E. This is all purposefully designed to retard new entry and new technology uses and to protect incumbent revenue streams and business models.....	28
F. Missoula violates express provisions in the Act concerning intercarrier compensation and universal service.....	29
1. Missoula violates § 251(b)(5) by carving out included traffic “types” into “access” and prices in excess of “additional cost” contrary to § 252(d)(2).....	29
2. Special access pricing for interconnection facilities violates the applicable cost standards.....	32
G. The Commission must expeditiously obey and implement the Act in full measure.....	32
1. Interconnection pricing and intercarrier compensation.....	32
2. Subsidies must flow only from the Universal Service Program.....	33
III. CONCLUSION .....	33
SIGNATURE.....	34

---

## EXECUTIVE SUMMARY

The “Missoula Plan” is not a “plan” to **reform** intercarrier compensation and USF. It is a last gasping attempt by the wireline and some wireless carriers to fend off the emergence of a new brand of competition. The Internet is blasphemy to those who cling relentlessly to old, obsolete business models and ancient technology, for it actually allows users to fulfill their own communications needs simply by employing an application that comes in the box the computer they buy, or one they can download for free. There is no “carrier” providing a “service” with Microsoft Messenger or Skype. And there often is no charge. And yet Missoula proponents insist on finding a carrier and a number so they have someone to charge whenever a call session somehow manages to get through the barrier and inside their monopoly distribution network. Missoula requires that specific and outdated technology be used (and implemented regardless how bad the fit) in order to enforce the artificial and inflated charging schemes it contains.

The technology mandates and the charging regime in Missoula will not stop the bleeding and will only lead to more uncertainty, delay and litigation. The enforcement efforts and costs are not worth it and seek to enforce silly artificial rules that should have been put to rest long ago.

This is not reform. Reform is eliminating all originating charges. Reform is bringing all terminating costs to the “additional cost” for terminating a call to the recipient. Reform is moving all support from intercarrier compensation to the USF regime, and making support payments from the USF available to any provider regardless of classification, or perhaps directly to users so they can choose how (or whether) to spend the money on the communications application/service or their choice.

The Commission should have no part of the protection racket Missoula sets up. True all encompassing and comprehensive reform is overdue. The Commission should reject the Missoula Plan and get its eyes focused back on the ball.

---

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

**In the Matter of  
The Missoula Inter-carrier  
Compensation Reform Plan**

**Docket 01-92**

**DA 06-1510**

**COMMENTS OF FEATURE GROUP IP**

**NOW COMES UTEX COMMUNICATIONS CORPORATION d/b/a Feature Group IP (“Feature Group IP”)** and respectfully submits these Comments on the so-called “Missoula Plan” for “reforming” inter-carrier compensation in response to the pleading cycle established for this purpose.

**I. DESCRIPTION OF FEATURE GROUP IP**

Feature Group IP is a CLEC with current operations in Texas and imminent expansions to other states. Feature Group IP’s product is the intermediation and interoperation of technologies and networks used for servicing the transmission of human speech or other data configured to track the analog characteristics of human speech<sup>1</sup> between two or more locations. This includes the interconnection of Internet telephony applications and networks with Plain Old Telephone Service networks. In order for all for the positive externalities of a Communication Network – and in order for a “network of networks”<sup>2</sup> to truly exist – Feature Group IP’s network must interoperate with the PSTN. The interoperability and interconnection obligations set out in §§ 201, 251, 252 and 332(c)(1)(B) of the Act (and other provisions) require incumbent carriers to

---

<sup>1</sup> FAX, modem, and TTY transmissions, for example, appear to the PSTN to be a traditional voice call, but the communication involves exchange of data, not human speech.

<sup>2</sup> The concept of a “network of networks” is not limited to the Internet. The PSTN is also a network of networks in that it is comprised of an interconnected and interoperable set of LEC, IXC and CMRS provider facilities. Second Notice of Proposed Rulemaking, *In the Matter of Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services*, CC Docket 94-54, FCC 95-149, 10 FCC Rcd 10666, ¶ 24 (rel. Apr. 20 1995) (*CMRS Interconnection 2<sup>nd</sup> NPRM*); see also 47 C.F.R. § 20.3 (definition of “public switched network”).

connect their networks with those of new technology entrants on a national basis and to interoperate with them on reasonable terms.<sup>3</sup>

Feature Group IP's business is principally wholesale in nature, and involves intermediation between the Internet and the Public Switched Telephone Network ("PSTN"). Feature Group IP provides wholesale PSTN connectivity to non-carrier Enhanced Service Providers ("ESPs")<sup>4</sup> that in turn provide Internet Protocol ("IP") enabled enhanced/information services to their customers. Feature Group IP's ESP customers obtain PSTN connectivity through Feature Group IP, as a wholesale service. Feature Group IP's service to these ESPs is a federally tariffed interstate telecommunications service. The ESPs then use the Feature Group IP-supplied telecommunications service as an input to the retail enhanced/information service output they provide to their ultimate customers. In other words, the ESPs provide their non-telecommunications service "via" telecommunications "offered over common carrier

---

<sup>3</sup> The 104<sup>th</sup> Congress understood the societal value propositions inherent to both Metcalfe's and Reed's law. Feature Group IP is attempting to make both the legacy telecommunications network and the Internet more valuable to society by gluing the networks together for users of each network. Any non-cost based charge for passage to or from either the "Internet" or to or from the "legacy telecommunications network" would create a policy imbalance favoring one network over the other, or worse, encourage each network to "island" itself and refuse communications with the other, thus artificially limiting the value of each and the total value to society that is possible if interoperability is maximized.

<sup>4</sup> Feature Group IP will refer to providers of enhanced and/or information service as "ESPs" for shorthand purposes. The telephone companies pretend that the only "ESPs" that are relevant are unaffiliated "ISPs" and only entities that provide "Dial Up Internet Service" are ISPs, and then they believe the concern is only related to "ISP-bound" traffic (*e.g.*, traffic addressed to a Dial Up Internet Service provider). This Commission has to know better. Enhanced services were defined long before there was a public Internet. ESPs do far more than just hook up "modems" and receive calls. They provide a wide set of services and many of them involve calls to the PSTN. *See*, Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry, *In the Matter of Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Transport Rate Structure and Pricing Usage of the Public Switched Network by Information Service and Internet Access Providers*, CC Docket Nos. 96-262, 96-263, 94-1, 91-213, FCC 96-488, 11 FCC Rcd 21354, 21478, ¶ 284, n. 378 (rel. Dec. 24, 1996); Order, *Amendments of Part 69 of the Commission's Rules Relating to Enhanced Service Providers*, CC Docket No. 87-215, FCC 88-151, 3 FCC Rcd 2631, 2632-2633. ¶ 13 (rel. April 27 1988); Memorandum Opinion and Order, *MTS and WATS Market Structure*, Docket No. 78-72, FCC 83-356, 97 FCC 2d 682, 711-22 ¶ 78 (rel. Aug. 22, 1983). As was noted in the first decision that created what is now known as the "ESP Exemption" ESP use of the PSTN resembles that of the "leaky PBXs" that existed then and continue to exist today, albeit using much different technology.

transmission facilities.” The ESP traffic processed by Feature Group IP is not the kind of traffic addressed in the *AT&T Declaratory Ruling*,<sup>5</sup> because Feature Group IP’s tariffed information access services are only available to non-carriers that certify to Feature Group IP they are not carriers subject to access charges under 47 C.F.R. § 69.5 and their traffic is therefore entitled to the ESP exemption.

Feature Group IP’s business plan revolves around supporting new technology services and applications. Unlike the rest of the wireline industry (and the regime contemplated by the Missoula Plan), Feature Group IP does not require its ESP customers to deploy equipment or processes that turn IP systems into TDM systems. Nor does Feature Group IP extract a premium for bestowing the privilege of touching the PSTN.

## II. ARGUMENT

The Commission cannot and should not adopt the “Missoula Plan” since it directly violates several substantive and policy provisions in the Communications Act relating to new technology and interconnection between the various kinds of carriers and non-carriers that need interconnection within the PSTN. It also unreasonably and unlawfully favors legacy systems and technology to the point that it penalizes new technology when the two kinds of networks must interoperate in order to jointly support traffic.

The Missoula Plan is driven by the same self-interest and antipathy to outside technology that led to the “Red Flag Law” passed in England in the late 1800s as a way to restrict and limit the spread of the automobile. Parliament passed the Locomotive on Highways Act in 1865. It stipulated that all self-propelled vehicles on public highways be limited to a maximum speed of

---

<sup>5</sup> Order, *In the Matter of Petition for Declaratory Ruling that AT&T’s Phone-to-Phone IP Telephony Services are Exempt from Access Charges*, WC Docket No. 02-361, FCC 04-97, 19 FCC Rcd 7457 (rel. April 21, 2004) (“*AT&T Declaratory Ruling*”).

four miles per hour, have two drivers and be preceded by a man on foot carrying a red flag to warn oncoming horse-drawn vehicles. The depressive intent and effect was manifest, and the Missoula Plan was formulated with the same goals. It is designed solely protect and preserve legacy networks and business models (and even more emphatically so for those in “rural” areas) that face disruption of their previously comfortable monopoly position as a result of rapid technological and market changes. In very large part it requires new technology and new business plans to solve citizens’ evolving communications needs to (1) dumb down their systems and capabilities and (2) emulate and subsidize age-old and soon to be obsolete telecommunications regulatory and revenue constructs.

**A. There is no “phantom” but there is a specter.**

Phan-tom /fæntəm/ fan-tuhm]

–noun 1. an apparition or specter.

2. an appearance or illusion without material substance, as a dream image, mirage, or optical illusion.

3. a person or thing of merely illusory power, status, efficacy, etc.: the phantom of fear.

4. an illustration, part of which is given a transparent effect so as to permit representation of details otherwise hidden from view, as the inner workings of a mechanical device.

–adjective 5. of, pertaining to, or of the nature of a phantom; illusory: a phantom sea serpent.

6. Electricity. noting or pertaining to a phantom circuit.

7. named, included, or recorded but nonexistent; fictitious: Payroll checks were made out and cashed for phantom employees.

Origin: 1250–1300; ME fantosme < MF, OF < L phantasma phantasm]

“phantom.” Dictionary.com Unabridged (v 1.0.1). Based on the Random House Unabridged Dictionary, © Random House, Inc. 2006. 25 Oct. 2006.

<Dictionary.com <http://dictionary.reference.com/browse/phantom>>

The ILECs have raised a furor over traffic they cannot trace back to the “actual geographic location” of the calling party. They have used NXXs when convenient, but other arbitrary means when the number is inconvenient, to their goal of assessing access on everything that touches their network. Any call they receive that lacks sufficient information for them to

support the particular (and often inconsistent) argument they have for assessing access charges is deemed “phantom” traffic to which – of course – they wish to apply access. The latest gambit for accomplishing their objective is to solve the drummed-up “phantom number crisis” by imposing specific technical obligations on all connecting carriers, and perhaps all users.

There is no “phantom” – other than the incorporeal nature of E.164 addresses<sup>6</sup> in general and the illusion of geographic relevance that so comforts and props up the ILECs. The problem is not the number or lack thereof. The problem is a wholesale pricing regime that differentiates based on actual, perceived or deemed location – unless it is a CMRS call, an ISP-bound call, a Foreign Exchange call, *etc., etc.*

But there is certainly a “specter” they greatly fear – the Internet with all of the disruptive insurgent “inter-model” competition it brings.<sup>7</sup> To the ILECs the Internet is Loompaland<sup>8</sup> and

---

<sup>6</sup> Telephone numbers are “E.164 addresses.” “E.164” is the international standard for numbering plans to map phone numbers to phone lines. *See*, Newton’s Telecom Dictionary, 17<sup>th</sup> Ed. The North American Numbering Plan overseen by the FCC follows E.164.

<sup>7</sup> “Inter-model” is not a typo. The FCC has been blinded to – and is therefore blindly stepping on – communications business models other than the three “modal” types (wireline, cable, wireless) it seems to be trying to support to the exclusion of all others. “Facilities-based” competition is not the end-all and be-all and squashing all models that do not include placement of redundant local broadband is extraordinarily short sighted. Two alternative models (non-monetary business models such as Skype) and wholesale business models involving intermediation between legacy systems and the newer IP-based systems (like that of Feature Group IP) actually present the best opportunity for continued freedom and growth precisely because they are not tied to legacy technology or legacy business models. There is no discernible or coherent policy vision on how to deal with “free” and “wholesale” business models aimed at increasing network efficiency and interoperation. But new business models are exactly what one would expect when a disruptive technology is introduced into a legacy industry. The legacy providers have no real incentive to allow the disruption to their revenue streams or the accelerated obsolescence of the old technology, so they do all they can to obstruct deployment and use by others until the incumbents can gradually deploy and replace while still maintaining control. This Commission needs to follow its own longstanding policy now codified in §§ 153 and 253. Section 253 sets out a policy that that “small entrepreneurs” and “enhanced service providers” be allowed to use technological advancements to enter the communications market and provide telecommunications and information services. Section 157 – passed in 1983 – mandates that regulators and incumbents not obstruct new technology and innovation until they prove the technology is not in the public interest.

<sup>8</sup> Willy Wonka: No, Oompa Loompas.  
The Group: Oompa Loompas?  
Willy Wonka: From Loompaland.

---

they are Ooma Loompas. They look to the FCC to be like Willie Wonka and transport them to his factory so he can protect them and they can live in peace and safety, away from all the “Wangdoodles (free independent IM-like applications such as GoogleTalk and Skype) and Hornswogglers (applications bundled into an operating system, like Microsoft Messenger) and Snozzwangers (Vonage) and rotten Vermicious Knids (wholesale services like those provided by Feature Group IP).”

There is no “phantom” – only impending disruption to the ILECs’ insulated, profitable and comfortable way of providing obsolete, costly and limited services. Internet-based services make calls easier, better and less expensive and they are not bound by the ILEC-centric focus on geographic location or artificial wants to geographically fix a person based on a network addressing scheme. They certainly have reason to fear, but the Commission has the obligation, the duty, to not act solely to protect them. Your duty is to serve the citizens and see to it they have the most modern, efficient and competitive communications network on Earth. Erecting financial and technical barriers to new, efficient entry in the form of Missoula is not proper and it would not be lawful, reasonable or anything close to a good idea.

---

Mrs. Teevee: Loompaland? There’s no such place.

Willy Wonka: Excuse me, dear lady...

Mrs. Teevee: Mr. Wonka, I am a teacher of geography.

Willy Wonka: Oh, well then you know all about it and what a terrible country it is. Nothing but desolate wastes and fierce beasts. And the poor little Oompa Loompas were so small and helpless, they would get gobbled up right and left. A Wangdoodle would eat ten of them for breakfast and think nothing of it. And so, I said, “Come and live with me in peace and safety, away from all the Wangdoodles and Hornswogglers and Snozzwangers and rotten Vermicious Knids.”

Mr. Salt: Snozzwangers? Vermicious Knids? What kind of rubbish is that?

Willy Wonka: I’m sorry, but all questions must be submitted in writing. And so, in the greatest of secrecy I transported the entire population of Oompa Loompas to my factory here.

*Willy Wonka & the Chocolate Factory*©, Paramount Pictures (1971).

---

**B. Missoula inhibits use – and punishes users – of new technology.**

In 1996 Congress expressed a direction and goal in what is now § 253 that “small entrepreneurs” and “enhanced service providers” use technological advancements to enter the communications market and provide telecommunications and information services.<sup>9</sup> In 1983 Congress mandated that regulators and incumbents not obstruct new technology and innovation.<sup>10</sup> The Commission has held on a multitude of occasions both before and after 1996 that new technology serves the public interest and should be encouraged.<sup>11</sup> A prime organizing principle long espoused by the Commission is that regulation should be used to advance and reward technological innovation and cannot be a vehicle to protect incumbent carriers’ legacy

---

<sup>9</sup> See, Communications Act §§ 253.

<sup>10</sup> See Communications Act § 157:

“It shall be the policy of the United States to encourage the provision of new technologies and services to the public. Any person or party (other than the Commission) who opposes a new technology or service proposed to be permitted under this Act shall have the burden to demonstrate that such proposal is inconsistent with the public interest.”

Section 157(a) was enacted in the Federal Communications Commission Authorization Act of 1983, Public Law 98-214. Senate Report No. 98-67 explained the objective:

[t]he development of new technologies and the efforts of competitors seeking to respond to consumer demands will bring more service to the public than will administrative regulations. ... [a] claim that the new or additional service will provide competition that will take revenue from another service, either existing or proposed, will not be a valid rebuttal. ... The regulatory process ... should not act as a barrier to those who wish to provide new and additional services.

See Memorandum Opinion and Order, *In the Matter of Petition for Reconsideration of Amendment of Parts 2 and 73 of the Commission’s Rules Concerning Use of Subsidiary Communications Authorization*, BC Docket No. 82-536, FCC 84-187 98 F.C.C.2d 792, 803, ¶ 24 (rel. May 1984). [FCC order preempting state regulation of FM subcarrier use for common carrier paging services.]

<sup>11</sup> See, e.g., Memorandum Opinion and Order, *Amendment of Part 90 of the Commission’s Rules to Prescribe Policies and Regulations to Govern the Interconnection of Private Land Mobile Radio Systems with the Public Switched Telephone Network in the Bands 806-821 and 851-866 MHz*, Docket No. 20846, FCC 83-174, 93 F.C.C.2d 1111, 1121, ¶ 26 and note 26 (rel. May 1983) and cases cited therein.

---

networks, business models and revenue streams from competitive forces by new technology insurgents.<sup>12</sup>

Section 257 sets out a related policy: the Commission should identify “market entry barriers for entrepreneurs and other small businesses in the provision and ownership of telecommunications services and information services, or in the provision of parts or services to providers of telecommunications services and information services.” The Commission “shall seek to promote the policies and purposes of this chapter favoring diversity of media voices, vigorous economic competition, technological advancement, and promotion of the public interest, convenience, and necessity.” It seems quite obvious the 104<sup>th</sup> Congress did not want the Commission to be creating new iterations of the very kinds of barriers § 257 says must be eliminated.

Missoula violates each of these rules. It proposes onerous technical and operational obligations on small businesses that seek to enter the market by imposing technical mandates that are incompatible with the nature and operation of new technology. It taxes new entrants by

---

<sup>12</sup> The Commission has traditionally rejected proposals infected with Luddite biases. *See*, Memorandum Opinion and Order, *In the Matter of Applications of Millicom Digital Communications, Inc. For a Nationwide Private Carrier Paging System*, FCC 83-512, 1983 FCC LEXIS 359 (rel. Nov., 1983):

18. ... a subscriber to Millicom’s PCPS service can originate a message in one of two ways: (1) by calling the number of a Millicom message dispatch center and conveying the message orally to a Millicom employee who enters it manually into a METASAT computer keyboard display terminal; or (2) by using a resident keyboard display terminal in the subscriber’s home or office to connect through telephone lines to Millicom’s METASAT computer. In its Application for Review, Telocator has indicated that it objects only to Millicom’s second method of subscriber access. ... n9

n9 Teleocator apparently reads the new legislation to allow Millicom to use 19th century technology as part of its PCPS, by, for instance, hand-carrying the subscribers’ written messages to its land stations, but not 20th century computer technology to accomplish the same result.

*See also*, *Texas PUC v. FCC*, 886 F.2d 1325, 1335, n. 10 (D.C.Cir. 1989) [Affirming FCC pre-emption of state commission order barring private customer interconnection with PSTN and likening the state commission to “a modern day King Canute seeking to hold back new technological waves.”]

forcing them to emulate the incumbents' revenue streams and business models that engraft a notion of geographic relevance to how communications are priced, at both the retail and wholesale level. It makes it more expensive and potentially infeasible to offer new enhanced services using this technology, since it is costly and inefficient (and, on occasion, impossible) to make the technology "backwards compatible" with incumbents' legacy systems and networks.

New entrants and the systems they use do not have any technical reason to include geographic relevance as any kind of criterion in their business and pricing models or how they support communications needs of users (other than as necessary to facilitate 911 emergency response). Distance and location are irrelevant since the cost of communication no longer materially varies in relation to location or distance if facilities are in place. This is all done to prop up existing revenue streams and deter competition by a new breed of suppliers. It is a barrier to entry and as such violates the Act.

**C. Unreasonable restrictions on the form of interconnection.**

The most oppressive and unreasonable technical mandate proposed in Missoula relates to the mandate that SS7 based interconnection signaling be exchanged,<sup>13</sup> and the requirement that specific signaling information be included the SS7 ISUP IAM.

**1. The proposal inappropriately requires all signaling to be SS7 based.**

Mandating a specific signaling format is inappropriate and the Commission should not exclusively decide the form that interconnection will take. Other forms of interconnection exist today and others are technically feasible. More important, SS7 is, frankly, outdated and obsolete.

---

<sup>13</sup> Feature Group IP is aware that Missoula does not outright ban all non-SS7 interconnection. CPN, however, is an SS7 signaling parameter. Missoula proponents propose an accelerated process in which all non-SS7 interconnecting parties would have a rigid burden of both proof and persuasion as to why they don't pass CPN. The prospect of a multitude of costly proceedings where a new entrant has to justify its networking architecture is the functional equivalent of a mandate to conform to the old ways. It is more likely a potential entrant will choose to invest its capital and effort other industries or countries rather than face this kind of hostile environment.

---

IP-based session control methods are far superior and provide more useable, functional and flexible signaling than does SS7.<sup>14</sup>

**a. Present interconnection methods.**

The Commission has not previously imposed a technical mandate of this sort; indeed it has consistently refused to do so. For example, in the proceeding in which the Commission promulgated its “CPN rule” (47 C.F.R. § 64.1601) it emphasized that it was not requiring carriers to deploy SS7 and only required passage of CPN if a carrier did deploy SS7 and only for those parts of the carrier network that used ISUP IAM capabilities.<sup>15</sup> As is clear from the orders in that case, the whole purpose of the CPN rule was to make Caller ID and other “CPN services” work between networks. Those cases and others show that CPN has never really been for rating or billing. Instead ANI or Charge Number is used for billing, but even then only for charges to retail customers, as opposed to wholesale inter-carrier compensation between carriers.<sup>16</sup>

---

<sup>14</sup> This is not to say that SS7 is poorly engineered or does not have a place today. It is simply a technological fact that the SS7 engineering concept is stale technology and should no longer be the standard for an evolving communications industry. From a purely engineering vantage point, the old Step by Step mechanical switch is one of the finest engineered machines mankind has ever built. It was admired and used, but once the industry took the next step it was a thing of the past. SS7 (if not propped up by government as mandatory) will also be admired by engineers but will soon be a thing of the past. Recall that SS7 uses a very rudimentary form of packet switching that predates the TCP/IP suite and consider that it does not interoperate with those parts of TCP/IP that perform the same kind of functions absent a mapping mechanism like that specified in RFC 3398. See <http://www.ietf.org/rfc/rfc3398.txt>.

<sup>15</sup> Memorandum Opinion and Order on Reconsideration, Second Report and Order and Third Notice of Proposed Rulemaking, *In the Matter of Rules and Policies Regarding Calling Number Identification Service -- Caller ID*, CC Docket No. 91-281, FCC, 95-187, 10 FCC Rcd 11700, 11703, 11718, ¶¶ 5, 49 (rel. May 5, 1995) (“*Caller ID Reconsideration Order*”); Report and Order and Further Notice of Proposed Rulemaking, *In the Matter of Rules and Policies Regarding Calling Number Identification Service -- Caller ID*, CC Docket No. 91-281, FCC 94-59, 9 FCC Rcd 1764, 1767, ¶ 17 (rel. March 29, 1994) (“*Caller ID Order*”).

<sup>16</sup> *Caller ID Order* ¶ 52. See also, Report and Order, *In the Matter of Rules and Regulations Implementing the Telephone Consumer Protection Act of 1991*, CG Docket No. 02-278, FCC 03-153, 18 FCC Rcd 14014, 14122 ¶ 180, note 661 (rel. July 3, 2003): [¶ 180: “Regardless of whether SS7 is available, a LEC at the originating end of a call must receive and be able to transmit the Automated Number Identification (ANI) to the connecting carrier, (n661) as the ANI is the number transmitted through the network that identifies the calling party for billing purposes.” Note 661: “The term “ANI” refers to the delivery of the calling party’s billing number by a local exchange carrier to any

---

The Commission has in fact affirmatively required non-SS7 based forms of interconnection: Type 1 CMRS interconnection and the *Local Competition Order* rules mandating end office based line and trunk side interconnection.

**i. Type 1 interconnection.**

CMRS carriers have the right to choose any technically feasible interconnection method, including non-SS7 methods:

The cellular carrier is entitled to reasonable interconnection, the form of which depends upon the cellular system design and other factors: in some cases the interconnection of a cellular system as an end office (Type 2) may be most appropriate, and in others, interconnection as a PBX (Type 1) may be best. 86 FCC 2d at 496. A cellular system operator is a common carrier, rather than a customer or end user, and as such is entitled to interconnection arrangements that “minimize unnecessary duplication of switching facilities and the associated costs to the ultimate consumer.” *Id.* Underlying these policies, was the goal of interconnection arrangements most favorable to the end user. *Id.* at 495.<sup>17</sup>

Type 1 interconnection does not involve exchange of SS7 signaling between the interconnecting CMRS carrier and the ILEC. Instead, with Type 1 interconnection the interconnecting carrier for all intents and purposes looks like a “PBX.” The Commission to this day continues to exempt “paging” carriers from number portability and number pooling obligations because those obligations rely on SS7 and paging companies would have to make

---

interconnecting carrier for billing or routing purposes, and to the subsequent delivery to end users. See 47 C.F.R. § 64.1600(b). ANI is generally inferred by the switch. Each line termination on the telco switch corresponds to a different phone number for ANI.”]

<sup>17</sup> *In the Matter of The Need to Promote Competition and Efficient Use of Spectrum for Radio Common Carrier Services* FCC 86-85, 59 Rad. Reg. 2d (P & F) 1275, ¶ 12, (rel. Mar. 5, 1986)(“*FCC Policy Statement*”). Although the policy statement expressly spoke only to “cellular” the FCC later clarified that the statement also applied to all RCCs and Part 22 licensees, including paging. Memorandum Opinion and Order, *In the Matter of The Need to Promote Competition and Efficient Use of Spectrum for Radio Common Carrier Services (Cellular Interconnection Proceeding)*, FCC 89-60, 4 FCC Rcd 2369, ¶ 43 (rel. March 15 1989). This rule was expressly maintained even after 1996. Memorandum Opinion and Order, *Bowles v. United Telephone*, File No. E-96-04, DA 97-1441, 12 FCC Rcd 9840 (rel. Jul. 1997).

material investments and network rearrangements to transition from Type 1 to Type 2.<sup>18</sup> Missoula would require them to do what the Commission has already refused to do on several occasions in multiple contexts.

**ii. Line side interconnection.**

As required by § 251(c)(2) of the Act and current rules, requesting carriers may interconnect at the line side of a local switch under 47 C.F.R. § 51.305(a)(2)(i). The Commission expressly ruled that line-side interconnection is technically feasible – and therefore required to be made available – in the *Local Competition Order*:<sup>19</sup>

26. ...Section 251(c)(2) requires incumbent LECs to provide interconnection to any requesting telecommunications carrier at any technically feasible point.... The Commission identifies a minimum set of five "technically feasible" points at which incumbent LECs must provide interconnection: (1) the line side of a local switch (for example, at the main distribution frame); (2) the trunk side of a local switch; (3) the trunk interconnection points for a tandem switch...

Line-side and Type 1 interconnection – which have clearly been technically feasible and a standard means of CMRS interconnection long before 1996<sup>20</sup> – are both “technically feasible” as defined in 51.5 of the rules:

---

<sup>18</sup> First Report and Order and Further Notice of Proposed Rulemaking, *In the Matter of Telephone Number Portability*, CC Docket No. 95-116, RM 8535, FCC 96-286, 11 FCC Rcd 8352, 8433-34, ¶ 156, n. 451 (rel. July 2, 1996); Third Report and Order and Second Order on Reconsideration in CC Docket No. 96-98 and CC Docket No. 99-200, *In the Matter of Numbering Resource Optimization; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Telephone Number Portability*, CC Docket Nos. 99-200, 96-98, 95-116, FCC 01-362, 17 FCC Rcd 252, 260, ¶ 16 (rel. Dec. 28, 2001).

<sup>19</sup> First Report and Order, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, CC Docket Nos. 96-98, 95-185, FCC 96-325 ¶¶ 861-862, 11 FCC Rcd 15499, 15928-15929 (rel. Aug. 1996) (“*Local Competition Order*”), *aff’d in part and vacated in part sub nom. Competitive Telecommunications Ass’n v. FCC*, 117 F.3d 1068 (8<sup>th</sup> Cir. 1997), *aff’d in part and vacated in part sub nom. Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8<sup>th</sup> Cir. 1997), *aff’d in part and rev’d in part sub nom., AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366 (1999).

<sup>20</sup> Line side and end office trunk side interconnection have been available in the form of Feature Groups A and B out of ILEC switched access tariffs since 1982, and before then under the old “ENFIA” contracts/tariffs. It is not clear if the Missoula proponents are proposing to eliminate Feature Groups A

---

Technically feasible. Interconnection, access to unbundled network elements, collocation, and other methods of achieving interconnection or access to unbundled network elements at a point in the network shall be deemed technically feasible absent technical or operational concerns that prevent the fulfillment of a request by a telecommunications carrier for such interconnection, access, or methods. A determination of technical feasibility does not include consideration of economic, accounting, billing, space, or site concerns, except that space and site concerns may be considered in circumstances where there is no possibility of expanding the space available. The fact that an incumbent LEC must modify its facilities or equipment to respond to such request does not determine whether satisfying such request is technically feasible. An incumbent LEC that claims that it cannot satisfy such request because of adverse network reliability impacts must prove to the state commission by clear and convincing evidence that such interconnection, access, or methods would result in specific and significant adverse network reliability impacts.

The Act forecloses mandating a particular interconnection form and particularly one that requires SS7 based signaling, since that would eliminate Type 1 and line side interconnection and the Commission has expressly ruled that both kinds must be made available as a result of §§ 201, 251(a), 251(c)(2) and 332(c)(1)(B) as well as Part 51 and Rule 20.11.

**b. Other technically feasible methods.**

There are additional technically feasible interconnection forms that do not use a direct exchange of signaling using SS7. ISDN PRI, for example could be used. The Texas PUC required the then Southwestern Bell Telephone Company to interconnect with a requesting carrier using ISDN PRI in 1997, and rejected SWBT's position that only SS7 should be used. Texas PUC Docket No. 17922, *Petition of Waller Creek Communications, Inc., for Arbitration With Southwestern Bell Telephone Company*, Arbitration Award, p. 6 (Dec. 29, 1997). The 5<sup>th</sup> Circuit Court of Appeals affirmed on that point. *Southwestern Bell Telephone Co. v. Waller Creek Communications*, 221 F.3d 812, 821 (5<sup>th</sup> Cir. 2000). ISDN interconnection does not "signal" via SS7. Instead, it signals over the "D" channel using ITU-T Q.931.

---

and B, or if they simply did not think about it. The requirement to use SS7 and pass CPN, however, would make those arrangements illegal for interconnection, even if used by pure "IXCs."

---

**2. ESPs use ISDN interconnection.**

ISDN “interconnection” is particularly relevant today, since most non-carrier VoIP providers use PRI connections<sup>21</sup> to interoperate – e.g., “interconnect” with the PSTN.<sup>22</sup> They obtain numbering resources<sup>23</sup> and other telecommunications related inputs from LECs and their appearance on the network looks like a PBX, much like CMRS Type 1.

**3. The CPN requirement will maintain and exacerbate the underlying problem.**

In the early days of the telephone industry, there was some basis to assume that a customer would be physically located in the area represented by the rate center designation. The customer was served by a telephone company switch and an access line ran from a customer’s premises to the serving local wireline switch. The telephone company would assign a number that corresponded to the rate center covering the residence or business of the customer, and they would assume or at least treat the customer as if she was in the rate center served by the switch. But this assumption is no longer valid, especially as the technology used to provide communications service has evolved. This is particularly true for CMRS service and Internet-based services such as Vonage, as the Commission has already observed.<sup>24</sup>

---

<sup>21</sup> Some of the larger providers do signal through the SS7 “cloud” and obtain only bearer links. Other methods are also possible, such as old-style MF signaling. The great preponderance, however, use ISDN PRI.

<sup>22</sup> “Interconnection” is not the sole province of carriers. That term has long been used on a more generic basis. Users and other non-carrier entities also have a broad set of interconnection rights – both in terms of the way they obtain PSTN connectivity and with regard to the equipment they use. Most “end user” CPE does not “speak SS7.” It bears repeating that ESPs are “end users” and are not carriers.

<sup>23</sup> From a purely technical perspective one does not require an E.164 address in order to launch outbound calls over a PRI arrangement. The call will still launch. The E.164 address is necessary only if a PSTN user wishes to initiate a session to a user behind the ISDN PRI PBX arrangement.

<sup>24</sup> Memorandum Opinion and Order, *In the Matter of Vonage Holdings Corporation for Declaratory Ruling on Order of the Minnesota Public Utilities Commission*, WC Docket No. 03-211, FCC 04-267, 19 FCC Rcd 22404 ¶ 9 (rel. Nov. 2004) (“*Vonage*”); Memorandum Opinion and Order, *In the Matter of Telephone Number Portability – Carrier Requests for Clarification of Wireless-Wireless Porting Issues* (“*Wireless-Wireless Portability Order*”), CC Docket No. 95-116, FCC 03-237 ¶ 22 (rel.

ILECs and some CLECs retail rate outbound calls from their own users based on a comparison of the calling and called NXXs. They do not usually use “CPN” as presented in the SS7 ISUP IAM to know the calling party’s phone number, however. The CPN parameter is inserted by the originating carrier at the end office, but only if an outbound call is destined to a different switch. Instead they use ANI, which is “inferred by the switch. Each line termination on the telco switch corresponds to a different phone number for ANI.”<sup>25</sup> LECs do not use a comparison of the calling and called party NXXs for retail rating purposes on the terminating side. They therefore do not rely on CPN.

CPN is also not used to “rate” calls for switched access purposes. While a call can be “jurisdictionalized” based on “call detail” other methods such as PIUs and even the JIP are also used. More important, however, the “call detail” is not necessarily “CPN” but is more general and can come from switch recordings or it can be ANI or Charge Number.

---

Oct. 7, 2003)(emphasis added), *affirmed*, *Central Texas Telephone Cooperative, Inc. v. FCC*, No. 03-1405 (D.C.Cir., March 11, 2005); Eighth Report, *In the Matter of Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, WT Docket No. 02-379, FCC 03-150, 18 FCC Rcd 14783, ¶ 62 and n. 227 (rel. July 14, 2003); Notice of Proposed Rulemaking, *In the Matter of Numbering Resource Optimization; Connecticut Department of Public Utility Control Petition for Rulemaking to Amend the Commission's Rule Prohibiting Technology-Specific or Service-Specific Area Code Overlays; Massachusetts Department of Telecommunications and Energy Petition for Waiver to Implement a Technology-Specific Overlay in the 508, 617, 781, and 978 Area Codes; California Public Utilities Commission and the People of the State of California Petition for Waiver to Implement a Technology-Specific or Service-Specific Area Code*, FCC 99-122, CC Docket No. 99-200, RM No. 9258, NSD File No. L-99-17, NSD File No. L-99-36, 14 FCC Rcd 10322, ¶ 112, n. 174 (rel. Jun. 2, 1999)(“*NRO NPRM*”); The North American Numbering Council LNPA Working Group Report on Wireless Wireline Integration, p. 33 May 8, 1998 (NANC Report to FCC) ¶ 2.3 available at <http://www.fcc.gov/wcb/tapd/Nanc/rptnancr.doc> (“*NANC Report*”); *Interconnection Between Wireline Telephone Carriers and Radio Common Carriers Engaged in the Provision of Domestic Public Land Mobile Radio Service Under Part 21 of the Commission's Rules (Domestic Public Land Mobile Radio Service)*, 63 FCC 2d 87, 88 (1977); *Interconnection Between Wireline Telephone Carriers and Radio Common Carriers Engaged in the Provision of Domestic Public Land Mobile Radio Service under Part 22 of the Commission's Rules (Memorandum of Understanding)*, 80 FCC 2d 352 (1980).

<sup>25</sup> Report and Order, *In the Matter of Rules and Regulations Implementing the Telephone Consumer Protection Act of 1991*, CG Docket No. 02-278, FCC 03-153, 18 FCC Rcd 14014, 14122 ¶ 180, note 661 (rel. July 3, 2003).

---

The ILECs spent years trying to convince regulators that the calling and called party numbers were not determinative for reciprocal compensation purposes; indeed, they have strenuously argued that the “actual physical location” of the parties to a conversation should be used, and NXXs should not act as a proxy. They have claimed – with considerable success – that Foreign Exchange like services are subject to access and not § 251(b)(5) and/or the *ISP Remand Order*. They have even convinced some state commissions that so-called “Virtual NXXs” should be banned outright.

These arguments have consumed an extraordinary amount of resources and involved a lot of money in terms of LECs’ rights and obligations in inter-carrier compensation and physical interconnection. Missoula proposes to resolve the issue by incorporating the concept that the calling and called party numbers and their respective rate center associations should be used to “rate” calls for inter-carrier compensation purposes. The number will serve as a proxy for the calling participant’s geographic location. While that might have been welcomed by many CLECs a few years ago – since that is the position most CLECs that provided PSTN connectivity to dial up Internet Service Providers asserted – it is now too late. Dial up is decreasing as “always on” Internet access grows. The issues surrounding “VNXX” and convergent one-way inbound traffic pattern is yesterday’s litigation – even though it continues. The Missoula proponents make it appear that the ILEC concession to finally use NXXs for rating is progress. It is not. The Missoula proponents most certainly know – and are trying to obtain advance favorable resolution on – the issue to be litigated today and tomorrow: traffic that comes from the Internet or both goes to and comes from the Internet. Missoula proponents have adopted NXX rate center assignments (using CPN as the way to identify the NXX) precisely because they will be able to thereby impose switched access on this new form of Internet traffic. The Internet does not have

---

an NXX. It has no “rate centers.” It is local to all places, but will not be treated as such under Missoula. Instead, the plan is that access will apply even though they never really admit as much. Missoula is a return of the “modem tax” and this time it is not an urban myth.

The argument over “numbers” and “CPN” is merely a symptom of the root problem. Any resolution that continues to take into account, determine or try to fix the “geographic location” of the participants to a call session will only yield further litigation as we move to the next set of business models. Continuing to discriminate between call sessions based on criteria that have nothing to do with the additional cost imposed on the terminating party, and continuing to allow LECs to assess another carrier for calls that are originated by an LEC’s own customer, will only lead to new forms of “arbitrage” and yet more litigation. Missoula is merely the next step in the ILECs frantic effort to maintain their walled garden local exchange monopoly by imposing a tax on any message that is deemed to either enter or exit the LEC’s network. Now they really are after the Internet.

The only rational and lawful approach is to eliminate all of the old arbitrary and increasingly arbitrary distinctions and move immediately to the regime contemplated by §§ 251(b)(5) and its companion § 252(d)(2). Restrict inter-carrier charges to only those involving termination, and require that termination charges reflect only the “additional cost” of terminating the call. End access charges and all other implicit subsidies. Move all the subsidies to the Universal Service Fund under § 254. Do it now.

The ILECs – and in particular the rural ILECs – will plea for a continuation of their favored subsidized monopoly position. They will claim rates will rise and they may suffer reduced profits or even fail. That may indeed occur. If there was real competition the ILECs could not substantially raise their retail prices – or they would do so and suffer competitive

---

losses and perhaps even fail. The tough love of a competitive market sometimes results in the failure of an inefficient, antiquated or non-competitive enterprise. Society moves on.

Retail mass market and business “Telephone toll” service provided by separate IXC’s is dying away. AT&T is now part of the soon-to-be largest RBOC. MCI is part of Verizon. Sprint remains, but is focusing more on its wireless and Internet endeavors. For the most part the great preponderance of presubscribed telephone toll is now carried by the LEC serving the retail customer. The ILECs shed nary a tear at the demise of the unaffiliated IXC industry. They are overjoyed to have regained the business. This way, they still receive access charges and recover a margin on toll calls – which are artificially overpriced in relation to the actual cost to society that is imposed when a caller dials “1+.”

We can also be certain they would not be bothered or concerned in the least if all independent dial-up ISPs went away, along with the companies providing the new competitive threat – Google, Microsoft, e-Bay, Skype and the other ESPs or Application Providers that now support voice service applications, most of which can interact with customers on the PSTN. One need only look at Missoula, since the entire plan is designed to hinder these new participants’ attempts to provide competitive or substitutable services and applications by taxing them if they touch a legacy network.

One must ask: if the ILECs are so unconcerned with the potential demise of their competitors, why should the competitors – or even regulators – be concerned about the continued success of the ILECs? Their business models and technology are stale and no longer serve the public interest. The government has no legitimate reason to continue propping them up. There certainly is an immense public value obtained by supporting rural, low income and certain other customers so they can have and use communications capability. The focus of universal service

efforts, however, **must** be on *consumer* welfare, not the welfare of the ILECs. The users for whom the universal service program was designed would likely prefer to directly receive the support and be able to choose how (or whether) to obtain the connectivity they need. Many potential rivals would rush into the market to compete for this communications business – and they would offer better, more and lower-priced service. It would likely take the form of digital, IP-based services and applications rather than antiquated narrowband circuit-switched services. If they were only allowed to do so. If the current barriers to entry and restrictions on use of USF support were removed. ***If*** no new barriers to entry are erected in the form of Missoula and ***if*** USF is changed by making more than piddling rearrangements of deck chairs on the ILECs’ Titanic.

#### **4. The CPN requirement is arbitrary and unreasonable.**

Missoula is not clear as to whether the intent is to impose any obligation on non-carrier VoIP providers to pass “CPN” with each outgoing call – or whether the CPN obligation will apply only to the LEC that is providing the PRI. If the intent is to impose obligations directly on non-carriers, then there has not been adequate notice that end users will possibly be regulated in this case. Missoula does not indicate how ESPs will interconnect with the PSTN – unless the proponents envision that ESPs also have to implement SS7 in their networks.<sup>26</sup> If, on the other hand, the intent is to require the LEC providing the PRI to pass CPN, then there are several practical problems that have not been adequately considered or resolved.

---

<sup>26</sup> ESP networks are not circuit switched and only a BellHead would dream of an SS7-like out of band “control plane” for IP traffic using something like IP Multimedia Subsystems. *See*, [http://telephonyonline.com/mag/telecom\\_crossing\\_convergence\\_chasm/](http://telephonyonline.com/mag/telecom_crossing_convergence_chasm/). Requiring SS7 in an IP network would be the equivalent of forcing automobiles to carry buggy whips. In any event, the Commission has never required non carriers to implement SS7, even in the TDM world. *See, e.g., Caller ID Reconsideration Order ¶¶ 100; Memorandum Opinion and Order, In the Matter of Rules and Policies Regarding Calling Number Identification Service -- Caller ID*, CC Docket No. 91-281, DA 98-500, 13 FCC Rcd 5137 (rel. March 16, 1998) (“*Siemens 64.1601(b) Stay*”).

One significant problem is which “CPN” should be used. Take, for example a FAX distribution service. This is an enhanced service, and many of the RBOCs still include it in their CEI plans.<sup>27</sup> A user of the FAX distribution service will create the FAX message and then launch it for distribution to persons in many potential locations. Let’s assume the FAX is addressed to a recipient in Washington, DC. Which “CPN” does Missoula require to be included in the signaling information?<sup>28</sup> That of the creator and user, who may be in New York and may not even have a wireline or wireless phone?<sup>29</sup> Or is it the line number associated with the local connection seized in Washington, DC to send to the FAX machine of the recipient. Does access or § 251(b)(5) apply if more than one LEC handles the call session at the terminating end?

What will likely be the more problematic issue is the number to be included in the CPN parameter for VoIP sessions. Let’s say the person who is initiating the session is in Michigan. She may not have a traditional phone number at all. She may have a SIP address, or an IM screen name. She may have a black rotary dial handset, but is not using it at the time since she prefers her SIP phone. Or, she may have a phone and is using it to launch a session with her local ISP at which point she activates an old-style VoIP application like Net2Phone has offered since the 1990s. The session set-up may traverse several different enhanced networks and one or two carrier networks and ultimately end up with a CLEC that provides ISDN PRI service to a partner of a partner of Net2Phone. Assume the CLEC customer does not purchase any DIDs, so there is

---

<sup>27</sup> A single example is the “CEI Plan for the Provision of Facsimile Services” filed by Southwestern Bell Telephone Company in 1995, found at <http://att.sbc.com/PublicAffairs/PublicPolicy/CEIplans/82007.pdf>. That plan expressly contemplates that this ESP service uses local lines to send FAXes to recipients.

<sup>28</sup> The information 47 C.F.R. § 68.318(d) requires for FAX transmissions is not CPN and is not included in the SS7 IAM CPN field. That is a separate issue.

<sup>29</sup> The user may communicate only over the Internet, for example, and has arranged to send and receive FAX messages through a computer using broadband. The user may have a FAX number, but most e-FAX companies allow the user to pick the number and therefore the rate center. Enhanced services have no geographic relevance. The “location” is cyberspace – which is “local” to all places.

no customer-specific line or directory number. The CLEC then uses a local interconnection facility to send the call to an RBOC tandem for delivery to an RLEC who then terminates the call to its customer. Who is responsible for populating the CPN parameter? The RBOC? The CLEC, which may not even know that VoIP calls are being launched through its service? One of the carriers up the chain? One of the ESPs prior to the carrier chain? The application provider (Net2Phone)? The “Dial Up” ISP that has no idea and does not care that the user is “doing voice” rather than “Web” or “email”? The initial user? And what “CPN” do the Missoula proponents expect? The phone number for our person in Michigan? Her landline number? Her cell number? Her dynamic IP number? IM screen name? SIP or email address? Or do we use the Charge Number of the CLEC’s customer even though the ISDN PRI switch is merely an intermediary switch and is not an “end point”<sup>30</sup>

Feature Group IP suspects the Missoula proponents will say it is the CLEC and the CLEC must ensure the “CPN” is the “true CPN” – whatever that means. We trust they have merely forgotten that the CLEC cannot control what CPN is passed into the SS7 CPN parameter for ISDN PRI calls. The ISDN customer (as well as an individual user behind the ISDN PRI system) can arrange to send up any number he or she desires, and it will automatically be placed in the CPN parameter. RFC 3398 is an accepted method used to map SIP to ISUP. That mapping method allows the user to insert any value for the CPN parameter and that is the value that will be pushed through the SS7 “cloud.” Given this, do the Missoula proponents contend that every

---

<sup>30</sup> Declaratory Ruling in Cc Docket No. 96-98 and Notice of Proposed Rulemaking in CC Docket No. 99-68, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Inter-Carrier Compensation for ISP-Bound Traffic*, CC Docket Nos. 96-98 and 99-68, FCC 99-38, 14 FCC Rcd 3689, 3698-3701, ¶ 10-14, note 44 (rel. Feb. 26, 1999) (*ISP Declaratory Ruling*) (appeal history omitted); Order on Remand and Report and Order, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Inter-carrier Compensation for ISP-Bound Traffic*, CC Docket No. 96-98; CC Docket No. 99-68, FCC 01-131, 16 FCC Rcd 9151, 9177-9178, ¶ 57 (rel. April 27, 2001).

---

LEC has the obligation to actively police users and do what it takes to ensure “true CPN” (whatever that means) is passed and will bear all responsibility should a user have the temerity to implement and use accepted Internet related applications and mapping methods? Must the LEC disconnect a customer that uses RFC 3398? If so, then Missoula is proposing to regulate end users and not just carriers. Missoula is also proposing to elevate one “standards” body (ITU) over another (IETF). The Commission should not prescribe technology winners or losers. Besides, if you pick SS7 you will be betting on the slower and stupider horse.

In an age when a number is just a specific kind of routing address that provides instruction for calls destined to it (and calls can be forwarded to a sequence of other numbers or converted to an IP-based address and routed to any place on the globe) it is clear that CPN is meaningless and tells us nothing. While the notion makes sense to BellHeads since they can conceive of no other way of doing things, in has no rational application in the real world we face today, and it will become even more irrational as time progresses. Five years is several generations in Internet time.

**5. Traditional interconnection methods have always launched call sessions with no discernible originating “geographic location” and the sky did not fall.**

Similar confounding examples abound even in traditional TDM telephony. The ILECs’ Foreign Exchange service (when the open end is used to launch a session) involves a number that does not represent the calling party’s geographic location. The end office routing a terminating Feature Group A call will provide a CPN that does not represent the location of the “calling party” (unless you assume that the “calling party” is the end office switch). A “leaky PBX” that launches an outbound call session will result in CPN that does not represent the “calling party’s” geographic location (unless you consider the PBX seizing the local line to initiate the session to be the “calling party”). This Commission has already recognized the growing disconnect

between telephone numbers and geography in the wireless arena and with VoIP.<sup>31</sup> Missoula nails up this attenuated connection when an ISUP “release” should have been launched long ago.

**6. The calling party’s location has no relationship to the additional cost imposed on the terminating network.**

As shown above, the proposed mandate to present a Calling Party Number and the proposed decision to use CPN and the called party number as the basis to enforce the continued discrimination between and among arbitrarily selected traffic types for inter-carrier compensation purposes is unreasonable, anticompetitive, arbitrary and irrational. Even more fundamentally, however, CPN will be used to rate, but the alleged geographic location (determined by CPN proxy) of the calling party has no impact on the “additional cost” imposed on the terminating carrier for terminating the call. While the point of interconnection for traffic exchange may

---

<sup>31</sup> Memorandum Opinion and Order, *In the Matter of Vonage Holdings Corporation for Declaratory Ruling on Order of the Minnesota Public Utilities Commission*, WC Docket No. 03-211, FCC 04-267, 19 FCC Rcd 22404 ¶ 9 (rel. Nov. 2004) (“*Vonage*”); Memorandum Opinion and Order, *In the Matter of Telephone Number Portability – Carrier Requests for Clarification of Wireless-Wireless Porting Issues* (“*Wireless-Wireless Portability Order*”), CC Docket No. 95-116, FCC 03-237 ¶ 22 (rel. Oct. 7, 2003)(emphasis added), *affirmed*, *Central Texas Telephone Cooperative, Inc. v. FCC*, No. 03-1405 (D.C.Cir., March 11, 2005); Eighth Report, *In the Matter of Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, WT Docket No. 02-379, FCC 03-150, 18 FCC Rcd 14783, ¶ 62 and n. 227 (rel. July 14, 2003); Notice of Proposed Rulemaking, *In the Matter of Numbering Resource Optimization; Connecticut Department of Public Utility Control Petition for Rulemaking to Amend the Commission's Rule Prohibiting Technology-Specific or Service-Specific Area Code Overlays; Massachusetts Department of Telecommunications and Energy Petition for Waiver to Implement a Technology-Specific Overlay in the 508, 617, 781, and 978 Area Codes; California Public Utilities Commission and the People of the State of California Petition for Waiver to Implement a Technology-Specific or Service-Specific Area Code*, FCC 99-122, CC Docket No. 99-200; RM No. 9258; NSD File No. L-99-17; NSD File No. L-99-36, 14 FCC Rcd 10322, ¶ 112, n. 174 (rel. Jun. 2, 1999)(“*NRO NPRM*”); The North American Numbering Council LNPA Working Group Report on Wireless Wireline Integration, p. 33 May 8, 1998 (NANC Report to FCC) ¶ 2.3 available at <http://www.fcc.gov/wcb/tapd/Nanc/rptnancr.doc> (“*NANC Report*”); *Interconnection Between Wireline Telephone Carriers and Radio Common Carriers Engaged in the Provision of Domestic Public Land Mobile Radio Service Under Part 21 of the Commission's Rules (Domestic Public Land Mobile Radio Service)*, 63 FCC 2d 87, 88; 1977 WL 38679 (F.C.C.) (1977); *Interconnection Between Wireline Telephone Carriers and Radio Common Carriers Engaged in the Provision of Domestic Public Land Mobile Radio Service under Part 22 of the Commission's Rules (Memorandum of Understanding)*, 80 FCC 2d 352 (1980).

impact cost, the location of the calling party on the other side of that POI is completely irrelevant.

Feature Group IP believes that the “additional cost” of terminating a call is so miniscule that it is not worth the effort and resources to meter, bill and try to collect termination charges. We would prefer “no compensation.” The Act, however, expressly provides that the terminating carrier has a right to recover a charge. Absent a negotiated bill and keep arrangement, or an understanding that traffic is roughly balanced, terminating charges are allowed.

**D. Missoula proposes to use CPN in a way it was never intended to be used.**

CPN is a defined term in the Commission’s rules. There are also definitions for ANI, Charge Number and SS7.<sup>32</sup> Those rules demonstrate that while both ANI and Charge Number can be used for “call routing, (retail) billing and management” *CPN* is nothing more than the information in the “CPN” parameter of SS7 and it is designed merely to indicate the “subscriber line number or the directory number.” Once one turns to 47 C.F.R. § 64.1601 it becomes clear that CPN was designed to be useful and used only to make “CPN-based services” – like caller ID, call return and call blocking – operate within and between compatible networks.<sup>33</sup> Under the Commission’s rules CPN was not intended to be used to identify “jurisdiction” or “call classification” and there is nothing to indicate it was designed to have any “geographic relevance.”<sup>34</sup>

---

<sup>32</sup> 47 C.F.R. § 64.1600(b), (c),(d) and (f).

<sup>33</sup> *Caller ID Order, supra; Caller ID Reconsideration Order, supra.*

<sup>34</sup> ANI has some geographic relevance in traditional wireline legacy networks because for them “ANI is generally inferred by the switch. Each line termination on the telco switch corresponds to a different phone number for ANI.” Report and Order, *In the Matter of Rules and Regulations Implementing the Telephone Consumer Protection Act of 1991*, CG Docket No. 02-278, FCC 03-153, 18 FCC Rcd 14014, 14122 ¶ 180, note 661 (rel. July 3, 2003).] Telcos base their retail rates on the location of the serving wire center. The ILECs are attempting to shoe-horn other technologies into the ILEC way of networking and charging users. New entrants do not use the same network architecture. Switch fabric may serve huge areas – including many LATAs or states or even the entire country, and their retail rates

---

CPN is not an appropriate or necessary – and certainly should not be used as the mandatory and exclusive – determinant for inter-carrier call classification. There are users that have no CPN. There are networks that are not SS7 and therefore will not pass CPN. There are many reasons why – if it exists – CPN will not be a reliable tool for fixing the “geographic location” of the calling party. A telephone number is merely a virtual routing address, and it is (or should be) useful only to facilitate routing and delivery across a single system or multiple systems and platforms. While it may also be useful for the purpose of advertising to the receiving party “who” is calling,<sup>35</sup> as the Commission knows, delivery of CPN (as well as Caller Name, Call-Back, Last Call Return, Anonymous Call Rejection, and the other “modern” CPN-based services that pale in comparison to what IP can do) to the called party can be blocked by users who affirmatively wish to not to be identified.<sup>36</sup>

Using an assumed geographic location of the calling and called parties as a means to classify calls for inter-carrier compensation purposes is exactly the opposite direction the industry should be headed. The “physical location” of the party at the originating end of a call session has absolutely no bearing on the “additional cost” incurred by the carrier to terminate a call. Using CPN as an arbitrary proxy in order to “rate” calls for inter-carrier purposes merely continues the present subsidy-laden regime that should have ended long ago.

---

do not generally depend on where the switch “is,” or even where the customer “is.” The Commission should not buy into a rule that locks this country into a particular technology or business model.

<sup>35</sup> CPN can be used to help identify a calling party. A forward looking policy would allow e-mail or SIP addresses as well as numbers to be presented in the signaling field of a call since they are useful for non-rating reasons. SS7, however, cannot perform that feat. But CPN and other identifiers are not appropriate to try to geographically “fix” the location of a calling party for use as an inter-carrier compensation rating engine.

<sup>36</sup> While CPN is not actually removed when the privacy indicator is properly flagged, it indicates the calling party does not wish to be identified. Interestingly, AT&T has an administrative policy of blocking or stripping CPN (not just flagging the privacy indicator) on outbound calls originated by certain of its personnel.

**E. This is all purposefully designed to retard new entry and new technology uses and to protect incumbent revenue streams and business models.**

The primary beneficiaries of using CPN for inter-carrier compensation call rating will be the rural ILECs that have little or no competition in their area and are usually the only carriers with numbering resources in the rate centers comprising their “local calling area.” Rural ILECs have forcefully resisted competitive carrier attempts to implement local calling when they do obtain “local” numbers in an RLEC’s local calling area. They refuse to interconnect. They refuse to honor the competitive carrier’s rate center association and thereby require their own users to dial 1+ to reach what should be a “local” number.<sup>37</sup> They demand access fees for termination of every kind of call session by deeming no call to be entitled to “local” termination based on a series of inconsistent and unsupported self developed criteria. They claim to be exempt from § 251(b)(5) until their § 251(f) exemption from § 251(c) is lifted and there is a § 252 agreement in place, with the requisite state level arbitration before that occurs. They are currently resisting incursion by cable companies (and the wholesale CLECs that often support them) by claiming they do not have to negotiate or interconnect under §§ 251(c) because the entrant is not a “requesting carrier.”<sup>38</sup>

The RLECs can do the math. The regulatory costs of piercing through their obstreperous opposition to competitive entry usually outweighs the revenues and profits that would flow from

---

<sup>37</sup> *In the Matter of ASAP Paging, Inc. Petition for Preemption of Public Utility Commission of Texas Concerning Retail Rating of Local Calls to CMRS Carriers*, WC Docket 04-6; *In the Matter of Sprint Corp. Petition for Declaratory Ruling Regarding the Routing and Rating of Traffic by ILECs*, CC Docket No. 01-92. Decisions in these cases – which involve the current rules and pertain to dialing parity and retail rating, not inter-carrier compensation – are long overdue. There is no reason to delay resolution pending promulgation of new prospective rules that address wholesale issues and not retail issues.

<sup>38</sup> *Petition of Time Warner Cable for Preemption Pursuant to Section 253 of the Communications Act of 1934, as Amended*, WC Docket No. 06-54; *Petition of Time Warner Cable for Declaratory Ruling That Competitive Local Exchange Carriers May Obtain Interconnection Under Section 251 of the Communications Act of 1934, as Amended, to Provide Wholesale Telecommunications Services to VoIP Providers*, WC Docket No. 06-55.

entry in their “rural” communities. They remain a monopoly island and continue to collect access fees from any call session that enters or exits the community and all calls other than their own are deemed to enter or exit since there are no other “local” numbers. This cannot be maintained. If society is to continue subsidizing these entities then the support must immediately be moved to the Universal Service Program and eliminated from all other sources. Then we will see competition in rural areas. The Act demands no less.

**F. Missoula violates express provisions in the Act concerning inter-carrier compensation and universal service.**

**1. Missoula violates § 251(b)(5) by carving out included traffic “types” into “access” and prices in excess of “additional cost” contrary to § 252(d)(2).**

Section 251(b)(5) on its face applies to all “telecommunications.” Only those matters covered by the Commission’s access charge regime as it existed prior to enactment of the 1996 amendments are “carved out” pursuant to § 251(g), and the “carve out” applies only to incumbents. Termination by CLECs is not carved out and is thus covered by § 251(b)(5) and its companion, § 252(d)(2). *Worldcom v. FCC*, 288 F.3d 429 (D.C. Cir. 2002). *ILEC* provision of service to enhanced/information service providers is frozen as part of “information access” until the Commission explicitly amends its rules for that traffic “type.” Section 251(g) therefore codified the so-called “ESP exemption” from regular switched access charges, but allows the Commission to modify the exemption if it expressly does so in a rulemaking. Even if the Commission eliminates the “information access” category in terms of ILEC service to ESPs it still cannot lawfully impose “exchange access” charges on ESPs since they do not obtain “exchange access” as defined in § 153(16).<sup>39</sup> The only alternative is “telephone exchange

---

<sup>39</sup> ESP’s do not provide “telephone toll” service as defined in § 153(48). The connectivity they obtain from LECs is not “for the purpose of origination or termination of telephone toll service.” Hence, ESPs do not procure “exchange access.”

---

service.” This means that when an ILEC serves an ESP, the intercarrier compensation for traffic to and from that ESP that happens to traverse multiple LEC networks must still follow the requirements in §§ 251(b)(5) and 252(d)(2) – which Feature Group IP submits has the same functional result as the law requires today under the current rules.

Under the D.C. Circuit’s interpretation in *Worldcom*, § 251(g) does not address (and therefore does not “carve out”) the “intercarrier compensation” for ESP traffic – traffic that is routed to or is routed from an ESP – when the ESP obtains PSTN connectivity from a non-ILEC. This traffic is also subject to § 251(b)(5). Further, as the Commission noted in the *ISP Remand Order*, § 251(b)(5) is not limited to “local” traffic; and again it applies to all “telecommunications.” As a consequence, regardless of the physical location of the calling and called party and regardless of whether there is one ILEC or an ILEC and a CLEC, a call session to or from an ESP is not subject to switched access unless one or both of the calling and called parties (or the carrier that supports them) voluntarily subscribed to switched access or is required by the Commission’s Part 69 rules to use switched access. To the extent Missoula departs from this rule it is unlawful.

Calls to an ESP were not classified based on where the communications “went” after they reached the ESP platform – the communications go to the “Internet” or some other enhanced/information network end point. This is so even if the session resulted in a termination point on the PSTN at the other end. The “address” (whether in the form E.164 address or some other format) and location of the addressee were irrelevant. The Missoula proposal to classify sessions based on the deemed end-points (based on CPN) for intercarrier compensation purposes is a stark and radical change that has no legitimate basis other than to increase incumbent LEC revenues from both requesting carriers and ESPs.

Note also that § 251(b)(5) does not include only “telecommunications service” but instead addresses the broader term “telecommunications.” The Commission recently ruled that “interconnected VoIP providers” provide “telecommunications.”<sup>40</sup> “VoIP traffic” as a distinct category did not exist in 1996, but it is an enhanced and/or information service.<sup>41</sup> The inter-carrier regime for VoIP traffic is covered by § 251(b)(5), not switched access. And this is so regardless of the location of the calling and called party or the “numbers” assigned to them. A regime that classifies traffic based on CPN in order to take a particular session out of § 251(b)(5) and subject it to switched access – whether charged directly to the user or ESP or as a basis for inter-carrier compensation – will *prima facie* violate the Act. VoIP traffic is not subject to access charges under the current rules and the statute does not allow the Commission to impose them going forward. When two LECs collaborate to terminate a VoIP call, § 251(b)(5) and the “additional cost” standard in § 252(d)(2)(A)(ii) must be applied for inter-carrier compensation purposes.

---

<sup>40</sup> Report and Order and Notice of Proposed Rulemaking, *In the Matter of Universal Service Contribution Methodology; Federal-State Joint Board on Universal Service; 1998 Biennial Regulatory Review -- Streamlined Contributor Reporting Requirements Associated with Administration of Telecommunications Relay Service, North American Numbering Plan, Local Number Portability, and Universal Service Support Mechanisms; Telecommunications Services for Individuals with Hearing and Speech Disabilities, and the Americans with Disabilities Act of 1990; Administration of the North American Numbering Plan and North American Numbering Plan Cost Recovery Contribution Factor and Fund Size; Number Resource Optimization; Telephone Number Portability; Truth-in-Billing and Billing Format; IP-Enabled Services*, WC Docket Nos. 06-122, 98-170, 99-200, 98-171, 96-45, 95-116, 92-237 and 90-571, NSD File No. L-00-72, WC Docket No. 04-36, FCC 06-94, 21 FCC Rcd 7518, 7539-7940, ¶ 41 (rel. June 27, 2006).

<sup>41</sup> The Commission has consistently refused to decide whether VoIP is “telecommunications service” or “information service” but there can be no serious doubt that IP telephony “employ[s] computer processing applications that act on the format, content, code, protocol or similar aspects of the subscriber's transmitted information; provide the subscriber additional, different, or restructured information; or involve subscriber interaction with stored information,” and “offer[s] a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.” See 47 C.F.R. 64.702(a) (definition of “enhanced service”) and § 153(2) (“definition of “information service”). Moreover, since the information supplied by the subscriber is modified or supplemented, there is a “change in content” and the service cannot be “telecommunications.” Section 153(43) (definition of “telecommunications”). Enhanced/information services use telecommunications but by definition are not telecommunications services.

---

**2. Special access pricing for interconnection facilities violates the applicable cost standards.**

The proposed requirement that carriers obtain §§ 201, 251(a), 252(c)(2) and 332(c)(1)(B) interconnection using special access violates § 252(d)(1), at least for interconnection with ILECs that are subject to § 251(c)(2). Section 252(d)(1) requires cost-based prices for interconnection facilities and trunks. Special access prices are not cost-based since they were not established using TELRIC. *See also*, 47 C.F.R. § 51.501 *et seq.*

Feature Group IP submits that the same cost standard should apply even for those entities not entitled to § 251(c) interconnection and/or when the LEC is not an ILEC subject to § 251(c) obligations. Any other result would violate §§ 201 and 202 and § 332(c)(1)(B) because it would be unreasonably discriminatory, unjust, unreasonable and anti-competitive.

**G. The Commission must expeditiously obey and implement the Act in full measure.**

**1. Interconnection pricing and intercarrier compensation.**

The Commission must – consistent with § 251(g) – move rapidly to a unified intercarrier rate for every “class” of terminating traffic that complies with the “additional cost” standard in § 252(d)(2)(A)(ii). The transitional § 251(g) “carve out” should finally be eliminated. The Act does not contemplate or allow “originating” charges – the LEC on whose network the session originates cannot impose any charges on any other carrier for the costs incurred in originating the call. Originating access charges must therefore be completely eliminated. Similarly, terminating access charges must be eliminated and all termination charges must comport with § 252(d)(2)(A)(ii). This should all occur immediately, on a flash-cut basis.

The Commission must also obey § 252(d)(1), and as noted above competitive carriers cannot be forced to pay non cost based “special access” prices.

---

## **2. Subsidies must flow only from the Universal Service Program.**

The continuation of subsidy payments through inter-carrier compensation to support “Universal Service” violates §§ 254(d) and (e) since the support is not and would not be “specific,” explicit,” “equitable” or “nondiscriminatory.” The Congress that passed the 1996 amendments expected the Commission to expeditiously<sup>42</sup> move from implicit subsidies built into inter-carrier payments – especially including those embedded in access charges – to a regime where all support is express and doled out through the universal service program. Ten years is not expeditious and it is time to implement true, comprehensive reform. The Missoula Plan is not the reform Congress intended. It is anticompetitive and anti-technology and it does not resolve the well-known problem of differential charges based on multiple, conflicting and increasingly Byzantine concepts that differentiate call session rating based on antiquated concepts of geography, use, users, type of carrier and of the other irrational regulatory classifications that are used today. It is unlawful economic and political protectionism for ILECs generally and in particular a few small “rural” ILECs. It serves to unreasonably and illegally deter the deployment and use of new technology and applications that would immensely benefit society but will be handicapped or banned. Missoula is the 21<sup>st</sup> Century version of the Red Flag Law and it should not be adopted.

## **III. CONCLUSION**

It obviously took a lot of effort to find enough plums to distribute around to those at the Missoula table. The result, however, clearly maintains the business plans and legacy systems of those that were there. And it does so in ways that simply do not comport with the Act, the policy

---

<sup>42</sup> Section 252(g) was a transitional provision designed to last only until the Commission fully implemented the directives in § 254. And the transitional period was supposed to be much shorter than 10 years. *Southwestern Bell Tel. Co. v. FCC*, 153 F.3d 523, 542 (8<sup>th</sup> Cir. 1998); *Competitive Telcoms. Ass’n v. FCC*, 117 F.3d 1068, 1075 (8<sup>th</sup> Cir. 1997).

embedded in the Act or society's best interests. The Commission cannot approve the Missoula plan because it is slanted against new entrants, new technology, new services and different business plans. While the results mandated by the 1996 amendments may be painful to the incumbents the Commission has no discretion to set aside the fundamental inter-carrier compensation principles that §§ 201, 251, 252, 254, 271 and 332 require.

Access charges should go away. Inter-carrier charges can apply only to terminating traffic, and they must comport with §§ 251(b)(5) and 252(d)(2). Facility and trunk charges must abide by the mandate in § 252(d)(1). When the Commission follows the law in this manner, it will have no need to worry about signaling methods or numbers in the signaling stream because location and calling number will be irrelevant. The ILECs have no constitutional or other claim to continued subsidies to prop up their legacy networks and anti-competitive ways. If subsidies are appropriate, they must come only through the vehicle established in § 254. The subsidy should benefit customers, not the ILECs, and all providers that pay in should be entitled to draw out. The benefits to society will be immense and they are way overdue.

Respectfully Submitted,

~~UTEX~~ COMMUNICATIONS CORPORATION  
d/b/a FEATURE GROUP IP

by: \_\_\_\_\_

W. Scott McCollough  
General Counsel  
1250 Capital of Texas Highway South  
Building Two, Suite 235  
Austin, TX 78746  
(V) 713.231.2315  
(FAX) 512.692.2522  
[wsmc@smccollough.com](mailto:wsmc@smccollough.com)

October 25, 2006