



NOTICE OF WRITTEN EX PARTE PRESENTATION (47 C.F.R. § 1.1204(10))

October 28, 2008

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

RE: Ex Parte to explain (1) neither 47 U.S.C.A. § 251(b)(5) nor § 201(b) provides a basis to preempt Intrastate Access and (2) fixed interconnected VoIP services remain subject to State jurisdiction, filed in the proceedings captioned: *In the Matter(s) of Developing a Unified Intercarrier Compensation Regime, CC Docket 01-92, Petition of AT&T Inc. for Interim Declaratory Ruling and Limited Waivers Regarding Access Charges and the ESP Exemption, CC Docket 08-152, IP-Enabled Services, WC Docket 04-36, Universal Service Contribution Methodology, WC Docket 06-122, Petition for Declaratory Ruling Filed by CTIA, WT Docket 05-194, Jurisdictional Separations & Referral to the Federal-State Joint Board, CC Docket 80-286.*

Ms. Dortch:

According to an October 15, 2008, FCC Notice,¹ the FCC may consider a “Report and Order, Order on Remand, and Further Notice of Proposed Rulemaking addressing the comprehensive reform of intercarrier compensation and universal service” at its November 4, 2008 open meeting. NARUC and a number of other parties² have requested that the FCC defer action on this *DRAFT ORDER*.

¹ Kenny, Robert, "FCC Announces Tentative Agenda For November 4th Open Meeting", FCC News Release (October 15, 2008) Available at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-286069A1.doc.

² Many have filed agreeing specifically with NARUC's motion or endorsing the need for further examination of the issues. All were filed in one or more of the above captioned dockets, including: [1] the Independent Telephone and Telecommunications Alliance's Oct. 24, 2008 *Motion to Defer and Set for Public Comment*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520178942; [2] the Public Service Commission of South Carolina Chair Fleming's Oct. 23, 2008 *Letter to all FCC Commissioners*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520178585; [3] State Members of the Separations Joint Board's Oct. 20, 2008 *Ex Parte letter to Chairman Martin and Commissioners Tate, Copps, Adelstein, and McDowell*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520176237; [4] USTelcom's October 24, 2008 *Ex Parte letter to Chairman Martin and Commissioners Tate, McDowell, Copps and Adelstein*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520178814; [5] Tennessee Regulatory Authority's Oct. 24, 2008 *Ex Parte Letter to all FCC Commissioners*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520178772; [6] The MGW Telephone Company, New Hope Telephone Cooperative, North River Telephone Cooperative, NTELOS, Telephone Inc., Pembroke Telephone Cooperative, Roanoke & Botetourt Telephone Company, and Shenandoah Telephone Company, Oct. 24, 2008 *Ex Parte Letter to Chairman Martin and Commissioners Tate, Copps, Adelstein, and McDowell*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520178750; [7] Chairman James H. Cawley, Pennsylvania Public Utility Commission's Oct. 24, 2008 *Ex Parte Letter to all FCC Commissioners*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520178434; [8] Chairman Edward S. Finley, Jr., North Carolina Utilities Commission, Oct. 23, 2008 *Ex Parte Letter to all FCC Commissioners*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520178342; [9] New Mexico Public

In its October 24, 2008 *ex parte*, NARUC outlined why *there is no legal compulsion to do anything other than narrowly address the Core remand issues at the November 4 agenda meeting*.³ All the FCC *must* do is provide a legal rationale to support the rates the FCC has consistently applied to dial-up traffic that terminates to an Internet Service Provider.⁴ NARUC's pleading also reiterated the dangers of proceeding on a proposal that has not been fully vetted and lacks record support.

Unfortunately, in spite of the stakes, it is unclear if the FCC will defer action on the broader proposal.

Published accounts⁵ and pleadings filed by Verizon⁶ and others suggest the *DRAFT ORDER* (1) reclassifies all traffic which touches the public switched telephone network ("PSTN") - including intrastate access traffic - as Section 251(b)(5) "reciprocal compensation," and (2) reserves exclusive FCC authority over all interconnected VoIP traffic. Neither revision can survive appellate review.

Regulation Commission Commissioners Jason Marks (Chairman), David W. King, Ben R. Lujan, Carol K. Sloan & Sandy Jones (Vice Chair)'s Oct. 23, 2008 *Ex Parte Letter to all FCC Commissioners*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520177927; [10] Massachusetts Department of Telecommunications and Cable Commissioner Sharon Gillett Oct. 23, 2008 *Ex Parte Notice*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520177819; [11] Nebraska Telecommunications Association's Oct. 23, 2008 *Ex Parte Letter Request to all FCC Commissioners*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520177767; [12] MTA's Oct. 23, 2008 *Ex Parte Notice*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520177760; [13] National Exchange Carrier Association's Oct. 23, 2008 *Ex Parte Notice filed by Joe Douglas*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520177756; [14] Georgia Public Service Commission Commissioner H. Doug Everett Oct. 23, 2008 *Ex Parte Letter for all FCC Commissioners*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520177740; [15] NASUCA's Oct. 23, 2008 *Ex Parte*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520177554; [16] COMPTEL's President Matthew Salmon's Oct. 21, 2008 *Ex Parte Letter to all FCC Commissioners*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520176547; [17] the New England Conference of Public Utility Commissioners' Oct. 17, 2008 *Ex Parte Presentation* filed by Bill Nugent, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520176113; [18] 360networks, Birch Comm., Bluegrass Wireless, Broadview Networks, CarolinaWest Wireless, Cavalier Telephone, Cellular South, COMPTEL, DeltaCom, Hypercube, LLC, Integra Telecom, NuVox, One Communications, PAETEC and All of Its Operating Subsidiaries, RCN Telecom Services, Inc., Southern Communications Services, Inc. d/b/a, SouthernLINC Wireless, TW Telecom., YourTel America, Inc., and XO Communications, Oct. 13, 2008 *Ex Parte Letter to all FCC Commissioners*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520175399; [19] Missouri Public Service Commission's Oct. 9, 2008 *Ex Parte Letter to all FCC Commissioners*, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520176545.

³ See, NARUC's October 24, 2008 Notice of Oral Ex Parte Communications, filed in the above captioned proceedings and available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520180051.

⁴ See, *WorldCom, Inc. v. FCC*, 288 F.3d 429 (D.C. Cir. 2002) and the same Court's order, *In re Core Communications, Inc.*, 531 F.3d 849, 862 (D.C. Cir. 2008) ("2008 Core Mandamus"), for the FCC to issue — no later than November 5, 2008 — "a final, appealable order that explains the legal authority" for the Commission's reaffirmation of earlier rulings that "exclude ISP-bound traffic from the reciprocal compensation requirement of § 251(b)(5)."

⁵ See, e.g., *Martin Rolls Out Plan to Reform Inter-carrier Comp, Universal Service*, TRDaily (Oct. 15, 2008).

⁶ See, *September 19, 2008 Letter from Verizon's Donna Epps to Marlene Dortch, FCC Secretary, with attached Memorandum captioned: "The Commission has Legal Authority to Adopt a Single, Default Rate for All Traffic Routed on the PSTN"* filed in the proceedings captioned: *In the Matters of Developing a Unified Inter-carrier Compensation Regime*, CC Docket No. 01-92, and *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, (Verizon White Paper), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520169702.

Neither § 251(b)(5) nor § 201(b) provide a basis to preempt State Intrastate Access Charges.

NARUC participated in the 2001 appeal that ultimately resulted in the D.C. Circuit's mandamus order in this proceeding. We *initially* supported a finding that dial-up Internet traffic is "reciprocal compensation" covered under § 251(b)(5) – because it was *local* traffic otherwise subject to State oversight. However, a major concern – which the Court did not address when it vacated the FCC's rationale while leaving its pricing regime intact – was that the FCC capped the rate a LEC could charge another for terminating "interstate" Internet bound traffic and yet directed States to address recovery of any revenue shortfalls.⁷

Several parties have suggested two basic competing theories for how the FCC can justify its current ISP traffic regime. Some are based on classification of the traffic as §251(b)(5) "reciprocal compensation."⁸ Others reject that classification and tell the FCC it should rely only upon its §201 authority over interstate traffic.⁹

Each has obvious legal deficits.

However, none can justify preemption of State authority to establish intrastate access charges.

The compressed time frame for any comment and NARUC's limited resources – combined with the fact that counsel has no specific details on the legal rationale the FCC is tentatively considering – necessarily limits NARUC's critique of these proposals.

⁷ Given the FCC's classification of the traffic as interstate – which the Court never discounted, this approach still potentially requires INTRAstate users to make up INTERState shortfalls through INTRAstate rates. The separations impacts and infringement on State ratemaking authority are obvious. NARUC specifically noted the separations freeze – adopted shortly before the brief was filed, complicated prospects for fashioning relief. *See, Brief of State Commission Petitioners and Supporting Intervenor*, filed August 28, 2001, *Worldcom, Inc et. al v. FCC*, DC Cir. No. 01-1218, p. 19-23.

⁸ *See*, August 18, 2008, *Level 3 Communications Ex Parte* filed *In the Matter(s) of Intercarrier Compensation for ISP-Bound Traffic*, CC Docket 99-68; *Developing a Unified Intercarrier Compensation Regime*, WC Docket 01-92, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520038539. In Level 3's view, the Commission need not choose between Section 201 and Section 251 (b)(5). According to Level 3, the fact that ISP-bound traffic falls *within* Section 201 does not mean that such traffic necessarily falls *outside* of Section 251(b)(5). To the contrary, Level 3 argues, Section 251 (b)(5) is the 1996 Act's termination provision, and the Commission recognized in the *ISP Remand Order* that, by its terms, the provision could apply to *all* telecommunications. *See also* May 9, 2008, *Letter from AT&T's Gary L. Phillips to Marlene Dortch, FCC*, filed *In the Matter(s) of Developing a Unified Intercarrier Compensation Regime*, CC Docket 01-92; *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket 96-98; *Intercarrier Compensation for ISP-Bound Traffic*, CC Docket 99-68, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520009214. AT&T argues, at 2, that: The Commission has long determined Internet-bound traffic is jurisdictionally interstate and therefore falls squarely within its section 201 regulatory authority. Nothing in either of the D.C. Circuit's two decisions on ISP-bound traffic casts any doubt on that jurisdictional determination.[] Instead, the main issue presented by those decisions is whether the "reciprocal compensation" rule of section 251(b)(5) places substantive restrictions on the Commission's exercise of its section 201 authority over this interstate traffic. []It does not. Section 251(i) provides that "[n]othing in this section"—including section 251(b)(5)—"shall be construed to limit or otherwise affect the Commission's authority under section 201." And section 201 has always authorized the FCC to set whatever rates it deems "just and reasonable" for jurisdictionally interstate services such as ISP-bound traffic." {footnotes omitted}

⁹ *See*, October 2, 2008 *Supplemental Comments of Verizon and Verizon Wireless on Intercarrier Payments for ISP-Bound Traffic and the Worldcom Remand*, filed *In the Matter(s) Developing a Unified Intercarrier Compensation Regime*, CC Docket 01-92, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket 96-98, *Intercarrier Compensation for ISP-Bound Traffic*, CC Docket 99-68, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520173398.

The problems of extending either theory to encompass State intrastate access charges are obvious. Any approach that eliminates intrastate access charges, on its face:

[1] unlawfully constrains State retail rate design options and restricts States' ability to set intrastate rates based solely upon State-determined reasonable costs of service. *Louisiana PSC v. FCC*, 476 U.S. 355 at 355 (1986) (Supreme Court rejects an FCC attempt to prescribe depreciation rates for intrastate ratemaking); and

[2] requires a prior and significant adjustment of the FCC's separations rules.¹⁰

Theories that suggest the FCC act solely based upon its §201 authority over “interstate or foreign communication” necessarily exclude by definition – and the action of §152(b)¹¹ – intrastate access. Section 152 operates in tandem with other sections of the 1996 legislation mandating reservation of continuing State authority to “establish access and interconnection obligations of local exchange carriers.”¹² Exceptions to this authority are,¹³ and must be express¹⁴ and explicit.¹⁵

¹⁰ “As a last point, to the extent the FCC determines it will preempt State access charge rate policies, separations changes must occur to ensure that jurisdictional cost assignments are consistent with rate setting authority. States should not be both preempted in setting rates for a service, yet responsible for the cost recovery for that service.” See, October 18, 2008 *State Members of the Joint Board on Separations Letter to all FCC Commissioners*, filed *In the Matter(s) of Petition of AT&T Inc. for Interim Declaratory Ruling and Limited Waivers Regarding Access Charges and the ESP Exemption*, CC Docket 08-152, *IP-Enabled Services*, WC Docket 04-36, *Developing a Unified Inter-carrier Compensation Regime*, CC Docket 01-92, *Universal Service Contribution Methodology*, WC Docket 06-122, *Petition for Declaratory Ruling Filed by CTIA*, WT Docket 05-194, *Jurisdictional Separations & Referral to the Federal-State Joint Board*, CC Docket 80-286, at p. 4, available at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520176237.

¹¹ See, 47 USC Sec. 152(b) (1996), which reserves States' authority over intrastate rates and services – specifying: “nothing in this Act shall be construed to apply or to give the Commission jurisdiction with respect to (1) charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service by wire or radio of any carrier.”

¹² See, 47 USC Sec. 251(d)(3) (1996): “Preservation of State Access Regulation: In prescribing and enforcing regulations to implement the requirements of this section, the Commission shall not preclude the enforcement of any regulation, order, or policy of a State commission that (a) establishes access and interconnection obligations of local exchange carriers; (b) is consistent with the requirements of this section . . .”

¹³ 47 USC Sec. 223 – 227 (1996)

¹⁴ See, Section 601(c)(1) [note to 47 USC Sec. 153 (1996)] entitled "Effect on Other Laws", states "[t]his Act and the amendments made by this Act shall not be used to modify, impair or supersede or authorize the modification, impairment, or supersede Federal, State, or local law unless *expressly so provided* in such acts or amendment." {Emphasis added}

¹⁵ See, *Louisiana Public Service Commission v. FCC*, 106 S.Ct. 1890, 476 U.S. 355, 90 L.Ed.2d 369, n.4 (1986) (*Louisiana*). Agency attempts to achieve a policy goal via an unsupported reading of other statutory provisions to expand preemptive authority has been a feature of several FCC orders. In *Louisiana*, the Supreme Court considered and fully rejected the argument that the Commission should be able to preempt state authority in order to foster federal policy:

“While it is certainly true, and a basic underpinning of our federal system, that state regulation will be displaced to the extent that it stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress, *Hines*, 312 U.S., at 67, 61 S.Ct., at 404, it is also true that *a federal agency may pre-empt state law only when and if it is acting within the scope of its congressionally delegated authority*. This is true for at least two reasons. First, an agency literally has no power to act, let alone pre-empt the validly enacted legislation of a sovereign State, unless and until Congress confers power

Theories that attempt to expand § 251(b)(5) reciprocal compensation to include intrastate access charges flounder on any examination of either the legislative history or the unambiguous statutory text. Section 251(b) specifies interconnection requirements applicable to *LOCAL exchange carriers* in *competitive LOCAL markets*. Subsection (b)(5) specifies the LEC duty to transport and terminate the traffic of other LECs competing in the same local exchange service area. On its face, it has no applicability to interstate or intrastate exchange access services. LECs have never established “reciprocal compensation arrangements” with interexchange carriers. Indeed, Congress specifically distinguished *exchange access services* from the “reciprocal compensation” transport and termination arrangement required by § 251(b)(5), when it specified that competitive LECs can utilize the facilities and equipment of incumbent’s “for the transmission and routing of telephone exchange service and exchange access.” 47 USC Sec. 251(c)(2)(A).¹⁶ Section 252(d)(2)(A) adds further support to this view – when it talks about an “incumbent local exchange carrier’s” compliance with § 251(b)(5) and specifies “mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier’s network facilities of calls that originate on the network facilities of the other carrier.” Obviously, toll traffic is usually passed on to an intervening carrier by a LEC, it rarely terminates on such “carrier’s carrier” networks. Courts will look to the common usage of a word.¹⁷ Congress’ selection of this term, in context, tracked the commonly used and widely understood meaning at the time the 1996 legislation¹⁸ was being drafted.¹⁹

upon it. Second, the best way of determining whether Congress intended the regulations of an administrative agency to displace state law is to examine the nature and scope of the authority granted by Congress to the agency. Section 152(b) constitutes, as we have explained above, a congressional *denial* of power to the FCC to require state commissions to follow FCC depreciation practices for intrastate ratemaking purposes. *Thus, we simply cannot accept an argument that the FCC may nevertheless take action which it thinks will best effectuate a federal policy.* An agency may not confer power upon itself. To permit an agency to expand its power in the face of a congressional limitation on its jurisdiction would be to grant to the agency power to override Congress. This we are both unwilling and unable to do *Louisiana* at pp. 374-375. {emphasis added}.

¹⁶ Indeed, in the Conference report, the Senate’s specification that “[t]he obligations and procedures proscribed in this section do not apply to interconnection arrangements between local exchange carriers and telecommunications under section 201 ... for the purposes of providing interexchange service, and nothing in this section is intended to affect the Commission’s access charge rules” morphed into new section 251(i). H.R. CONF. REP. 104-458, at pp 117, 123.

¹⁷ Cornell University Law School, Legal Information Institute, http://topics.law.cornell.wex/statutory_construction.

¹⁸ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified at 47 U.S.C. § 151 et. seq.).

¹⁹ See, Communications Daily (Warren Publ. 6/23/95) Vol. 15, No. 121; Pg. 7 (“[The PA PUC] ... adopt “bill-and-keep” model for reciprocal compensation *between competing local exchange carriers*,”); Communications Daily (Warren Publ. 12/21/95) Vol. 15, No. 245; Pg. 3 (“Fla. PSC approved 2-year interconnection agreement involving competitive access provider Intermedia Communications and BellSouth. . . sets terms for rates, reciprocal compensation.”); “Industry Lukewarm on FCC Plan To Collect Data on Competition”, Communications Daily (Warren Publ. 12/13/95) Vol. 15, No. 239; Pg. 4 (“[S]urvey has 2 “fundamental flaws”: (1) Bureau “omitted requests for data on the essential elements for [local] competition” -- such as reciprocal compensation, interconnection, number portability.”); Communications Daily (Warren Publ. 19/21/95) Vol. 15, No. 224; Pg. 6 (“(PT) and MFS Communications announced interconnection agreement in Cal. . . . grants co-carrier status to MFS, including provisions for number portability . . . reciprocal compensation.”); Brief Transmission MFS, Pac Bell Form Local Telecomms Pact, Telecomworldwire (M2 Communications Ltd. 10/21/95) MFS Communications has aligned in an agreement with Pacific Bell to provide the first Californian competitive local telephone company and its customers to receive the financial and operational benefits of co-carrier status. MFS says the pact will promote effective local telephone competition in California as well as providing number portability, reciprocal compensation, unbundled local loops.”) NARUC Convention; Work Group Urges Fewer Telecom Entry Barriers, Communications Daily (Warren Publishing Nov. 17, 1995) Vol. 15, No. 222; Pg. 2 State regulators should work to remove telecom entry barriers even though competition could develop in current environment, said NARUC

The FCC cannot reserve exclusive authority over fixed interconnected VoIP traffic.

During NARUC members' two conference calls with Chairman Martin, his comments suggested the FCC may advance at least two legal theories for exerting exclusive jurisdiction over interconnected nomadic and fixed VoIP services.

The Test

As even the FCC's original Vonage order effectively concedes,²⁰ the FCC can *only* preempt: (1) to the extent necessary to avoid a conflict between federal law and State law,²¹ and (2) where the intrastate telecommunications service is inseverable from the interstate service component.²²

Indeed, in a subsequent order also addressing so-called "nomadic" VoIP,²³ the FCC specifies that "a fundamental premise of our decision to preempt Minnesota's regulations in the *Vonage Order*

Communications Subcommittee local competition work group in recommendations issued at convention here...Interconnection terms must be "reasonable and nondiscriminatory," offered to all competitors, said group on interconnection and technical standards. It said those terms must include functions and switching software at any location, number portability and dialing parity, reciprocal compensation, "equal status in and control" over databases.); Communications Daily, (Warren Publ. 12/01/95) Vol. 15, No. 211; Pg. 4 (Wis. PSC granted local exchange certificate to Teleport. . .will meet Dec. 4 to discuss interconnection, number portability, reciprocal compensation issues.") Communications Daily (Warren Publ. 07/26/95) Vol. 15, No. 143; Pg. 8 ("Cal. PUC issued long-awaited decision Mon. opening local telephone service to competition. It permits competitors to enter local market by building own facilities or by reselling services of incumbent LECs. . . and sets interim rules for reciprocal compensation, interconnection and number portability.") Prepared Testimony of Robert Annunziata, President, Chairman and CEO, Teleport Communications Group before the Subcommittee on Telecommunications and Finance, Commerce Committee, U.S. House of Representatives H.R. 1555, Communications Act of 1995 May 11, 1995 ("but the legislation that is finally passed must be the right legislation. The single most important "right" element of H.R. 1555 is the requirement for reciprocal compensation for the mutual exchange of local traffic."))

²⁰ See, Memorandum Opinion and Order, In the Matter of Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission, WC Docket No. 03-211, (rel. November. 12, 2004), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-267A1.doc, at ¶20-22 arguing that any State regulation will necessarily conflict with federal policy and at ¶23-32 pressing the – even then factually inaccurate – statement that intrastate nomadic VoIP services are impossible to separate from interstate services – based pretty much solely upon self-serving statements by the industry.

²¹ The FCC bears the burden of justifying its entire preemption order by showing "with some specificity" that it is narrowly tailored to preempt only such state regulations as would necessarily negate FCC regulations. *California v. FCC*, 905 F.2d 1217, 1243 (9th Cir. 1990); *California v. FCC*, 39 F.3d 919, 931 (9th Cir. 1994). To be valid, preemption must be limited to state regulation that would negate the FCC's exercise of its own lawful authority over interstate communications. *NARUC v. FCC*, 880 F.2d 422, 429 (D.C. Cir. 1989). The FCC must explain why preemption is required in order to advance legitimate federal regulation. *Texas Office of Pub. Util. Counsel*, 183 F.3d at 422.

²² See, generally, *Louisiana PSC*, 476 U.S. at 374-376; *National Ass'n of Reg. Utils. Comm'rs v. FCC*, 880 F.2d 422, 429 (D.C. Cir. (1989).

²³ See Universal Service Contribution Methodology, WC Docket 06-122; CC Dockets 96-45, 98-171, 90-571, 92-237; CC Dockets 99-200, 95-116, 98-170; WC Docket 04-36, *Report and Order and Notice of Proposed Rulemaking*, 21 FCC Rcd 7518 (2006), available at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-94A1.pdf (Contribution Order), aff'd in part, vacated in part, *Vonage Holdings Corp. v. FCC*, 489 F.3d 1232, 1244 (D.C. Cir. 2007), at ¶ 56, mimeo at 29 ("While . . .interconnected VoIP providers may report their actual interstate telecommunications revenues . . . some interconnected VoIP providers do not currently have the ability to identify whether customer calls are interstate and Indeed, a fundamental premise of our decision to preempt Minnesota's regulations in the *Vonage Order* was that it was impossible to determine whether calls by Vonage's customers stay within or cross state boundaries [note 188 See *Vonage*

was that it was impossible to determine whether calls by Vonage's customers stay within or cross state boundaries."

Without any reference to *an alleged potential* conflict between State and Federal oversight, the FCC goes on to concede that, "an interconnected VoIP provider with the capability to track the jurisdictional confines of customer calls would no longer qualify for the preemptive effects of our *Vonage Order* and would be subject to State regulation. This is because the central rationale justifying preemption . . . would no longer be applicable." Id.

Fixed/Facilities-based VoIP Services

Apparently, Verizon's pleadings alleging widespread "inseverability" may be one potential basis for preemption of State access charge regimes the Chairman is considering. Verizon asserts that providers are unable to distinguish between intrastate and interstate traffic, or between purely circuit switched and IP traffic, and therefore "all traffic that is routed on the PSTN can no longer be reliably separated and treated differently and is therefore inseverable for jurisdictional purposes."²⁴

However, the factual predicate for this statement - the purported inseverability of traffic on the network, is, to be charitable, a gross overstatement.²⁵ Indeed, with respect to facilities-based or "fixed" interconnected VoIP services - severability is a non-issue.²⁶ For them, it appears the traffic never touches the internet - but interfaces with the PSTN just like other communications systems with different dedicated protocols.²⁷

Order, 19 FCC Rcd at paras. 23-31.] Therefore, an interconnected VoIP provider may rely on traffic studies or the safe harbor . . . in calculating its federal universal service contributions. Alternatively, to the extent that an interconnected VoIP provider develops the capability to track the jurisdictional confines of customer calls, it may calculate its universal service contributions based on its actual percentage of interstate calls. [Footnote omitted] . . . an interconnected VoIP provider with the capability to track the jurisdictional confines of customer calls would no longer qualify for the preemptive effects of our *Vonage Order* and would be subject to state regulation. This is because the central rationale justifying preemption set forth in the *Vonage Order* would no longer be applicable to such an interconnected VoIP provider."

²⁴ See, September 19, 2008 *Letter from Verizon's Donna Epps to Marlene Dortch* with attached Memorandum captioned: "*The Commission has Legal Authority to Adopt a Single, Default Rate for All Traffic Routed on the PSTN*" filed in the proceedings captioned: *In the Matters of Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, and *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, (*Verizon White Paper*), at 2, {emphasis added}, available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520169702.

²⁵ Verizon argues that if nomadic VoIP and wireless services are growing *economically* inseverable from other traffic, and not subject to State economic jurisdiction, *Verizon White Paper* at 5-7, 15 then it must also be concluded that "all traffic routed over the PSTN is inseverable for jurisdictional purposes." *Id.* at 4, 7 {emphasis added}.

²⁶ Fixed VoIP services can be accessed from one and only one geographic point -- the physical location where the service connection is established. Fixed VoIP providers know where their subscribers are calling from. This fixed VoIP telephony is provided by companies which have their own fixed connections to customer premises and have bandwidth specifically dedicated to VoIP telephony. For the most part, instead of using the Internet, cable companies operate their own high-speed data networks on their cable facilities. These facilities typically only permit the end-user to access VoIP telephony from the hardwired connection at that user's premises.

²⁷ Lawson, Stephen, *Comcast Calls on VoIP - Cable company announces plans to launch phone service this year*, IDG News Service (2006) According to *Comcast Chairman and Chief Executive Officer Brian Roberts*, Cable operator Comcast VoIP service "[w]ill not be an Internet telephony service, he says: Though they will use IP, the voice calls won't touch the Internet, running instead over Comcast's private data network, with priority over regular data packets to ensure good quality." Available at: <http://pcworld.about.com/news/Jan112005id119241.htm>. (Last accessed October 28, 2008) {emphasis added} See also, July 23, 2008 *Sworn Initial Testimony of James R. Burt on behalf of Sprint Communications*

*Inseverability is a factual issue. Footnote 24 cites sworn testimony and an on the record adjudication about the severability of facilities-based VoIP. The record statements in these hearings are consistent. Even the FCC conceded in the cited June 2006 Order, at footnote 189, that fixed interconnected VoIP services do currently contribute to the federal program based on actual revenues (aka – severed traffic).*²⁸

Company L.P. filed before the Arkansas Public Service Commission, *In the Matter of Petitions for Arbitration by Sprint Communications Company L.P. against Yelcot Telephone Company, DOCKET NO. 08-0764, and against Northern Arkansas Telephone Company, DOCKET NO. 08477-U*, Exhibit JRB-1 at page 65, and at pages 29-30, where Mr. Burt notes: available at http://www.apscservices.info/pdf/08/08-076-u_14_1.pdf. (Excerpt: “Is the proposed service an Internet Telephony, Internet-based VoIP or over-the-top VoIP service? No. I am not speaking to the regulatory treatment of these services, but rather, the functionality of the proposed service . . . The terms Internet Telephony, Internet-based VoIP and/or over-the-top VoIP services are used to describe voice services that utilize the public Internet. An example would be the service provided by Vonage. By contrast, the service provided by Sprint and Suddenlink does not use the public Internet in any manner. . . . The voice services provided by Sprint and Suddenlink are not nomadic; the customers only use the service in their homes. Internet Telephony, Internet-based VoIP service and over-the-top VoIP services have also struggled with providing 911 service consistent with customer or public safety official expectations. The voice services provided by Sprint and Suddenlink provide reliable 911 service. . . There is one factor that is sometimes used to attempt to create confusion between Internet Telephony, Internet-based VoIP service and over-the-top VoIP service and the voice service king provided by Sprint and Suddenlink. It is the fact that all of these services happen to use the Internet protocol. Since all of these services use the Internet protocol, there is a tendency to claim the services are the same. The mere fact that there is one technical similarity, use of the Internet protocol, should not lead one to the conclusion that the services are the same.) {emphasis added} Cf. June 6, 2008 Prefiled Testimony of Corey R. Chase on Behalf of the Vermont Department of Public Service, *State of Vermont Public Service Board Docket No. 7316 Investigation into regulation of Voice over Internet Protocol Services*, at pages 12-14, 13, (Excerpt: Q. Is it true that CDV packets “flow interwoven with other data packets such as email or video along Comcast’s private IP data network” as Mr. Kowolenko stated on page 10 of his prefiled testimony? A. It appears to be true that at some points within the Comcast network, packets containing CDV data travel with packets containing other data types on the same IP network, with CDV packets marked to maintain quality. However, in the response to DPS Information Request 1-12, Mr. Kowolenko stated that, “It [CDV] does not contend with other IP based traffic destined for the public Internet that flows across the Comcast access network.” Since packets carrying various data types do not contend for bandwidth and thus cannot affect each other, they should not be considered “interwoven” because CDV traffic can be identified separately from other data. Furthermore, as discussed above combining various traffic types on a single network is a function of all modern networks, not just IP networks. See also, July 25, 2008 Prefiled Rebuttal Testimony of David J. Kowolenko on behalf of Comcast of Vermont, *State of Vermont Public Service Board Docket No. 7316 Investigation into regulation of Voice over Internet Protocol Services*, at pages 8-9, where he points out, as does his CEO, *supra*, that Comcast’s phone service “uses IP technology but provides a facilities-based service that does not traverse the public Internet unlike ‘over the top’ providers that do not directly connect via a private network to the PSTN as Comcast does. It also does not conflict with other IP-based traffic destined for the public Internet that flows across the Comcast access network.” All 3 documents can be downloaded from: <http://www.naruc.org/Publications/Testimony%20filed%20in%20Vermont%20PSB%202008%20Examination%20of%20VOIP.pdf>. See also, May 9, 2008 FINAL DECISION, in *Public Service Commission of Wisconsin Docket 5911-NC-101, Application of Time Warner Cable Information Services (WI), LLC to Expand Certification as an Alternative Telecommunications Utility*, at 8, Findings of Fact # 8 “Under the business model established by Sprint and TWCIS, Digital Phone uses IP technology as a transmission protocol, but does not use the Internet as such.” Available at: http://www.psc.wi.gov/apps/erf_search/content/docdetail.aspx?docid=94163. See also, Briefing Memorandum in *Public Service Commission of Wisconsin Docket 5911-NC-101, Application of Time Warner Cable Information Services (WI), LLC to Expand Certification as an Alternative Telecommunications Utility*, available at: http://www.psc.wi.gov/apps/erf_search/content/docdetail.aspx?docid=84954.

²⁸ Contribution Order at note 189 (“Because we permit interconnected VoIP providers to report on actual interstate revenues, this Order does not require interconnected VoIP providers that are currently contributing based on actual revenues to revise their current practices.”) Added to these “State-jurisdictional” facilities-based services, are the majority of households (64%), that Verizon’s own statistics indicate will still rely on circuit-switched based telephone service by December of this year. *Verizon White Paper* at 8.

Because there is no question it is possible to separate intrastate non-nomadic facilities-based VoIP calls from interstate calls, the FCC has no jurisdiction over such intrastate calls.

Nomadic VoIP

Indeed, now that the FCC has *required* both *constructive severance* by means of a proxy interstate safe harbor for nomadic VoIP providers to contribute to the federal universal service programs, as well as *actual severance*, by requiring nomadic VoIP providers to have functioning 911 services,²⁹ it may be time to re-examine that FCC action.

Verizon's use of the inaccurate (or at best - unsupported) adjective – “economically” – to describe inseverable – necessarily concedes that all traffic is severable. Moreover, businesses in particular, and some private users will continue to insist on call detail, 911 services that work, and, thereby, albeit indirectly, also insist on severability.

Fixed and Nomadic VoIP as “Information Services”

The Chairman indicated that the *DRAFT ORDER* finds fixed and nomadic VoIP services to be “information services.” Curiously, he also maintained, in response to questions, even though they are not telecommunications services, that State universal service programs would still be able to assess carriers – apparently based upon the degree of intrastate traffic – as the current precedent³⁰ requires. It is unclear what impact this might have on State authority generally or over intrastate rate design in particular. Case law confirms that States retain jurisdiction over severable intrastate information services.³¹

²⁹ “In May 2005, the FCC adopted rules requiring providers of interconnected VoIP services to supply 911 emergency calling capabilities to their customers as a mandatory feature of the service *by November 28, 2005*. “Interconnected” VoIP services are VoIP services that allow a user generally to receive calls from and make calls to the traditional telephone network. Under the FCC rules, interconnected VoIP providers must: Deliver all 911 calls to the local emergency call center; Deliver the customer’s call back number and location information where the emergency call center is capable of receiving it.” See: <http://www.fcc.gov/pshs/services/911-services/voip/Welcome.html>

³⁰ *Texas Office of Pub. Util. Counsel v. FCC*, 183 F.3d 393, 447 (5th Cir. 1999), cert. granted, *GTE Corp. v. FCC*, 530 U.S. 1213 (2000), cert. dismissed, 531 U.S. 975 (2000)(Fifth Circuit held the FCC overstepped its authority by assessing intrastate revenues for determining carriers’ contribution to federal universal service fund).

³¹ See, e.g., *California v. FCC*, 905 F.2d 1217, 1240 (9th Cir. 1990) (overturning FCC preemption of state regulation of intrastate enhanced services). Providers of “enhanced services” – the precursor for “information services” defined in the 1996 legislation were originally categorized as “customers” of local exchange carriers. See Huber, Peter W. , Kellogg, Michael K. & Thorne, John, *Federal Telecommunications Law*, (Aspen Law and Business 2nd Ed 1999) at page 1104 , (“The upshot is that they did not pay the steep access charges paid by ordinary (voice) long-distance companies for telecommunications transmission, even though most Internet ...traffic is interstate. The Commission preserved this access charge exemption for information services. . . in its 1997 Access Charge Reform Order. [] . . .The Commission reasoned that information service providers should not be subject to interstate access charges. . .” {emphasis added & footnotes omitted} . . . In a report to Congress in April 1998, however, the Commission made an exception to this general policy. IT suggested that “[c]ertain ISP telephony services lack the characteristics that would reder them information services and instead bear the characteristics of telecommunications services.” Such a characterization would make those services subject to access charges...as well as to universal service obligations.) and presumably inter- and intrastate access charges.

But taking that approach is not just inappropriate from a policy perspective - as it actually encourages rather than retards regulatory arbitrage opportunities.

It also is inconsistent with past FCC precedent. The Commission has defined "interconnected VoIP services" as those that (1) enable real-time, two-way voice communications; (2) require a broadband connection from the user's location; (3) require IP-compatible customer premises equipment; and (4) permit users to receive calls from and terminate calls to the PSTN.³²

In ¶ 39, mimeo at 21, of the *Contribution Order*, the FCC further finds that:

interconnected VoIP providers are "providers of interstate telecommunications" . . . Specifically, using the Act's definitions, we find that interconnected VoIP providers "provide" "the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received."

Given that interconnected VoIP providers are admitted "providers of telecommunications" to the general public and charge a fee for their services, they are on all fours with the Federal definition of telecommunications service – which covers:

offering of telecommunications for a fee directly to the public, or to such class of users as to be effectively available directly to the public, regardless of the facilities used.³³
(Emphasis added.)

In contrast, the Telecommunications Act defines an "Information service" as:

The offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service.³⁴ (Emphasis added.)

Any narrow focus on whether a voice-in – voice out substitute for phone service performs a "net protocol conversion" should not shift the classification of the service. The conversion all these services complete results in no apparent change in the appearance or performance of the telephone service from the end user's perspective. According to the FCC, "protocol processing that takes place incident to phone-to-phone IP telephony does not affect the service's classification, under the Commission's current approach, because it results in no protocol conversion to the end user."³⁵

³² See *IP-Enabled Services; E911 Requirements for IP-Enabled Service Providers*, WC Dockets. 04-36, 05-196, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245, 10257-58, ¶24 (2005) (VoIP 911 Order), aff'd, *Nuvio Corp. v. FCC*, 473 F.3d 302 (D.C. Cir. 2006); (defining "interconnected VoIP service" in 47 C.F.R. § 9.3)

³³ 47 U.S.C. § 153(46).

³⁴ 47 U.S.C. § 153(20).

³⁵ In Re Federal-State Joint Board on Universal Service, CC Docket 96-45, Report to Congress (April 10, 1998) at ¶ 52, available at: http://www.fcc.gov/Bureaus/Common_Carrier/Reports/fcc98067.html (a.k.a. Steven's Report).

(Emphasis added.) From an end-user perspective, the conversions that take place in a voice over IP call are no greater or lesser than conversions that take place when an analog voice signal is converted to a digital signal and transmitted over a fiber optic network, or converted again into an analog or digital radio signal and transmitted over a wireless network. A protocol simply is an agreed-upon format for transmitting data between two devices.³⁶ Protocols determine the technical aspects of an electronic communication. For example, protocols define the types of error checking, when communicating devices use data compression, and indicate how the beginning and end of a transmission is determined. Most importantly, “[f]rom a user’s point of view, the only interesting aspect about protocols is that your computer or device must support the right ones if you want to communicate with other computers.” Id. Protocols, including IP, are simply one means by which people employ devices to engage in communication. In this instance, the medium is not the message; form does not dictate substance for the purposes of the 1996 Act.

If you have any questions about this letter, please do not hesitate to contact the undersigned at 202.898.2207 or jramsay@naruc.org.

Respectfully Submitted,

**James Bradford Ramsay
NARUC General Counsel**

cc: Chairman Kevin Martin/Amy Bender
Commissioner Jonathan Adelstein/Scott Bergmann
Commissioner Michael Copps/Scott Deutchman
Commissioner Robert McDowell/Nicholas Alexander
Commissioner Deborah Taylor Tate/Greg Orlando
Dana Shaffer
Matthew Berry
Ajit Pai
Paula Silberthau
Christopher Killion
Lisa Gelb
Al Lewis
Rebekah Goodheart
Marcus Maher
Aaron Goldberger
Jay Atkinson
Randy Clarke
fcc@bcpiweb.com

³⁶ Webopedia “Protocol”, at: <http://www.webopedia.com/TERM/p/protocol.html> (accessed April 27, 2004).

AFFIDAVIT OF JOEL SHIFMAN

Q: Mr. Shifman, please describe your education and experience with regard to the topics contained within this affidavit.

A: My education and work experience is described in an attachment to this affidavit. In addition, I have been a member of the NARUC Staff Committee on Telecommunications and Toll Rate Disparity, which is now the NARUC Staff Subcommittee on Telecommunications, for over 30 years. Since its inception, that subcommittee has dealt with interstate/intrastate jurisdictional issues involving telecommunications. I have also been a staff member of the Federal-State Joint Board on Separations, which deals with jurisdictional issues, since the 1980s. I was the lead staff person interacting with the FCC when we recommended the establishment of the so-called 10% rule, which deals with the jurisdictional treatment of mixed use private lines. I was also the lead attorney for the Public Service Commission of West Virginia before the United State Supreme Court in *Louisiana Public Service Commission v. FCC*, 476 U.S. 355 at 355 (1986), in which the United States Supreme Court reversed the United State Court of Appeals for the Fourth Circuit finding that “federal purpose” could not be used to preempt the jurisdictional authority reserved by the state at 47 U.S.C. § 152(b). I have also followed the evolution of the public switched network and have read and studied the “Notes of the Network” and its predecessor documents for at least 40 years. In addition to the experience listed in the attachment, I have attended and taught numerous courses sponsored by such entities as NYNEX, USTA and the Joint Board on Separations of the Federal Communications Commission, which dealt with jurisdictional issues and the determination of jurisdiction. The earliest of these courses was held over 20 years ago, and the latest was held this past summer.

Q: Have you read and analyzed the legal memorandum filed by Verizon on September 19, 2008, alleging a technical basis for the FCC’s preemption of state jurisdiction over intrastate access rates and establishing a single default rate for all traffic routed over the PSTN.

A: Yes.

Q: Do you agree with these assertions?

A: No. They are factually and legally incorrect. First, there are no characteristics of Internet Protocol (IP) calls being originated in a non-nomadic IP format that makes jurisdiction more difficult to determine today than it ever has been. If anything, technology is taking us in the other direction.

Q: Is it possible to determine the jurisdiction of facilities-based non-nomadic VoIP calls?

A: It has never been a problem to determine the jurisdiction of non-nomadic originated VOIP calls like cable telephone service. The jurisdiction of these calls is as easily determined as for circuit switched calls. The largest facilities-based non-nomadic VoIP provider in Maine is Time Warner Cable – who advertises its phone services in competition with Fairpoint, the largest local exchange carrier in the state. The reason why its just as easy to determine the jurisdiction of these calls, is that they interact with the public switched network the same manner as any other network connected to the PSTN. The non-nomadic digital voice services provided by Time Warner do not interface with or use the public Internet in any way.

For nomadic VoIP calls, since 2005, the FCC has required carriers to assure that 911 calls get routed to the correct public safety answering point. Any solution that allows the carrier to comply also serves as a proxy to allow the carrier to determine the location of, and thereby, the jurisdiction of most outgoing calls.

Moreover, nomadic VoIP providers are being pressed to come up with an enhanced 911 service that will give the emergency operators better location information and will ultimately assure that only a few 911 calls are ever misdirected and will, if nomadic providers take a larger share of the market, make it easier for the service provider to determine the jurisdiction of calls that terminate onto the customer's serving network.

Q: Could you describe some instances where, before the existence of IP telephony and the Internet, jurisdiction was somewhat difficult to determine?

A: For the last fifty years, there have always been instances where it was difficult to determine the jurisdiction of isolated calls or incidental traffic, but those circumstances have never been used as a basis for wholesale preemption. For example, in some cases, a local service line is bridged with an interstate private line, Foreign Exchange line or private network. This problem began over 50 years ago, and it is still around today. I remember when my mother would call the Sears store located in our state using the advertised interstate Foreign Exchange number, because interstate toll rates were less expensive than intrastate toll rates. I also remember when my father could make and receive calls via a private line or so-called "tie line" when the call would appear to be local even though it was interstate. I also remember working as an intern at NASA when it was possible to use special codes to make calls by connecting to interstate Foreign Exchange lines, tie lines, and private lines, which made it difficult to determine the jurisdictional nature of the call. All of these cases are examples of situations where, for a small and incidental portion of traffic, the exact jurisdiction was not readily determinable. These situations however did not and could not have justified the FCC's preemption for all traffic.

Determining the end-to-end jurisdiction of a "call-forwarded" call has always been difficult to determine, but only if the transaction is treated as one call. Therefore, a call-forwarded call has been treated and rated as two transactions. The first transaction is from the originating phone to the forwarding location. The second transaction is from the forwarding location to the terminating phone location. The second transaction can independently generate toll charges, if applicable to that route.

These examples are illustrations of cases where jurisdiction has been difficult to determine in the classical switched network, but practical, if approximate, solutions have been developed that today are generally accepted and that preserve the fundamental statutory distinction between intrastate and interstate calling.

Q: Does this complete your affidavit?

A: Yes.

Dated this 28th Day of October, 2008

/s/ Joel Shifman

Wrote a portion of the technical section of the petitioners brief that dealt with separations issues in Louisiana Public Service Commission v. F.C.C.

Developed the Local Measured Service Plan and expanded Extended Area Service plan used in West Virginia

Presented Testimony before the New York, Texas, West Virginia and Maine Public Utility Commissions

Author of Articles dealing with Open Network Architecture, Separations, and Universal Service for Public Utility Fortnightly

Teacher: Science and Chemistry
Mineral County Schools
Keyser, West Virginia
School year 1971-1972

Teacher: Mathematics and Economics
Highland County High School
Monterey, Virginia
School year 1970-1971

North Fork Mutual Telephone Company
Macksville, West Virginia
1970 to 1972

Legal Education:

West Virginia University School of Law
J.D. June 1975

National Association of Regulatory
Utility Commissioners
Regulatory Course
Michigan State University
August 1975

Numerous other Regulatory Short Courses
and Seminars

Pre-Legal Education:

Carnegie Mellon University
B.A. 1970
Majors: Physics and Biology Education
Received Secondary School teaching credentials in
Mathematics, Chemistry, Economics, Biology,
Physics, and General Science