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NOTICE OF EX PARTE COMMUNICATION

**Universal Service Contribution Methodology
WC Docket No. 06-122**

November 2, 2007

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

Reference Docket IDs: WC Docket No. 05-195; CC Docket No. 96-45; CC Docket No. 02-6; WC Docket No. 02-60; WC Docket No. 03-109; CC Docket No. 97-21; WC Docket No. 06-122 and/or FCC 05-124

Dear Ms. Dortch:

The Regulatory Studies Program (RSP) of the Mercatus Center at George Mason University is dedicated to advancing knowledge of the impact of regulation on society. As part of its mission, RSP conducts careful and independent analyses employing contemporary economic scholarship to assess rulemaking proposals from the perspective of the public interest. Thus, this ex parte comment on shifting universal service fee assessment from a revenue-based model to a numbers-based one does not represent the views of any particular affected party or special interest group, but rather discusses scholarly research that might aid the Commission in determining whether a numbers-based approach to universal service assessment will advance overall consumer welfare.

The overwhelming majority of comments filed in the matter of Universal Service Contribution Methodology¹ favor moving to a numbers-based system. Some respondents disagreed, claiming that such a change would amount to a “tax’ on low income and under-served customers.”² A number of comments also maintained that small adjustments to the revenue-based system would be sufficient to stabilize the funding

¹ Notice of Proposed Rule Making, WC Docket No. 06-122 (proposed June 27, 2006).

² See “Comments of Leap Wireless International, Inc.,” WC Docket No. 06-122 (proposed June 27, 2006).

stream and that, thus, no fundamental reform is necessary.³ While the stability of the funding base is clearly of great concern to many stakeholders, that is not the only reason for moving to a numbers-based system. Recent economic research clearly demonstrates that a numbers-based system would better promote overall consumer welfare than the current revenue-based system.

Federal universal service funds come from percentage assessments against telecommunications carriers' interstate and international revenues. Because firms' revenues often vary with the amount of service customers choose to buy, universal service contributions act like a usage-based tax. When applied to price-sensitive services such as long-distance and wireless, this tax leads to substantial reductions in usage and output. Consumers are worse off because they use less of the service, and telecommunications firms are worse off because they sell less of the service. Economists call this reduction in consumer and producer welfare the "excess burden" or "deadweight loss" associated with the price distortion. The universal service program best promotes the public interest when it raises revenue to achieve its intended purposes with as little deadweight loss as possible.⁴

The amount of deadweight loss from universal service assessments depends critically on the "elasticity of demand" for the services paying the assessment. If demand is elastic, a price increase generates a large reduction in the amount purchased; if demand is inelastic, a price increase generates a small reduction in the amount purchased. Studies indicate that demand for wireline service is almost completely inelastic, meaning that customers will generally continue to purchase the service, regardless of price changes. The elasticity of demand for wireline service has been calculated as near-zero in the United States,⁵ implying that assessing a universal service charge on wireline numbers, rather than minutes used, would have little effect on subscription rates (and thus fewer hidden costs to consumers).

Demand for long-distance communication has significant price elasticity; increases in price cause consumers to buy fewer minutes, which leads them to forego significant benefits. The elasticity of demand for wireline long-distance service is approximately -0.7; that is, a 1 percent increase in the price of long-distance leads to a 0.7 percent decrease in minutes used.⁶ Historically, universal service assessments have acted like a

³ See "Comments of the Nebraska Rural Independent Companies," WC Docket No. 06-122 (proposed June 27, 2006); "National Telecommunications Cooperative Association's Initial Comments," WC Docket No. 06-122 (proposed June 27, 2006); and "Reply Comments of the New Jersey Board of Public Utilities," WC Docket No. 06-122 (proposed June 27, 2006), among others.

⁴ Jerry Ellig and Joseph P. Rotondi, *Outcomes and Alternatives for Universal Telecommunications Service: A Case Study of Texas*, October 1, 2007 DRAFT, at 12-14, available at http://www.mercatus.org/repository/docLib/20070928_Outcomes_and_Alternatives_for_Universal_Telecommunications_Service_Oct_authors_revisions_changes_accepted.pdf

⁵ ROBERT CRANDALL & LEONARD WAVERMAN, WHO PAYS FOR UNIVERSAL SERVICE? WHEN TELEPHONE SUBSIDIES BECOME TRANSPARENT (2000) at 47.

⁶ A range of estimates exists, but -0.7 is the consensus view. See Jerry Hausman & Howard Shelanski, *Economic Welfare and Telecommunications Regulation: The E-Rate Policy for Universal-Service Subsidies*, 16 Yale J. ON Reg. 19, 36-37 (1999); See also Michael H. Riordan, *Universal Residential*

per-minute surcharge on the price of long-distance service. This is because most long-distance customers paid by the minute—either explicitly, or because they chose to purchase “buckets” of minutes whose price varied with the number of minutes purchased. An unknown number of consumers now purchase packages that include unlimited long-distance service. These customers do not face a price per minute each time they make a long-distance call. Nevertheless, it is likely still accurate to model universal service assessments on long-distance as an increase in the per-minute price. If many of the most price-sensitive customers still purchase long-distance by the minute or in buckets with finite numbers of minutes, then a per-minute surcharge will still have a significant effect on the amount purchased.

Wireless service is more complicated, but careful analysis still suggests benefits from changing the assessment methodology. The elasticity of demand for wireless *subscription* is much lower than the elasticity for wireless *minutes of use*. Most economic studies that estimate the demand for wireless subscription (using the number of subscribers per hundred or the probability of subscription as the dependent variable) yield elasticities between -.43 and -.71.⁷ That is, a 1 percent increase in the monthly subscription price reduces the number of subscribers by between four-tenths and seven-tenths of 1 percent. This contrasts markedly with studies measuring the elasticity of demand for wireless minutes, which usually find that a 1 percent price change leads to a greater than 1 percent change in quantity. Researchers have calculated that the elasticity of demand for wireless minutes ranges between -1.12 and -1.29,⁸ though some calculations using international data put the figure as high as -3.62.⁹

Although a numbers-based charge would reduce wireless subscriptions below the level that would exist if there were no USF charge, the relevant question is whether that welfare loss is greater or less than the loss from the current system. Since the demand for wireless minutes is more elastic than the demand for wireless subscription, the market distortion and net welfare loss in wireless would likely be less under a numbers-based system than under the current regime.

Telephone Service, in 1 HANDBOOK OF TELECOMMUNICATIONS ECONOMICS 423, 431 (Martin E. Cave et al. eds.) (2002).

⁷ See Jerry Hausman, *Cellular Telephone, New Products, and the CPI*, J. Bus & Econ. Stat. 188, 191 (1999) (estimating a demand elasticity of approximately -0.5 with 1988-1993 data); Jerry Hausman, *Efficiency Effects on the U.S. Economy from Wireless Taxation*, 53 Nat'l Tax J. 733, 738 (2000) (estimating a demand elasticity of -0.71); Mark Rodini et al., *Going Mobile: Substitutability Between Fixed and Mobile Access*, 27 Telecommunications Policy 457, 470 (2003) (estimating an elasticity of -.43 with respect to the monthly access charge and an overall price elasticity of demand of -0.6 with 2000-2001 data); Christopher Garbacz & Herbert G. Thompson, Jr., *Universal Telecommunication Services: A World Perspective*, Info. Econ. & Pol'y 495 (2005), tbl. 5 (estimating an elasticity of -0.45).

⁸ See J. Gregory Sidak, *Is State Taxation Of The Wireless Industry Counterproductive?* Criterion Econ. L.L.C., 19 (2003), www.criterioneconomics.com/docs/sidak_pacific_research.pdf (using 1999–2001 data).

⁹ See Thomas W. Hazlett & Roberto E. Munoz, *A Welfare Analysis of Spectrum Allocation Policies*, AEI Brookings Joint Center For Regulatory Studies, related pub'n 04-18, available at <http://www.aei-brookings.org/admin/authorpdfs/page.php?id=1024>; See also, Gary Madden & Grant Coble-Neal, *Economic Determinants of Global Mobile Telephony Growth*, 16 Info. Econ. & Pol'y 519, 531 (2004).

A number of empirical studies imply that a numbers-based system generates less distortion and less welfare loss:

- In one of the first empirical studies assessing the effects of federal USF charges on long-distance consumers, Jerry Hausman estimated that the deadweight loss associated with assessments on long-distance averaged between 65 and 79 cents for every dollar raised by the assessment. He estimated that the deadweight loss from raising the revenue by increasing the Subscriber Line Charge (analogous to a per-number charge) would be negligible.¹⁰
- In a study published in 2000, Hausman estimated that every dollar raised by USF assessments on wireless reduced producer and consumer welfare by 53 cents on average.¹¹
- A 2006 study found that the \$2.7 billion in federal universal service charges on interstate long-distance in 2002 cost producers and consumers \$1.16 billion in lost welfare (43 percent of revenue raised).¹² For wireless, federal universal service charges generated a welfare loss of \$978 million (56 percent of revenue raised).¹³
- Using 2004 data, Ellig and Taylor estimated that the welfare loss associated with wireless universal service charges totaled \$994 million, equal to 56 percent of the \$1.77 billion in revenues raised. Switching the USF fee to a numbers-based charge would cut the deadweight loss by \$529 million.¹⁴
- Examining state universal service charges in Texas, Ellig and Rotondi found that a numbers-based charge would reduce consumer welfare much less than a revenue-based charge. Substituting a numbers-based charge for the current revenue-based charge would reduce the total deadweight loss from \$176 million (28.4 percent of the revenue raised) to \$86 million (14 percent of revenue raised). The welfare loss in wireless would drop from 48.6 cents to 25.1 cents per dollar of assessment, and the welfare loss in long-distance would drop from 53.9 cents per dollar of assessment to zero.¹⁵

Raising universal service funds by charging per line will not substantially reduce wireline subscriptions, but the current method of charging based on long-distance and wireless revenues causes consumers to significantly reduce their call volume. A numbers-based charge would eliminate this loss of welfare. While some changes to the current system

¹⁰ Jerry Hausman, *Taxation by Telecommunications Regulation*, 12 *Tax Policy the Economy* 29, 31 (James M. Poterba ed., 1998).

¹¹ Hausman, *supra* note 7, at 3.

¹² See Jerry Ellig, *Costs and Consequences of Federal Telecommunications and Broadband Regulations*, 58 *Federal Communications Law Journal* 17 (Feb. 2005) at tbl. 2.

¹³ *Id.*

¹⁴ Jerry Ellig and James Taylor, *The Irony of Transparency: Unintended Consequences of Wireless Truth-in-Billing*, *Loyola Consumer Law Review* 19:1 (2006), at 65, available at http://www.mercatus.org/repository/docLib/20070423_ElligTaylor_LoyolaConsumerLawReview_2007.pdf

¹⁵ See Ellig and Rotondi, *supra* note 4, at 40.

might temporarily stabilize the Fund's revenue stream in the face of changing technology, a systemic change to a numbers-based system of assessment would reduce the large, unintended costs that producers and consumers bear under the current system of revenue-based charges.

Sincerely,

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