INTERCARRIER COMPENSATION

A White Paper To The

State Members

Of The

Federal-State Joint Board

On

Universal Service

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DISCLAIMER

THIS WHITE PAPER HAS BEEN PREPARED BY MEMBERS OF THE STATE STAFF OF THE FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE AND ITS CONSULTANTS IN ORDER TO ASSIST THE RELEVANT DELIBERATIONS OF THE STATE MEMBERS OF THE JOINT BOARD. THE ANALYSIS AND VIEWS EXPRESSED IN THIS WHITE PAPER ARE THOSE OF THE AUTHORS AND DO NOT REFLECT THE FORMAL POSITIONS OR OPINIONS OF THE REMAINING STATE STAFF, STATE MEMBERS, OR GOVERNMENTAL/NON-GOVERNMENTAL ENTITIES THAT CURRENTLY EMPLOY THESE AUTHORS.

Intercarrier Compensation

I. Introduction

The intercarrier compensation docket began on April 2001 when the FCC released its Notice of Proposed Rulemaking.[1] In that Notice, the FCC attempted to unify various intercarrier compensation regimes. It sought comment on a proposed "bill and keep" regime. Bill and keep requires that carriers bill only their own retail end-users and keep those revenues and, at the same time, sets all intercarrier charges to zero. The FCC asserted that a bill and keep regime would solve the various problems of the existing regime including terminating monopoly power, regulatory arbitrage and economic efficiency.

Evaluating the FCC's proposal has taken many years and substantial regulatory resources and is still incomplete. Early in the process it became apparent that to reach bill and keep, the FCC would have to provide some type of replacement revenues for incumbent local exchange carriers (ILECs). The most likely sources of the replacement revenue are substantial increases in the federal subscriber line charges (SLCs) and universal service funding. To date the FCC has not been willing to increase either.

Alternatively, it is possible to prevent the exercise of terminating monopoly power, to eliminate arbitrage opportunities, and to improve economic efficiency by establishing a cost-based intercarrier compensation regime. Moreover, cost-based rates can be established that would not require increases in SLCs and universal service funding. Given all the other demands on the limited universal service funds, a solution to the intercarrier compensation issues that does not require universal service funding deserves a close inspection.

II. ILEC Cost Recovery Sources

A. Three sources

ILECs have three major revenue sources. Intercarrier compensation reform proposals reduce one of these sources and would either require increases in the other revenue sources or would dramatically reduce carrier revenue. The second option could jeopardize capital sources required for building broadband networks.

The first major revenue source is subscriber-paid retail revenues. These include local service rates and the federal SLC. Most of this revenue is collected on a per-month-per-subscription basis. Local exchange rates are the largest component. The federal SLC is another component and is capped at $6.50 per month for residential subscribers and single line business customers and $9.20 for multiline businesses. Some states impose separate state SLCs that produce intrastate revenues.

[1] *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, Notice of Proposed Rulemaking, FCC 01-132, released April 27, 2001.

The second major revenue source is intercarrier compensation on switched and special access traffic. For most LECs, intercarrier compensation consists chiefly of regulated access and reciprocal compensation on switched traffic. All of this revenue is paid on a per-minute basis.

In the past, the FCC authorized per-month intercarrier payments called "presubscribed intercarrier compensation" charges ("PICC," pronounced "pixie"). Those interstate charges have been abandoned for residential customers.

In the past, the FCC authorized intercarrier payments called "carrier common line" charges (CCL). These per-minute access charges helped to pay for the non-traffic sensitive (NTS) costs of loop investment. The FCC has abandoned CCLs for rate of return carriers.[2] For most price-cap carriers, the CCL is also zero. The revenue previously recovered from CCL charges has been replaced with higher federal SLC rates, Interstate Access Support, and PICC revenue. However, CCLs are still available in the interstate jurisdiction, and a few carriers (as of June, 2010) have a CCL rate.[3] Some state commissions still allow carriers to impose CCL components in their intrastate access charges.

The third major revenue source is universal service fund (USF) support. For rural ILECs, federal USF support can be a substantial revenue component. For non-rural carriers in most states, federal USF support is provided only in minimal amounts, even those serving rural areas. Federal support to non-rural carriers can be a substantial factor in the ten states where the carriers receive High Cost Model support. State USF programs also can be a major source of revenue. California, Texas, Wyoming and Nebraska have sizeable state-specific USF funds, for example.

Special access and non-regulated revenues are playing an increasing role for both rural and non-rural ILECs. For example, retail broadband access services (e.g., xDSL, fiber to the premises or FTTP, including Verizon's "FiOS" product) are classified as "information services." They are not within the universe of regulated services although they may utilize facilities (e.g., xDSL and the conventional copper loops) that are directly or indirectly supported by federal and state USF mechanisms. Some rural ILECS are exceptions and do have tariffed xDSL services.

III. Problems with the existing system

A. Dependence on per-minute intercarrier revenues

Carriers vary widely in their dependence on intercarrier compensation revenues. Some carriers are net recipients, while others are net payors.

[2] In the Matter of Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, CC Docket No. 00-256, *Second Report Order and Further Notice of Proposed Rulemaking*, released November 8, 2001, FCC 01-304.

[3] FCC, Telephone Trends, September 2010, Tables 1.3 and 1.4

In some states, the ILECs charge high access rates that have not been adjusted for years, even decades, while in other states access rates have been adjusted downwards with consequent upward adjustments in regulated local rates and the introduction of state-specific USF support mechanisms.[4]

B. Traffic Pumping

Traffic pumping refers to the local exchange carrier (LEC) practice of encouraging terminating customers to use the LEC's network for the purpose of increasing revenue and profits. A typical traffic pumping activity is to offer toll-free 800 lines for conference calls.

The cause of traffic pumping is usually considered to be high per-minute carrier access rates. However, that is not true. Instead, the cause of traffic pumping is the existence of rates that are higher than cost. A high rate that is equal to cost does not provide an incentive to engage in a traffic pumping strategy. Moreover, merely requiring all carriers to charge the same rate would not eliminate the incentive to engage in traffic pumping.

The following example illustrates the above argument. Let Carrier A have an access rate of two cents per minute and Carrier B have an access rate of one cent per minute. If carrier A's cost is two cent per minute and Carrier B's cost is one cent, neither carrier has an incentive to engage in traffic pumping even though the carriers have different rates. If regulators forced all carriers to terminate at not more than one cent, that would not prevent a possible traffic pumping strategy. Rather, the below-cost rate would either force Carrier A out of business or force it to engage in strategies that reduce its terminating traffic. This result would occur even though both carriers A and B have the same rate.

Alternatively, if regulators allowed both A and B to charge two cents per minute, that would induce carrier B to engage in traffic pumping strategies because its rate would now be above cost, and it would earn excessive profits by receiving additional terminating traffic. In this case, mandating equal rates for A and B actually would induce one carrier to engage in traffic pumping strategies. Therefore, in order to discourage traffic pumping and to encourage reasonable investments in communications facilities, each carrier should be authorized to establish a rate that is equal to its cost.

A "bill and keep" access regime would reduce the incentive to engage in traffic pumping strategies. But the reduction would not be caused by setting maximum terminating rates at zero. Rather, the effect occurs because the allowed terminating rate is below the cost of terminating calls for all carriers. Under this situation every carrier would have incentive to reduce its terminating traffic. This would be the antithesis of reasonable communications policy, which is normally designed to encourage the use of the network.

C. Bypass

Bypass occurs when a customer changes from one access service provider or type of service to another. Bypass can be economic or uneconomic. Economic bypass occurs when the cost of the old service is higher than the cost of the new service. In this case, the customer benefits, and fewer total resources are used. Uneconomic bypass occurs when the customer moves to a service that costs more, but still has a lower rate. In such instances the customer is better off, but more resources are used to

[4] Such local rate reforms can also affect the underlying pricing of unregulated service bundles or packages where local service is a constituent component.

provide the service. Economists also make a distinction between facilities bypass and service bypass. Facilities bypass occurs when the customer leaves the facilities of one carrier to use the facilities of another carrier, while service bypass occurs when the customer purchases a different service from the same carrier.

When access rates were very high in the early 1980s, there was a fear of massive service and facilities bypass. The FCC feared that customers would move from incumbent carriers to alternative carriers that charged lower access rates. They also feared that customer would move from switched access services to special access services.

In the current environment, some parties seek to reduce switched access rates and other inter-carrier compensation rates to a uniform level that is zero or close to zero. Such a low access rate would be below cost for nearly all ILECs. It would give customers an incentive to uneconomically increase their switched access activities and uneconomically decrease their activities that use other telecommunications methods, including special access. In other words, a very low switched access rate would create a risk of special access bypass. This change in behavior could dramatically impact ILEC revenue flows and cause a new kind of revenue erosion beyond those discussed immediately below.

D. ILEC Revenue Erosion

End-user migration to wireless and Internet Protocol (IP) based services, including both "fixed" and "nomadic" voice over IP or VoIP, has eroded conventional voice traffic. This trend has reduced both the intrastate and interstate switched access revenues of rural and non-rural ILECs.

The FCC's failure to definitively classify VoIP traffic[5] has exacerbated the problem or revenue erosion. ILEC network facilities today are used to terminate VoIP traffic, although transmitting carriers sometimes refuse to pay compensation or pay at very reduced rates. Many of these transmitting carriers pay $0.0007 per minute of use (MOU), a rate the FCC established some time ago for dial-up ISP traffic. A number of states have successfully adjudicated a number of intercarrier compensation disputes involving VoIP traffic. To resolve these cases, states have used existing federal and state law and applicable common carrier principles.[6] Some states have made an affirmative finding that fixed wireline VoIP is a telecommunications service.[7] State laws deregulating retail VoIP services have further complicated the issue.[8]

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[5] The FCC once again avoided the issue in its December 23, 2010 *Net Neutrality* Order through the use of the term "specialized traffic." In the Matter of Preserving the Open Internet Broadband Industry Practices, GN Docket No. 09-191 and WC Docket No. 07-52, *Report and Order*, released December 23, FCC 10-121.

[6] *See generally Palmerton Tel. Co. v. Global NAPs South Inc. et al.*, (Pa. PUC, March 16, 2010) Docket No. C-2009-2093336, *Hollis Tel., Inc. et al.*, (NH PUC, November 10, 2009), DT-08-28, Order No. 25, 043. Similar disputes have arisen when competitive local exchange carriers (CLECs) terminate IP-based traffic.

[7] *See generally Public Utilities Commission Investigation into Whether Providers of Time Warner "Digital Phone" Service and Comcast "Digital Voice" Service Must Obtain Certificate of Public Convenience and Necessity to Offer Telephone Service*, (Maine PUC, October 27, 2010), Docket No. 2008-421 Order; *Petition of AT&T Wisconsin for Declaratory Ruling that Its "U-verse Voice" Service is Subject to Exclusive Federal Jurisdiction*, (Wisconsin PSC, September 24, 2010), 6720-DR-101, PSC Ref# 139149.

[8] *See generally* Pennsylvania "Voice-Over-Internet Protocol Freedom Act," 73 P.S. § 2251.1 *et seq.*

E. Implicit Interstate Transfers

Charging high intercarrier compensation rates allows ILECs to reduce revenue recovery from other sources. However, high rates can harm IXCs and their toll customers. To the extent that an IXC chooses to maintain uniform national toll rates, then state access rates can be exported to the IXC's entire toll customer base, which often is a regional or national set of customers.

47 U.S.C. § 254(g) prohibits toll de-averaging. This section prohibits higher rates in rural areas compared to urban areas and requires the same interstate toll rates across states. However, the implication of that rule for intrastate toll rates is not well defined. Some IXCs do recover more from their subscribers in high-access states. IXC toll rates in one state can be higher than toll rates in other states. In addition, some IXCs offer national rate plans that contain state surcharges reflecting state access rate differences. To the extent IXCs engage in these practices, they are able to transfer costs to their customers in the states that allow high intrastate access rates.

Deregulation is an additional factor. IXC services are deregulated both on the federal and state levels. Therefore, it is not clear that state or federal regulatory changes mandating lower access charges will benefit wireline end users.

IV. Legal Issues

A. Dual Jurisdiction

The Communications Act of 1934 and the Telecommunications Act of 1996 each recognized the jurisdictional split for switched traffic between intrastate and interstate. One fundamental question is whether the FCC has legal authority to order states to lower intrastate access rates.

Preemption might occur on the basis of Section 201(b) of the Act,[9] which gives the FCC general rulemaking authority over all charges, practices, classifications and regulations for communication service. Many states believe, however, that section 152(b) of the Act protects intrastate services from rate preemption.[10] States also rely on *Louisiana PSC v. FCC*, a 1986 Supreme Court case involving dual jurisdiction.[11]

It seems likely that if the FCC were to preempt state authority over intrastate access, one or more states would appeal. States have a strong interest in avoiding or mitigating the effects of any federally-mandated changes to intrastate carrier compensation rates that would increase local rates or place greater burdens on state universal service funds.[12]

B. Reciprocal Compensation and Sections 251 and 252.

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[9] 47 U.S.C. § 201(b).

[10] 47 U.S.C. § 152(b).

[11] *Louisiana Pub. Serv. Comm'n v. FCC*, 476 U.S. 355 (1986) (state commission has jurisdiction over intrastate rates and intrastate depreciation rates).

[12] For example, Pennsylvania state law specifies "revenue neutrality" for ILEC intrastate carrier access charge reforms. 66 Pa. C.S. § 3017(a).

Sections 251 and 252 of the 1996 Act set forth a structure for negotiation and arbitration of reciprocal compensation agreements. The statutes prescribe private negotiation and, on occasion, state arbitration. There is no explicit role for the FCC except that the FCC can require states to use FCC-prescribed total element long-run incremental cost (TELRIC) principles when establishing reciprocal compensation and unbundled network element (UNE) rates.

Subsection 251(i) has been mentioned as a possible basis for preemption of state authority over reciprocal compensation.[13] Subsection 251(i) states that nothing in section 251 limits the FCC's authority under section 201. It is unclear whether this preservation of authority to the FCC allows it to reduce the states' authority otherwise granted under section 251.

It appears that the FCC has managed to implement a nationally uniform rate cap for the termination of Internet Protocol IP-based traffic to information service providers (ISPs).[14] However, voluntarily negotiated interconnection agreements often incorporate conventional interstate and intrastate carrier access charges as intercarrier compensation for interexchange IP-based traffic. In addition, in the absence of FCC's rulings regarding the jurisdictional classification of VoIP, some states have ruled that conventional access rates apply for the resolution of intercarrier compensation dispute involving VoIP traffic.

V. Evaluation of Past Activity

A. Past Proposals

1. COBAK

Underlying the FCC's proposal to move towards a bill and keep regime is the assumption that both parties to every call share evenly in the benefits of the call. This assumption was articulated in an FCC white paper that developed an intercarrier reform plan called Central Office Bill and Keep (COBAK).[15] Under this plan the calling party is responsible for originating cost and transporting the cost to the central office of the called party, and the called party is responsible for the terminating costs.

The advantage of the COBAK plan is that it directly negates monopoly power for terminating access. That monopoly power exists because once a customer chooses to rely on the services of a particular local exchange carrier (LEC), all other carriers must use that carrier to terminate calls. Thus, the chosen carrier has an incentive to increase terminating access charges. With those added receipts, the chosen carrier can reduce local rates, attract more customers and obtain still more terminating access revenue. Where the terminating access rate is zero, the terminating carrier obviously does not receive terminating access revenues and cannot exercise terminating monopoly power.

However, the COBAK has drawbacks. First, the plan induces an arbitrage opportunity in the reverse direction. Instead of seeking customers that terminate a substantial amount of minutes, carriers

[13] 47 U.S.C. § 251(i).

[14] *Core Communications v. FCC*, (D.C. Cir. 2010), petition for cert. denied Nov. 15, 2010.

[15] Patrick DeGraba, "Bill and Keep at the Central Office as the Efficient Interconnection Regime," OPP Working Paper Series No. 33, FCC, December 2000.

are incented to seek customers that originate a substantial amount of minutes. Customers that dominate originating traffic patterns would increase the carrier's revenue and would no longer increase the carrier's terminating access costs. Thus, carriers would develop strategies to capture telemarketers and other customers that can dominate originating traffic patterns.

Second, end-users would be required to replace the revenue loss. Since most end-user revenue is collected through flat rates, the COBAK plan would create an implicit subsidy from low-usage customers to high-usage customers. It would also reverse the FCC's long-standing goal of collecting traffic sensitive costs from usage-based rates and collecting non-traffic sensitive costs from flat monthly rates. Moreover, there would be no reduction in regulation associated with the plan. Regulators would have to shift their focus from establishing just and reasonable intercarrier compensation rates and return to determining just and reasonable end-user rates.

Third, the goal of achieving economic efficiency rests heavily on the assumption that the calling party and called party benefit equally in every call. Economic efficiency requires that price of service should equal the cost of that service.[16] Economists and regulators also generally assume that the cost-causer should pay for the cost of the service. With regard to a telephone call, the originator of the call is the person who initiates the cost and therefore would generally be considered the cost-causer. However, when the provision of the service includes an externality, such as benefits to the called person, internalizing those benefits through spreading the recovery of the costs between both parties to the call is acceptable.

Even though many calls generate positive externalities, other calls generate negative externalities. While customers can use Caller-ID, voice mail boxes and no-call lists to reduce the negative externalities, those negative externalities still exist. In addition, there are mechanisms available to share the positive externalities. For example, when the called party perceives that there will be substantial benefits from receiving calls, the called party can establish an 800 number. When the benefits of the calling are approximately equal, the parties (such as persons involved in personal or familial relationships) may alternate calling each other. Finally, even if the benefits of the call are equal, the cost may not be equal because originating access may be more or less expensive than terminating access or terminating a call on one carrier's network may be more expensive than terminating it on another carrier's network. Thus, it is not clear that bill and keep enhances economic efficiency. Moreover, the current system allows for more flexibility to reach an efficient outcome because it allows for services such 800 numbers to be used when there is a positive externality to the calling party.

2. The Missoula Plan

The Missoula plan was a unified intercarrier compensation proposal. The plan relied on a broad three-category classification of carriers, setting different rates for each group. For many carriers, the final rate for termination would have been $0.0007 per minute. The plan applied to intrastate

[16] In particular, that price should equal the marginal cost of service. However, given that telephone networks exhibit large sunk costs and economies of scale, carriers that equate price and marginal or even incremental cost would not be financially viable. In addition, price equals marginal cost measures only allocative efficiency. Other measures of efficiency, such productive efficiency and technological progress, are also important for social welfare. In fact many economists have observed that technological progress leads to much higher gains in welfare than allocative efficiency. It has been observed that carriers regulated under rate of return schemes have deployed digital subscriber line (DSL) services at a faster rate than price-cap carriers.

communications also, relying on federal preemption of state authority. The plan was also based on the revenue neutrality concept, replacing lost intercarrier revenues from other sources, including increases of the federal SLC and a new "Restructure Mechanism" of USF support. The plan also proposed certain changes to interconnection rules.

The Missoula Plan had many disadvantages. Many states found the federal preemption called for by the Missoula plan to be unacceptable. The potential increases for the federal SLC to $10 per line per month was not considered feasible because of price elasticity of demand effects and because of the implicit transfer of network Traffic Sensitive (TS) costs to end-user consumers. The Restructure Mechanism could have imposed additional burdens to states that were already net contributors to the federal USF. In addition, reciprocal compensation is both a revenue source and a cost to carriers. While the plan's articulated goal was revenue neutrality, the plan did not consider that lowering access and reciprocal compensation rates would also reduce carrier costs, an effect which, for some carriers, was larger than their revenue loss. In calculating the cost of the plan and in developing the plan's rules, reciprocal compensation revenue was included as a revenue loss, but reciprocal compensation payments were not used to offset those revenue losses. Finally, some of the proposed changes in interconnection rules were perceived as potentially anticompetitive by certain industry segments, such as CLECs.

In addition, the $0.0007 per MOU rate in the Missoula Plan matched the rate that the FCC had previously established for ISP-bound traffic in order to address alleged "traffic imbalances." It has repeatedly been argued that this rate does not comply with the FCC's own TELRIC standard and the legal mandates of Sections 251(b)(5) and 252(d).[17]

3. Martin plan

Near the end of his term at the FCC, Chairman Martin filed several alternative proposals for reducing intercarrier compensation rates. One proposal was to use pure incremental cost rates. Chairman Martin also simultaneously made several federal USF proposals.

Chairman Martin's plan was also seen as having several disadvantages. First, there were objections to the process by which they had been drafted and released. The proposal for a "new" "incremental cost" standard for switched access and reciprocal compensation undermined the FCC's long advocacy for using a TELRIC standard for pricing. The plan's principles ignored network joint and common costs that are ongoing and thus "variable" in the long run even under an incremental cost philosophy. Finally, there were issues with the FCC's legal interpretation of its authority under Sections 201, 332 and Title I to preempt state commissions on matters of reciprocal compensation and intrastate carrier access charges.

4. National Broadband Plan

In 2010, the FCC issued a major policy document called the National Broadband Plan. In that plan, the FCC appears to be on the same track for intercarrier compensation as it was previously, although with perhaps a more modest pace. The FCC said that it would implement intercarrier compensation reforms in "Stage Two" of the NBP. The plan said this would amount to "reducing

[17] 47 U.S.C. § 251(b)(5), 252(d).

intrastate rates to interstate rate levels in equal increments over a period of time."[18] The FCC also said that it would implement interim solutions to address arbitrage, which will help offset revenue losses from the reduction in intrastate rates. Finally, the FCC said it would:

> Continue a staged reduction of per minute rates adopted as part of the comprehensive ICC reform. After reducing intrastate rates, the FCC could, for example, reduce interstate rates to reciprocal compensation rate levels for those carriers whose interstate rates exceed their reciprocal compensation rates, and reduce originating access rates in equal increments. Doing so would transition all ICC terminating rates to a uniform rate per carrier, which is an important step to eliminate inefficient economic behavior. The rate reduction in a staged approach will give carriers adequate time to prepare and make adjustments to offset the lost revenues.[19]

B. Status of State Access Charge Reforms

State access reform varies according to the type of legislative or regulatory initiative, length of transition and the number of companies affected. Currently there are eight states in which carriers are required by legislative mandate to establish intrastate access rates at levels no higher than interstate access rates.[20] Among these states, at least three states provide exemptions to the general rule for small carriers.[21] Moreover, in those eight states it is not clear how frequently carriers are required to change intrastate access rates.

Thirteen state commissions require by rule that some or all the carriers in the state must maintain parity between intrastate and interstate access rates. Carriers that are entirely or partially exempt from these rules tend to be the smaller carriers. In addition, two other state commissions have approved state access rates that are virtually equal to the interstate rate. In ten states there appears to be ongoing investigations into the reasonableness of the intrastate access rates. In seventeen states, there appears to be little or no activity regarding reform of intrastate access rates. Finally, in many states, CLEC access rates are capped at the underlying ILEC rate unless the CLEC can provide a cost study that demonstrates the need for higher rates.

VI. Recommendations to Joint Board State Members

The authors offer several recommendations to the State Members of the Joint Board, as described below.

A. Intercarrier Compensation Needs Continued Price Regulation

[18] National Broadband Plan at 148.

[19] Id. at 149.

[20] The information in this section is, for the most part, a summary of information contained in an AT&T ex parte filed in CC Docket No. 01-92 on October 25, 2010.

[21] The three states with exemptions are Illinois, Oklahoma and Texas.

Intercarrier compensation payments arise naturally in many unregulated networks. In the shipping industry, for example, originating carriers have access efficient mechanisms to find the lowest cost subcontracting carrier, whether it be by rail, by ship, by air, or by truck.

Telecommunications differs from unregulated networks in three ways that give certain participants market power that would not otherwise exist. One factor is technological and the other two are legal.

- Each telephone number has a unique terminating carrier. Although many customers have a long-run option of changing their LEC, in the short run each telephone call is dialed to a particular number, and only one carrier can terminate that call. Any carrier seeking access to that telephone number must transmit the call to its unique terminating carrier. This gives terminating carriers market power in the market for terminating conventional circuit-switched as well as VoIP calls.

- Terminating carriers cannot ignore a termination request. LECs are required by the FCC and by many states to terminate each call submitted by another carrier, whether or not the terminating carrier is compensated. Where one party to a transaction is obligated by law to accept all offers of incoming traffic irrespective of traffic protocol, there can be no market-based pricing mechanism for termination.

- Some LECs are required to allow competitors the use of their facilities for toll call origination, without additional compensation from the subscriber. Where one party to a transaction is obligated by law to accept all offers of outgoing traffic, there can be no market-based pricing mechanism for origination.

These three facts fundamentally alter the dynamics of the switched access services telecommunications market and require some form of continued price regulation of intercarrier compensation. Properly done, such regulation can avoid price gouging by terminating carriers and ensure that originating and terminating carriers receive compensation that is just and reasonable, is sufficient to ensure continued service, and provides for access network capacity to handle increasing access traffic demand in a variety of associated protocols.

B. Functionally Equivalent Intercarrier Compensation Services Should Be Offered at A Single Rate.

Functionally equivalent intercarrier compensation services should be offered at a single rate to all purchasers of network access services at a single location. To the extent that various telecommunications networks fail to follow this principle, carriers will seek to bypass the more expensive access services, and the regulatory system can inadvertently create opportunities for arbitrage and access service bypass. Requiring a uniform rate for all purchasers also promotes competitive neutrality and avoids creating regulatory advantages for some industries or technologies.

This principle requires elimination of some traditional rate design distinctions, notably:

- Distinctions between the rates charged for interstate services and intrastate services.

- Distinctions between access rates for terminating toll traffic and terminating local traffic.

- Distinctions between the intercarrier compensation rates charged to wireline and wireless carriers.

- Distinctions between digital transmission capacities that are based on the historical epoch in which a service was defined.

This principle does not require national uniformity of originating or terminating access charges. It merely requires that all buyers of a single service at a single location must pay the same price.

C. Low Intercarrier Compensation Rates Create Public Benefits

Low per-minute retail rates tend to promote usage. Lower toll rates over the last 20 years have certainly helped increase toll traffic volumes. Retail toll rates in turn, depend on the provider's costs of providing toll service, including access costs. To the extent that terminating access rates are reduced, and to the extent that competition requires toll providers to pass on such savings to end-users it is reasonable to believe that toll rates will decline and customers will use the network more frequently. That usage growth is desirable in almost all circumstances.

High intercarrier compensation rates also can create undesirable incentives. High LEC terminating rates, for example, can create an incentive for LECs to find ways to "pump" traffic volumes. Where traffic pumping occurs, the regulatory system must find ways to respond. The FCC's decision to lower rates for ISP-bound traffic may be perceived as an illustration of such a regulatory response to an unanticipated imbalance in traffic volumes.

Low intercarrier compensation rates are also desirable for digital services. Digital services are usually sold on a throughput capacity basis and impose no charge for usage. We do note some exceptions to this rule, including some recent offerings from wireless carriers reestablishing usage-based charges for their data services, such as limits for broadband downloads on per Mbps level basis.

D. Intercarrier Compensation Rates Should Not Be Prescribed at Zero.

It has sometimes been proposed that intercarrier compensation be set to zero or a number very close to zero. In our view, such a system cannot arise naturally in an unregulated market as a universal principle. It is hard to see how a market could operate when it requires some carriers to offer their network facilities to other carriers without charge. Indeed, the premise of all proposals to set rates at or near zero is that regulatory power should be used to prescribe a result that does not arise naturally.

Certainly it is possible in unregulated markets to develop occasional "bill and keep" agreements. As the Internet demonstrates, however, bill and keep is a special case. In the Internet world, retail ISPs with retail subscribers usually pay ISPs with backbone transport facilities. Bill and keep arrangements generally are limited to pairs of ISPs that recognize that they have roughly equal traffic flows among large Tier One carriers. Smaller carriers pay access like charges for the use of the Internet backbone networks.

Prescribing zero rates for intercarrier compensation would greatly increase the burden on federal and state USFs. Some local networks are more costly to maintain than others. For the more costly networks, costs cannot always be recovered solely from subscribers without violating universal service principles. Therefore, intercarrier compensation revenues, USF revenues, or both are required

to keep these access networks functioning and expanding their capacity to meet future increases in access traffic demand.

If regulators were to set intercarrier payments on telecommunications networks uniformly to zero, LECs with terminating lines would have to derive substantial portions of their revenue from subscribers and the federal and state-specific USFs. Current universal service mechanisms are being expanded to include broadband deployment or the inclusion of at least federal USF-supported retail broadband access services or components. These USF mechanisms do not appear to have sufficient fiscal capacity to meet universal service goals without also requiring some contribution from intercarrier compensation. Therefore, the Joint Board should consider a rate policy that requires reasonable compensation between carriers for the exchange of traffic. This policy must inevitably strike a balance between the good of having low intercarrier compensation rates and the good of having sufficient revenue to keep all networks functioning and able to expand access capacity to accommodate future traffic demand growth.

Prescribing zero rates for intercarrier compensation can inhibit sufficient investment. To the extent that regulatory policy mandates that carrier A can have access to carrier B's network facilities without paying compensation, regulators create an incentive for all telecommunications and communication service providers to adopt business plans similar to A's rather than B's. Yet if carriers like B must continue to invest to provide adequate facilities and adequate capacity for access services, the result can be insufficient investment and traffic congestion.

Prescribing zero rates for switched intercarrier compensation would place existing point-to-point services at a competitive disadvantage. Existing telecommunications networks that pay for special access and advanced services would have a financial incentive to use free switched telecommunications network services. For example, companies that operate private branch exchanges (PBXs) and private networks that are connected to larger public networks via special access facilities and services would have incentives to reconfigure their networks to use more switched access services. Such a market distortion would be similar to, but in the opposite direction from, the one that drove the growth of special access in the 1980s.

E. Federal Law Requires Some Minimal Contribution to Common Costs from Intercarrier Compensation.

47 U.S.C. § 254(k) provides, in part:

> The Commission, with respect to interstate services, and the States, with respect to intrastate services, shall establish any necessary cost allocation rules, accounting safeguards, and guidelines to ensure that *services included in the definition of universal service* bear no more than a reasonable share of the joint and common costs of facilities used to provide those services. (Emphasis added.)

If intercarrier compensation rates were mandated at zero, or if they covered only marginal cost, then all joint and common costs of facilities providing universal service would fall on end-user subscribers. Those payments would generally take the form of fixed monthly "local exchange" charges and SLCs.

While the italicized language above is not entirely clear, the authors understand that the original intention of Congress was to limit local exchange charges and SLCs from having to cover more than a reasonable share of joint and common costs. If subsection 254(k) is to have any meaning at all, 100% of joint and common costs cannot be a reasonable share. Therefore, intercarrier compensation payments should also cover at least a portion of those joint and common costs of the network that provides wholesale access services.

F. TELRIC Pricing Is a Reasonable Long-Term Floor for Intercarrier Compensation Rates

Generally, intercarrier compensation rates should be no lower than the marginal cost of providing service.

TELRIC is an acceptable method for measuring the forward-looking economic costs of access services, inclusive of a level of joint and common costs, and providing cost-based rates for both intrastate and interstate carrier access services and reciprocal compensation. Notwithstanding Chairman Martin's November 2008 access reform proposals, the FCC originated and has long supported the use of TELRIC pricing. The FCC defined the essential elements of TELRIC pricing in its landmark *Local Competition Order* of 1996:

> We conclude that, under a TELRIC methodology, incumbent LECs' prices for interconnection and unbundled network elements shall recover the *forward-looking* costs directly attributable to the specific element, *as well as a reasonable allocation of forward-looking common costs*. Per unit costs shall be derived to from total costs using reasonably accurate "fill factors" (estimates of the proportion of a facility that will be "filled" with network usage); that is, the per-unit costs associated with a particular element must be derived by dividing the total cost associated with the element by a reasonable *projection* of the actual total usage of the element.[22]

While TELRIC provides a reasonable floor for intercarrier compensation, it should be noted that setting rates for all services at TELRIC levels could lead to financial hardship for many carriers. Thus, regulators must still determine which services should carry the financial burden of supporting the telephone network. If one service is required to pay rates above TELRIC,[23] then it would be reasonable for intercarrier compensation rates also to be higher than TELRIC-based rates. At the same time, a goal of minimizing the differences between the rate and TELRIC also appears to be reasonable. A unique answer to these issues is not available. However, given that goals of universal service are expanding and funds may be needed to support broadband build-out programs in the near future and that it does not appear that SLC increases would be recoverable given current market conditions (e.g., price elasticity of demand constraints), an intercarrier compensation regime that minimizes the requests for increases in SLC rates and universal service funding should be considered. In sum, a regime that decreases high access rates and increases low rates so that the combined revenue from all

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[22] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket Nos. 96-98 & 95-185, (FCC rel. August 8, 1996), FCC 96-325, ¶ 682, *slip op.* at 351 (emphasis added).

[23] See the SLC costing order, where it is recognized that SLC rates are above 25 percent of TELRIC estimated loop costs. In the Matter of Cost Review Proceeding for Residential and Single-Line Business Subscriber Line Charge (SLC) Caps, Access Charge Reform and Price Cap Performance Review for Local Exchange Carriers, CC Docket Nos. 96-262 and 94-1, *Order*, released June 5, 2002, FCC 02-161.

access rates changes very little may be the best intercarrier rate structure that can be achieved in an imperfect world.

The fact that TELRIC costs include joint and common costs means that intercarrier rates based on TELRIC would unequivocally comply with the legal requirements of Section 254(k).[24] Furthermore, the use of TELRIC by the FCC and the states has been upheld by the U.S. Supreme Court.[25]

G. An Initial Target Rate for Access Should Be the Lower of the Current Rate for Interstate Toll or the Average Rate for All Intercarrier Compensation Services.

The allowable terminating rate for any carrier should be the lesser of the carrier's current interstate access terminating rate or its average intercarrier compensation revenue (defined as the sum of all terminating revenue divided by the sum of all terminating minutes). A carrier that charges the average revenue rate would not experience a revenue shortfall as a result of intercarrier compensation reform. Carriers in that position would not be allowed to increase their SLC rates and would not need to receive additional universal support. On the other hand, carriers that adopt the interstate access rate would incur revenue shortfalls. These carriers would not be allowed to increase their SLC rates above the current SLC caps. However, these carriers would be allowed the opportunity to recover the revenue shortfall as part of the provider of last resort (POLR) support plan

H. The FCC Should Create Financial Inducements for States to set Intercarrier Compensation rates at or Below a Stated Ceiling.

The FCC could change its rules regarding the local service area for calls to or from a CMRS network for the purposes of applying reciprocal compensation obligations under section 251(b)(5) of the Act.[26] In the Local Competition Order, the FCC concluded that the Major Trading Area (MTA) serves as the most appropriate definition of the local calling area for CMRS traffic to and from an ILEC. Thus, traffic to and from a CMRS network that originates and terminates within the MTA is subject to the generally lower reciprocal compensation rates established under section 251(b)(5).[27]

An alternative would be to apply state commission-approved calling areas to determine the scope of section 251(b)(5). Traffic that originates outside of the state commission-authorized ILEC local calling area and terminates within the state commission-authorized ILEC local calling area (even though the traffic originates and terminates within a single MTA) could be subject to intrastate access rates. One effect of this policy would be to generate additional intrastate access revenue from the portion of CMRS traffic that would be subject to intrastate access charges. This additional revenue would offset the reduction of ILEC revenue associated with the reducing the intrastate access rate. The additional revenue would reduce the pressure on local rates and state universal service funds caused by lowering allowed intrastate rates. The additional revenue would also provide an incentive for states to authorize an access rate reduction.

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[24] 47 U.S.C. § 254(k).

[25] *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 119 S.Ct. 721 (1999).

[26] 47 U.S.C. § 251(b)(5) requires each local exchange carrier to "establish reciprocal compensation arrangements for the transport and termination of telecommunications."

[27] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, released August 8, 1996, FCC 96-325.

I. A Simple New Regulatory Mechanism Can Eliminate the Incentives for Traffic Pumping.

The FCC could periodically reduce termination access for any carrier that is actively engaging in traffic pumping. The rate reduction would be implemented according to the following suggested procedure.

First, the FCC would determine the national average Terminating to Originating Ratio ("T/O ratio"). Second, the FCC would determine T/O ratio that is equal to one standard deviation above the national average. Third, the FCC could prescribe that the maximum allowable terminating revenue for any carrier equals the carrier's initial rate times its originating minutes times the maximum allowed T/O ratio. As suggested above, the initial rate for an ILEC would be the lesser of its current interstate access terminating rate or its average intercarrier compensation revenue (determined as the sum of terminating revenue divided by the sum of terminating minutes). The initial rate for a CLEC would be the initial rate for the ILEC study area.

For example, assume the national average T/O ratio is 1.2 and one standard deviation above the average is 1.7. Also assume a carrier with a 1 cent rate, 100 originating minutes and 200 terminating minutes. Without the maximum constraint that carrier would receive $2.00 in terminating revenue (1 cent times 200 minutes). The new rule would limit the carrier's revenue to $1.70 (1 cent times 100 originating minutes times the 1.7 ratio). The carrier would have to revise its terminating rate to 0.85 cents ($1.70 divided by 200 minutes).

The proposal has two important parameters. The first is how high the upper T/O ratio limit should be set. The second parameter is how often the mechanism should be activated to limit traffic pumping, and annually seems the most likely choice.