

- Understanding the economics of IP-based voice telephone services
- How far does *Concepcion* actually go in blocking consumer class action cases against wireless carriers?
- FCC issues new wireless market report, declines to find wireless market effectively competitive

## Understanding the economics of IP-based voice telephone services

A great deal of attention in recent years has been directed at the large-scale “cord cutting” by residential telephone consumers as they abandon their traditional wireline local phone service and become “wireless-only” households. The Center for Disease Control and Prevention (CDC) has been tracking this trend for a number of years, and in the most recent CDC study it estimated that some 26.6% of US households were relying upon wireless for their primary residential phone service. FCC data indicates that between June 2005 and June 2009, the number of (ILEC+CLEC) wireline residential exchange service connections had dropped from 111.7-million to 92.9-million.

Business use of wireless services has also grown rapidly but, unlike residential, business “cord-cutting” is far more limited. In June 2005, there were roughly 66-million (ILEC+CLEC) wireline business exchange service lines in place; by June 2009 that figure had decreased only slightly, to 63.7-million. But is this drop in business access line demand also due to migration to wireless, or is there something else going on here? Indeed there is.

Traditional circuit-switched business exchange service is being replaced by IP-based voice telephone offerings that “ride” on the customer’s broadband connection, often the same or a similar one that is used to obtain Internet access. “SIP” (Session Initiation Protocol) is used to provide Voice over IP (VoIP) signaling, facilitating telephonic connections over IP-based networks (such as the public Internet) much as Signaling System 7 (SS7) supports an analogous set of functions in the circuit-switched Public Switched Telephone Network (PSTN). SIP supports the same types of calling features found in traditional telephone systems (plus some additional ones), but operates as a peer-to-peer protocol that can support non-voice communications applications as well. SIP-based services provide a functional alternative to traditional PBX trunks and Centrex lines, and enable business multiline users to “cut the cord” with respect to their telco-provided services just as residential consumers can abandon wireline in favor of wireless.

### How SIP works

In the broader context of the Internet and IP-based services generally, SIP is simply a packet-based VoIP “application” that travels over the same broadband facilities as other IP-based apps. SIP can be used in place of traditional PBX trunks (so-called “SIP trunks”) to provide dial-up access to an “IP PBX” physically maintained on the customer’s premises. Providers of SIP trunking

services, like providers of most other Internet-based applications, typically utilize broadband facilities obtained by the customer from the local phone company, cable company, or other source. SIP “trunks” are not discrete channels (as in the case of traditional Time-Division Multiplexing (TDM) trunks) but utilize the customer’s broadband bandwidth as needed. SIP trunking services are typically priced in terms of the number of simultaneous voice calls that can be supported, as well as charges for usage and for direct-dial phone numbers.

The other main form of SIP services is analogous to Centrex. These “Hosted PBX” services utilize remotely located IP PBX platforms and support individual handsets connected (registered) to the remote platform over the customer’s broadband connection. Larger organizations would typically utilize broadband services specifically dedicated to the SIP services; small and medium businesses may be able to integrate their SIP phone services with their access to the public Internet.

### *IP Telephony is often less expensive for the customer*

From the business user’s perspective, IP phone services typically cost much less than comparable circuit-switched PSTN services, for several reasons. First, the market for IP-based phone service is far more competitive than the market for circuit-switched services, which consists mainly of the incumbent local phone company and at most a handful of CLECs that are themselves dependent upon facilities obtained from the incumbent local phone company. Because the SIP provider does not need to construct or even lease its own broadband network, barriers to entry into the IP phone service business are minimal. Customers can easily switch providers in response to better pricing offers. SIP handsets, which cost about the same as traditional business multiline phones, are connected to the broadband service using the same ethernet wiring infrastructure that a firm uses for its LAN, obviating the need for separate telephone wiring. Also, because all of the addressing information is maintained within each individual handset, off-premises locations (e.g., branch offices, telecommuting employees) can be served from anywhere that a broadband Internet connection is available.

The second principal source of the cost differential between IP and PSTN telephone service may be more illusory than real. Where the various factors summarized above represent substantive operational efficiencies and the effects of competition, SIP services are also less costly to provide because of differential regulatory treatments afforded IP vs. PSTN telephony. PSTN services have long been subject to a complex array of cross-

subsidies, surcharges, fees and other non-cost-related factors imposed by regulation to support one or more “public interest” goals. Long distance services were traditionally priced above cost to subsidize local service; business services were priced so as to provide a subsidy for residential service; urban services were priced so as to subsidize rural services, and premium or “optional” features were priced so as to subsidize “basic” dial-tone access. IP-based voice services have thus far escaped much of this treatment and, while the FCC has for a number of years sought to create technology-neutral parity among all services offering the same or equivalent functionalities, there is still a considerable gap. Moreover, since technology seems to move a lot faster than regulation, it is not clear that this gap could ever be fully eliminated.

### *Is it actually less expensive to provision IP-based telephony?*

*PSTN vs. IP operating parameters.* The PSTN employs a circuit-switched architecture in which a physical or logical transmission path is established between caller and recipient that exists for the duration of the call. The various PSTN resources are thus dedicated to a specific call and are not available to support any other use until the call has been disconnected. It is for this reason that PSTN services are typically subject to some form of duration-based pricing. In the case of IP, traffic is measured in terms of bits transmitted rather than duration of the call itself. In its recent Universal Service/Intercarrier Compensation NPRM (*Views and News*, March 2011) the FCC suggested that for this reason VoIP traffic should be measured and priced on the basis of bits rather than time. While that approach might have some theoretical appeal, as it turns out, VoIP traffic actually embodies cost attributes that are not all that different from those that control PSTN operation, making duration-based measurements a reasonable – and far more understandable (from the consumer’s point-of-view) – proxy.

While the customer operational efficiencies associated with IP telephony are real, it is far less clear that VoIP transmission is actually less costly to provide than legacy TDM transmission that is used in the PSTN. Both require periodic sampling of the analog voice signal for conversion into digital form. However, where TDM involves the assignment and dedication of a specific “time slot” in the synchronous TDM bitstream, VoIP traffic is transmitted asynchronously in packets. The voice conversation must still be continuously sampled for the full duration of the call, so the number of bits involved for a given call duration is not dependent upon whether actual conversation is taking place. Put differently, there is a direct and predictable relationship between the duration of a VoIP call and the number of bits that will need to be transmitted – in both directions – over the Internet or other IP transmission facility. Additionally, in the case of interconnected VoIP – i.e., VoIP traffic that either originates or terminates on the PSTN – the resources involved in the PSTN end of the call are, like any other PSTN traffic, duration-sensitive.

There are many reasons why regulatory policy must be technology-blind. Existing regulation deliberately or inadvertently operates to treat TDM and VoIP services differently across a broad range of policy areas – support mechanisms, intercarrier compensation, jurisdiction, among others – and these disparities need to be corrected. But the “corrections” need to be in the form of eliminating uneconomic cost shifting and subsidies that currently apply to PSTN services, not by extending these same treatments to VoIP.

The FCC seems to agree in principle, although not necessarily for the right reasons. In the NPRM, the Commission posits, but without any factual basis or support, the notion that “because most [PSTN] intercarrier compensation rates are set above incremental cost, they create incentives [for ILECs] to retain old voice technologies and engage in regulatory arbitrage for profit.” However, in reality, PSTN carriers – primarily ILECs – are retaining “old voice technology” precisely because of the decline in voice MOUs that has been taking place over the past decade. As the NPRM observes, switched access MOUs peaked at roughly 550-billion in 2000 and by 2008 had plummeted to just above 300-billion. This rapid drop-off in switched access demand was further compounded by an even larger decrease in dial-up ISP MOUs over the same period as consumers migrated to broadband. The result is massive amounts of excess switched service capacity the costs of which are largely sunk at this point. There is little economic justification for tossing this in-place and perfectly serviceable capacity aside merely because IP exists as a technological substitute. Indeed, when correctly viewed in the context of our current national economic recession and budgetary crisis, unnecessary replacement of these assets is antithetical to our national interests and to our economy generally. Moreover, due to the disparate treatment of VoIP and TDM for purposes of intercarrier compensation, there has never even been a market-driven, level playing field test of these two alternative voice telephony technologies. We don’t know for certain that VoIP is actually more efficient than TDM, but what we do know for certain is that using existing TDM capacity whose costs are entirely sunk is certainly more efficient than incurring new capital investment costs to replace these assets with IP technology.

There are, to be sure, numerous deficiencies and inefficiencies in the existing ICC system that must be addressed and resolved, but not for the purpose of incenting incumbent carriers to make investments that serve no valid economic purpose. Indeed, “correcting” the existing ICC regime so as to “incent” carriers to prematurely and unnecessarily abandon their TDM assets should be seen as antithetical to the Commission’s overarching goals.

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## **How far does *Concepcion* actually go in blocking consumer class action cases against wireless carriers?**

[THE FOLLOWING DISCUSSION IS OFFERED AS A POLICY ANALYSIS OF THE EFFECTS OF THE SUPREME COURT’S DECISION. IT IS NOT, AND SHOULD NOT BE TAKEN AS, LEGAL OPINION.]

At first glance, it appeared that the April 27 US Supreme Court decision in *AT&T Mobility LLC v. Concepcion* had broadly eliminated the ability of consumers to bring class action lawsuits in situations where mandatory arbitration clauses and class action waivers are included in customer contracts (*Views and News*, April 2011). If you ask those wireless service providers whose form Customer Service Agreements contain such provisions, that’s certainly what they’ll tell you. But does the Supreme Court ruling actually go as far as the wireless carriers contend?

First, is the ruling as general in its applicability as some have contended, or is it limited to consumer agreements containing provisions that roughly correspond to those extant in the AT&T

Mobility contract upon which the Supreme Court expressly relied in making its determination:

The version [of the AT&T Mobility Customer Agreement] at issue in this case reflects revisions made in December 2006, which the parties agree are controlling.

The revised agreement provides that customers may initiate dispute proceedings by completing a one-page Notice of Dispute form available on AT&T's Web site. AT&T may then offer to settle the claim; if it does not, or if the dispute is not resolved within 30 days, the customer may invoke arbitration by filing a separate Demand for Arbitration, also available on AT&T's Web site. In the event the parties proceed to arbitration, the agreement specifies that AT&T must pay all costs for nonfrivolous claims; that arbitration must take place in the county in which the customer is billed; that, for claims of \$10,000 or less, the customer may choose whether the arbitration proceeds in person, by telephone, or based only on submissions; that either party may bring a claim in small claims court in lieu of arbitration; and that the arbitrator may award any form of individual relief, including injunctions and presumably punitive damages. The agreement, moreover, denies AT&T any ability to seek reimbursement of its attorney's fees, and, in the event that a customer receives an arbitration award greater than AT&T's last written settlement offer, requires AT&T to pay a \$7,500 minimum recovery and twice the amount of the claimant's attorney's fees.

In reaching its conclusion, the majority expressly relied upon these provisions in the AT&T contract:

As noted earlier, the [AT&T] arbitration agreement provides that AT&T will pay claimants a minimum of \$7,500 and twice their attorney's fees if they obtain an arbitration award greater than AT&T's last settlement offer. The District Court found this scheme sufficient to provide incentive for the individual prosecution of meritorious claims that are not immediately settled, and the Ninth Circuit admitted that aggrieved customers who filed claims would be "essentially guarantee[d]" to be made whole. Indeed, the District Court concluded that the Concepcions were better off under their arbitration agreement with AT&T than they would have been as participants in a class action, which "could take months, if not years, and which may merely yield an opportunity to submit a claim for recovery of a small percentage of a few dollars.

The Supreme Court's ruling is thus inextricably linked to the fact set contained in the AT&T contract, using its specific arbitration provisions to overcome claims of the type voiced in the dissent:

What rational lawyer would have signed on to represent the Concepcions in litigation for the possibility of fees stemming from a \$30.22 claim? [Citing *Carnegie v. Household Int'l, Inc.*, "The realistic alternative to a class action is not 17 million individual suits, but zero individual suits, as only a lunatic or a fanatic sues for \$30").

The specific provisions of the arbitration agreement that operate to make a claimant "better off ... than they would have been as participants in a class action" are thus critically dependent upon, in this instance, AT&T's commitment that such claimants "would be 'essentially guarantee[d]' to be made whole" irrespective of the outcome of the arbitration proceeding itself. That outcome, of course, would not be the case where the arbitration agreement requires that the claimant pay his or her own costs or worse, the provider's costs as well, if the outcome is ultimately in the provider's favor. The Supreme Court is utterly silent as to the supremacy of the Federal Arbitration Act (FAA) over state law prohibitions against mandatory arbitration and class action waivers where the specific circumstances of the AT&T agreement are not present.

### ***Federal preemption***

Another area in which the Supreme Court is entirely silent is with respect to federal telecommunications law and regulation that may be at odds with the FAA. 47 U.S.C. §332(c)(3) provides that "no State or local government shall have any authority to regulate the entry of or the rates charged by any commercial mobile service or any private mobile service, *except that this paragraph shall not prohibit a State from regulating the other terms and conditions of commercial mobile services.*" Emphasis supplied. While the question as to what exactly constitutes a federally-preempted "rate" or an "other term and condition" whose regulation is expressly reserved to the states has been the subject of considerable controversy, mandatory arbitration requirements and class action waivers unambiguously fall into the "other terms and conditions" category. Ironically, despite the fact that the dispute in *Concepcion* involved a wireless common carrier subject to both federal and state telecommunications regulation, nowhere in the Supreme Court's ruling is there any mention of, or reference to, the FCC, state PUCs, or federal or state telecom statutes. Thus, the supremacy of the Federal Arbitration Act vis-a-vis inconsistent state *contract* law that appears to have been controlling in the Supreme Court's holding, is nowhere even addressed, let alone decided, as to conflicting federal or state telecommunications law.

### ***Attorneys' and experts' fees and other costs of litigation***

"What rational lawyer would have signed on to represent the Concepcions in litigation for the possibility of fees stemming from a \$30.22 claim?" Indeed. The *Concepcion* court sidesteps this problem by its reliance upon AT&T's self-imposed requirement that it "pay all costs for nonfrivolous claims" and the provision in the AT&T arbitration agreement that "denies AT&T any ability to seek reimbursement of its attorney's fees, and, in the event that a customer receives an arbitration award greater than AT&T's last written settlement offer, requires AT&T to pay a \$7,500 minimum recovery and twice the amount of the claimant's attorney's fees." But what if commitments such as these are absent from a customer agreement that, like AT&T's, requires arbitration and prohibits class actions? While the Court does not say explicitly, its reliance upon the presence of such commitments implies that the ruling in *Concepcion* does not apply where such commitments are absent.

While there is certainly some relationship between the dollar amount in dispute and the amount that litigants will be willing to expend to support or to defend their respective positions, that relationship is certainly not linear. Small disputes cannot, as a practical matter, be litigated where the amount of money involved is less than the costs associated with such litigation. Class action lawsuits overcome this problem by combining a large number of similar small disputes and thereby creating a closer alignment between the costs of the litigation and the aggregate dollar amount at issue. If customers are forced to settle small dollar disputes by individual arbitration, they are effectively denied the opportunity to present an affirmative case, producing an environment in which the entity whose adhesion contract compelled such individual arbitrations will necessarily win each such dispute by default. The ruling in *Concepcion* cannot be reasonably read to deny plaintiffs their "day in court," and where plaintiffs can demonstrate that the costs of effective litigation outweigh the amount in dispute, the

rational conclusion must be that any mandatory arbitration provisions and class action waivers that had been included in the customer agreement are unconscionable and invalid.

## FCC issues new wireless market report, declines to find wireless market effectively competitive

In the April 2011 *Views and News*, we reported the wireless market concentration ratios for end-of-year 2008 as provided in the then-latest 14th annual FCC report on CMRS competition. All of the top 30 Economic Area (EA) markets (as measured by subscriber counts) were either “highly concentrated” or “moderately concentrated” as defined by the DOJ/FTC Horizontal Merger Guidelines (HMG). The FCC has just released its 15th annual report on CMRS competition that provides market concentration data for end-of-year 2009. This new data is particularly relevant in light of the pending AT&T/T-Mobile merger. Overall, there has been little change in the reported HHIs for 2008 and 2009. One “Moderately Concentrated” market – Portland, Oregon – crossed the HMG’s “Highly Concentrated” threshold of 2500, and one Highly Concentrated market – Philadelphia – inched below the 2500 threshold to become “Moderately Concentrated.” The status of the remaining 28 remained unchanged. 47 U.S.C. §332(c)(1)(C) requires that:

The Commission shall review competitive market conditions with respect to commercial mobile services and shall include in its annual report an analysis of those conditions. Such analysis shall include ... *an analysis of whether or not there is effective competition*, an analysis of whether any of such competitors have a dominant share of the market for such services ...

Emphasis supplied. The Fourteenth CMRS Report was the first in many years in which the FCC did not offer such an analysis. In the Fifteenth Report, the FCC actually punts on such a determination:

Thus, the Fifteenth Report makes no formal finding as to whether there is, or is not, effective competition in the industry. Rather, given the complexity of the various inter-related segments and services within the mobile wireless ecosystem, the Report focuses on presenting the best data available on competition throughout this sector of the economy and highlighting several key trends in the mobile wireless industry.

Why did the FCC choose not to offer a formal assessment of the extent of competition when such a determination is critical to its response to the AT&T/T-Mobile merger? Perhaps it prefers to make no finding at all rather than to reach the only conclusion that is actually consistent with the data – i.e., that the wireless market is a concentrated oligopoly and in no realistic sense is it subject to effective competition. Commissioner Michael Copps provides the clearest perspective as to the status of competition in his attached statement:

Finally, I cannot ignore some of the darkening clouds over the state of mobile competition. The headline for this Report will be that the FCC neither finds nor does not find effective competition. Dig deeper and, sure enough, we find ongoing trends of industry consolidation. The well-accepted metric for market concentration, the Herfindahl-Hirschman Index, remains above the threshold for a ‘highly concentrated’ market. It also appears that consumers are no longer enjoying falling prices, according to the CPI for cellular services.

Wireless Market Concentration  
Top-30 Economic Areas by Subscriber Count  
Year-end 2008 vs. 2009

Economic Area (EA)	2008 HHI	2009 HHI	HMG Concentration
Cleveland	3773	3763	High
Pittsburgh	3157	3185	High
Columbus	3080	3157	High
Charlotte	3059	3097	High
Indianapolis	3033	3135	High
Detroit	2971	2815	High
Boston	2800	2752	High
Washington, DC	2731	2683	High
Phoenix	2683	2792	High
Nashville	2679	2562	High
St. Louis	2674	2669	High
New York	2640	2556	High
Dallas	2623	2614	High
Sacramento	2621	2831	High
Seattle	2615	2702	High
Philadelphia	2614	2498	Moderate
San Francisco	2610	2662	High
Minneapolis	2588	2689	High
San Diego	2574	2543	High
Los Angeles	2488	2365	Moderate
Orlando	2486	2426	Moderate
Portland, OR	2469	2546	High
Atlanta	2411	2452	Moderate
Denver	2339	2387	Moderate
Tampa	2291	2257	Moderate
Kansas City	2290	2289	Moderate
Houston	2279	2268	Moderate
Miami	2250	2238	Moderate
San Antonio	2220	2162	Moderate
Chicago	2140	2070	Moderate

Source: FCC 14th Annual CMRS Report, 15th Annual CMRS Report.

On June 20, 2011, ETI Vice President Colin B. Weir submitted an expert declaration in FCC Docket WT 11-65, containing an expanded analysis of wireless market concentration across hundreds of EAs using even more current, but confidential, data from June 2010. The Weir Declaration, which needed to be filed under seal,” developed *pro forma* HHIs for each of 165 EAs by combining the existing AT&T and T-Mobile market shares. While we are not permitted to present or to discuss the details of Weir’s analysis or conclusions, they do shed considerable light as to the overall effect of the merger on the extent of competition in the US wireless market.

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