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Petition of Sprint Spectrum L.P. d/b/a Sprint PCS, Pursuant to Section 252(b) of the Telecommunications Act of 1996, for Arbitration to Establish an Intercarrier Agreement with Verizon New York Inc.
Case 01-C-0767
New York Public Service Commission
August 21, 2002

Issued and Effective **August 23, 2002**

ARBITRATION ORDER

Before Helmer, Chairman, Bennett, Weiss and Galvin, Commissioners.

BY THE COMMISSION:

INTRODUCTION AND PROCEDURAL HISTORY

On June 4, 2001, Sprint Spectrum L.P. d/b/a Sprint PCS filed a petition for arbitration, pursuant to § 252 of the Telecommunications Act of 1996 (the 1996 Act), of terms, conditions, and prices for interconnection with Verizon New York Inc. Verizon filed its response on July 3, 2001. Following exchanges of prefiled testimony and discovery, as well as several delays agreed to by both sides, the parties have stipulated that the formal request for arbitration was submitted such that the deadline for this decision is September 3, 2002.

Sprint initially posed nine issues for arbitration. Issue 1, the rate to be paid by Verizon to Sprint for terminating traffic originating on Sprint's network, required examination of Sprint's own costs. Sprint accordingly submitted a cost study that became the subject of prefiled testimony submitted by both parties (initial testimony by Sprint, responsive testimony by Verizon, and rebuttal by Sprint) and of extensive discovery. The parties ultimately waived cross-examination with respect to each other's testimony, and the hearing that had been scheduled was cancelled. The record accordingly comprises eighteen exhibits, constituting the testimony as prefiled, the witnesses' affidavits, and a series of Sprint interrogatory responses submitted by Verizon. [FN1]

The remaining eight issues involved primarily matters of law or policy and were not the subject of pre-filed testimony. An informal technical conference was held in Albany on May 14, 2002, at which Administrative Law Judge Joel A. Linsider and several members of Department of Public Service Staff sought to clarify and refine the issues and encourage their resolution by mutual agreement to the extent possible. Consistent with the Judge's request at the conclusion of the technical conference, the parties continued their discussions and submitted, on May 29, 2002, a Joint Statement of Resolved and Unresolved Issues. The Joint Statement reports that Issues 5, 6, 7, 8, and 9 have been fully resolved by agreement of the parties, that a portion of issue 2 had been resolved, that issue 3 has been partially resolved, and that issue 4 remains unsolved.

Both parties submitted briefs and reply briefs on the unresolved issues (Verizon submitted separate briefs on the cost and non-cost issues), and it is those issues to which this order is directed.

FN1. Some of the exhibits have been afforded provisional protection as trade secrets; the Judge's ruling on their final status is pending.

RECIPROCAL COMPENSATION (ISSUE 1

Introduction and Summary

To state the issue in the most general terms, Sprint seeks asymmetric reciprocal compensation based on

its own costs of terminating calls instead of the more common arrangement in which reciprocal compensation is symmetric, based on the ILEC's costs. It has submitted a cost study in support of its claim that its own recognizable costs exceed Verizon's. Verizon challenges numerous aspects of that cost study and regards it as an inadequate basis for the reciprocal compensation payments Sprint seeks. Some background is needed to put the issue in perspective.

The 1996 Act imposes on all local exchange carriers "the duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications." [FN2] The terms for reciprocal compensation are to be set forth in interconnection agreements, such as the one at issue here. The applicable pricing standards specify that the terms and conditions for reciprocal compensation may be considered just and reasonable only if they "(i) ...provide for the 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 and (ii) ...determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls." [FN3]

FN2. 47 U.S.C. §251(b)(5).

FN3. 47 U.S.C. §252(d)(2)(A).

In implementing these provisions, the FCC has determined, among other things, that reciprocal compensation rates should be based on Total Element Long-Run Incremental Cost (TELRIC) and that the recoverable additional costs referred to in the statute are primarily the traffic-sensitive component of local switching, together with a reasonable allocation of common costs. [FN4] In most instances, however, payments to a CLEC for terminating calls originating on the ILEC's network are set not on the basis of the CLEC's own costs; rather, they are set symmetrically, on the basis of the ILEC's costs, unless a CLEC presents a cost study showing its own costs to be higher and thereby rebutting the presumption of symmetry. In setting up that regime, the FCC reasoned, among other things, that the ILEC's costs would be a reasonable presumptive proxy for the CLEC's inasmuch as both would be operating in the same geographic area; that symmetric compensation might diminish an ILEC's ability to use its bargaining strength to negotiate termination charges that were seriously asymmetric in its favor; and that symmetrical rates would be easier to administer and would avoid requiring CLECs to perform costly forward-looking economic cost studies unless they voluntarily undertook to do so in a effort to rebut the presumption of symmetry and show their costs exceeded the ILEC's. [FN5]

FN4. CC Docket No. 96-98 et al., Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, et al., First Report and Order (rel. Aug. 8, 1996) (Local Competition Order), ¶¶1056-1057.

FN5. Id., ¶¶1085-1090.

In this proceeding, Sprint has so undertaken. It seeks, on the basis of its cost study, reciprocal compensation of 3.9 cents per minute.

Sprint contends it has submitted, in support of that proposal, the most exhaustive cost study ever produced by a wireless carrier, that the study complies with the FCC's TELRIC requirements, and that it uses the same principles used to develop the economic costs underlying its reciprocal compensation rate in its land-line territories. The study, it says, breaks down Sprint's network into the categories identified by the FCC and further subdivides them to identify specific components used. It projects expected demand over the next three years and demonstrates how each element and sub-element will be expanded to accommodate that demand. On the basis of current vendor pricing and current technology, Sprint then calculates the cost of providing terminating service to local exchange carriers with which it is interconnected. Sprint maintains that its study is forward-looking in its use of current vendor pricing, generally below embedded cost; its use of the most current technology available, even where legacy units are

still in place; its use of a three-year subscriber forecast to project both investment and demand; and its use of economic depreciation lives that "are generally longer than the existing book lives." [FN6]

FN6. Sprint's Initial Brief, p. 12.

Sprint also reviews the legal background that entitles a carrier to recover transport and termination costs based on its own network, and it emphasizes the FCC's recognition, in a statement quoted below, that the termination costs of wireless carriers may differ from those of landline carriers. It charges that Verizon would disregard that statement and insists it satisfied the cost recovery criteria there set forth.

Sprint disputes what it characterizes as the policy arguments that Verizon proffers to justify declining to follow those legal requirements. It contends, first, that Verizon's argument that reciprocal compensation should be based on the cost avoided by the originating carrier rather than the cost imposed on the terminating carrier contravenes both the 1996 Act and the FCC's interpretation of the Act. It runs contrary to logic as well, since it implies that if the two companies' operating costs differ, one would receive less than its actual cost of providing service while the other would receive more. Sprint disputes Verizon's argument that allowing it to recover its additional costs of termination would vitiate its incentive to build an efficient network, citing the incentives to efficiency provided by the intensely competitive environment in which it operates. Sprint denies that mobile service is a premium service whose costs should be borne by its customers rather than those of landline service; that is one of the major issues discussed below. Finally, Sprint challenges Verizon's argument that asymmetric rates are cost subsidies, contending that "wireless carriers offer the only viable possibility for facility-based competition to Verizon and the other monopolist LECs in the residential market," and that such competition can flourish "only when each carrier recovers its 'actual costs of interconnection.'" [FN7]

FN7. Sprint's Initial Brief, p. 10.

Verizon disavows any claim that policy considerations should prevail over legal requirements and maintains that Sprint simply has failed to meet its burden of proof with regard to its costs--a burden imposed both by the FCC, as a condition for departing from symmetric reciprocal compensation, and by this Commission, which has routinely imposed the burden of proof in a cost proceeding on the carrier whose costs are at issue. [FN8] It contends that many of the flaws in Sprint's model cannot be corrected by adjusting input parameters and that the only way to correct Sprint's result would be to restructure the model and develop a new record. Accordingly, it urges that reciprocal compensation be symmetric, either at rates reflecting Verizon's recently approved UNE costs [FN9] (about 0.107 cents per minute) or at the slightly lower "Plan B" rates that Verizon has offered to charge and pay to all carriers pursuant to the FCC's "Remand Order" [FN10] (0.10 cents per minute, scheduled to decline to 0.07 cents per minute in June 2003).

FN8. Verizon notes our use of this principle to deny some of its own claims in other proceedings, and, though disputing many of those rulings, calls for evenhanded application of their underlying procedural principle.

FN9. Case 98-C-1357, Second Network Elements Proceeding, Order on Unbundled Network Elements (issued January 28, 2002) (the UNE Order). In its initial brief (p. 16, n. 32), Verizon asserts that the UNE Order itself would have resulted in a rate of about 0.14 cents per minute and that it agreed to the lower rate of 0.107 cents in connection with the adoption of its VIP Plan in Case 00-C-1945. It should be clear, however, that we regard the 0.107-cent rate as a cost-based rate properly reflecting the costing decisions made in the UNE Order and not as some agreed-upon below-cost figure.

FN10. CC Docket No. 96-98 et al., supra, Order on Remand (rel. April 27, 2001). In that order, the FCC determined interim rates applicable to termination of traffic bound for the Internet but required incumbent LECs wishing to take advantage

of those rates (lower than the rates that otherwise would apply) to offer interconnecting carriers the option of exchanging all reciprocal compensation traffic at those rates.

Verizon is correct that Sprint bears the burden of proof in this proceeding, both because the FCC imposes it on carriers seeking asymmetric reciprocal compensation and because we impose it on the carrier whose costs are at issue and which therefore has the best access to pertinent information. Determining whether Sprint has borne that burden requires consideration of numerous, intertwined factors. That consideration can best be organized around Verizon's three-pronged challenge (as articulated in its initial brief) to the cost study and Sprint's response. Broadly stated, Verizon contends (1) that Sprint's study fails to satisfy TELRIC requirements; (2) that the study fails to distinguish the costs attributable to transport and termination (and therefore properly allowed) from other costs, such as those of mobility; and (3) that the study fails to distinguish the allowable traffic-sensitive costs from non-traffic-sensitive costs. Sprint denies all of those allegations.

For the reasons explained in detail below, we conclude that Sprint has failed to bear its burden of showing the magnitude of the costs that should be reflected in an asymmetric reciprocal compensation arrangement and that, therefore, reciprocal compensation rates should be set in accordance with the presumption of symmetry. We consider the issues raised in order, identifying the specific failings that form the basis for our overall decision and concluding with an overall explanation of the result we have reached. [FN11] We begin with a more detailed discussion of burden of proof and the consequences of failing to meet it.

FN11. With respect to a few issues, the usual sorts of estimates and adjustments might be applied to reach a workable result. We do not do so, however, because such efforts would be rendered moot by the overall failure of proof.

Burden of Proof

Verizon maintains that Sprint's network costs comprise three components: mobility costs, non-traffic-sensitive access costs, and traffic-sensitive usage costs. Only the last category, it says, is recoverable through reciprocal compensation, and the burden of identifying those costs falls on Sprint. Verizon sees no basis for shifting the burden of proof to it (by, for example, holding that Sprint had made a prima facie case that Verizon was required to rebut by showing the level of non-traffic-sensitive costs and mobility costs), contending that doing so would be inconsistent with the terms established by the FCC for overcoming symmetric compensation. It would likewise run counter to sound policy, inasmuch as it is Sprint that has control of the pertinent data.

Verizon goes on to distinguish this case from those occasions in the two Network Elements Proceedings in which we found that Verizon had failed to meet its own burden of proof but nevertheless declined to disallow the costs entirely, instead simply reducing them by a substantial amount. Verizon explains that we did so in recognition that the cost categories at issue clearly existed, notwithstanding Verizon's failure to prove their amount; in those circumstances, total disallowance would have denied recovery of indisputably real costs. Here, in contrast, denial of Sprint's proposal on burden of proof grounds would still permit it to receive symmetrical reciprocal compensation, and it is by no means obvious that there exists some level of non-traffic-sensitive costs exceeding those that would be allowed for in symmetrical compensation. In addition, Verizon argues, strict application here of the burden of proof would not be unduly harsh, for Sprint would still receive reciprocal compensation at the same rate as other carriers and, in any event, Sprint is charging its own end-users for the delivery of incoming calls. Finally, according to Verizon, denying Sprint's claim would cause it no competitive harm and would leave in place the competitive balance in the wireless industry. In contrast, allowing Sprint's claim would force wireline companies and their customers to subsidize the mobility services provided by wireless carriers to their customers. Verizon asserts that "simply put, Sprint's customers pay more (in

monthly wireless charges, as compared with monthly charges for wireline local exchange service) because they get more (the advantages of mobility). That is exactly as it should be." [FN12]

FN12. Verizon's Initial Brief on Issue No. 1, pp. 81-82 (emphasis in original).

In reply, Sprint insists its cost study satisfies its burden of proof and that Verizon has attempted to create and impose new standards for doing so. It does not, however, suggest a course of action to be followed in the event of a finding that it failed to meet its burden.

Verizon draws a fair distinction between the consequences here of a failure to meet burden of proof and the consequences in its Network Elements Proceedings. In the several instances in those proceedings where we found Verizon had failed to meet its burden of proof but nonetheless allowed a placeholder or alternative calculation of the cost at issue, we did so because denying all recovery on burden of proof grounds would have been tantamount to holding that the cost at issue was zero--a clearly wrong result given the undisputed reality of the cost. The placeholder allowance more closely approximated the correct allowance than zero would have.

Here, in contrast, we are dealing with a presumption of symmetric compensation, and a failure of proof on Sprint's part would simply mean that the presumption stands and compensation remains symmetric. There would be no total disallowance of any indisputably real cost category and no need to temper the effect of a decision based on burden of proof.

With that in mind, we turn to Sprint's presentation and Verizon's challenges to it.

TELRIC Compliance

Verizon provides an overview of the criteria to be met by a proper TELRIC study and alleges various deficiencies in Sprint's presentation. They are considered in order.

1. Specific Issues

a. Quantity of Network Components

The proponent of a TELRIC study is required, among other things, to demonstrate the amount of equipment needed to serve the relevant demand, recognizing that the equipment will not be 100% utilized. [FN13] Asserting that equipment quantities are hard coded into Sprint's cost model and do not change in response to changes in demand inputs, Verizon argues that Sprint has simply used existing quantities of assets and has assumed, without showing, that those quantities of assets are properly used in a forward-looking design. It discredits Sprint's claim to be a new, unregulated company in a competitive market, therefore lacking incentives to inefficiency; and it asserts that any company may have valid business reasons to overbuild its network in relation to current demand and that building in excess of TELRIC requirements does not necessarily betoken inefficiency. But however legitimate the reasons for overbuilding--which might include a belief that capital financing will be more difficult to obtain in the future or that costs will increase--they do not warrant imposing the costs of over-construction on competitors through intercarrier compensation rates.

FN13. The extent to which a particular category of equipment is utilized is referred to as the fill factor. Verizon cites Local Competition Order ¶682, where the FCC says that "per-unit costs shall be derived 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."

Verizon cites in this regard our statement in the UNE decision that while it was reasonable for Verizon to build loop distribution plant to meet long-term ultimate demand, the cost of that plant should not be imposed exclusively on current customers. [FN14] Disavowing any contention that TELRIC requires networks being perfectly sized to

meet only the current level of demand, Verizon recognizes the need to allow for such factors as churn and growth and asserts that its own testimony in the UNE proceeding analyzed those factors qualitatively and recommended appropriate utilization factors, thereby allowing for the quantitative adjustments ultimately made by the administrative law judge and the Commission. It contrasts that presentation with Sprint's failure here to use explicit utilization factors [FN15] and Sprint's "apparent contention that TELRIC requirements are satisfied simply by relying on the quantities of facilities used in the embedded network." [FN16]

FN14. Verizon's Initial Brief on Issue No. 1, p. 21, citing UNE Order, p. 98.

FN15. Id., p. 22, citing Sprint's response to Interrogatory VZ-PCS-5.

FN16. Id.

Verizon goes on to assert that the telecommunications industry generally has over-invested in many types of facilities, thereby further undermining any claim that actual current investment corresponds to the quantities that should be included in a TELRIC study. It cites Sprint's statement in its annual report that it has enough spectrum to meet its needs for 10 years and suggests similar over-capacity may exist for other facilities and resources. Noting that Sprint's study is based on an average of unit costs during the years 2000-2003, Verizon cites Sprint's witness's observation that in the early part of that period, "scale economies have not yet been realized." [FN17]

FN17. Id., p. 24, citing direct testimony of Sprint witness Mitchell, p. 34.

Finally, Verizon contends that the record lacks information about the assumptions made by Sprint in determining the quantities of network components deployed, and it again contrasts that failing with its own presentation in the Second Elements Proceeding, where it disclosed and justified the assumptions on which its analysis was based and the utilization levels that were applied, and where its expert analyses were statistically validated and based on a forward-looking fresh look, rather than quantities actually deployed. Verizon concludes that "without some independent demonstration that the equipment quantities assumed by the Model are efficiently related to demand served, there is no way to validate, under TELRIC, the unit costs that the Model generates. This is a fatal flaw in Sprint's presentation." [FN18]

FN18. Id., p. 27.

Sprint defends its equipment quantities, contending that they are supported by expert engineering testimony, and describing the basis for them, which included standard engineering practices for CMRS networks as well as Sprint PCS's actual business plans. It notes that Verizon did not submit engineering testimony challenging its own, and it sees no record basis for what it characterizes as Verizon's speculation that Sprint's system may be overbuilt. It cites its witness Sabatino's testimony that

Sprint PCS engineers its network to meet expected busy hour demand. As I stated in my direct testimony, wireless carriers operate in a highly competitive environment and cannot afford to deploy capital in an unnecessary or unwarranted manner. Despite the conjecture of [Verizon's witness] Panel, Sprint PCS has not overbuilt its network in anticipation of increased vendor costs or construction risks. [FN19]

FN19. Sprint's Initial Brief, p. 20, citing the rebuttal testimony of its witness Sabatino, p. 1.

Noting that the TELRIC cost standard is total cost divided by total demand, Sprint argues as well that it was under no obligation to break down busy hour demand on more than a per-month basis.

In its reply brief, Sprint argues that the youth of its network in contrast to Verizon's--it began deployment in New York only in 1996--obviates concern about the inefficiencies of embedded

networks and provides added support for reliance on its existing network. It notes again its various incentives for efficiency and again specifically disputes Verizon's suggestion that it may have overbuilt its network.

More fundamentally, Sprint insists it met its burden by describing not only its current network but also the engineering principles and methods used to create it. It denies that its burden of proof requires, as Verizon suggests, providing a method by which each engineering decision can be independently validated. Nor does it see any basis for concluding that its network is overbuilt, noting the lumpiness of investment and pointing out that its spectrum investment, which Verizon suggests may be excessive for cost study purposes, is amortized over a forty-year period.

The newness of Sprint's actual network may make it resemble a TELRIC network more than would the legacy network of an incumbent landline provider, and there is no basis for concluding that the network has been deliberately overbuilt. But more is needed if forward-looking investment is to be properly sized.

For one thing, and contrary to Sprint's claim that it was under no obligation to break down busy hour demand on more than a per-month basis, forward-looking investment must be sized with reference to expected peak-load demand. Verizon did so with respect to switching costs in the Network Element Proceeding [FN20] and our cost manuals adopted in Case 28425 contemplate that method as well. [FN21] Sprint's present study makes no attempt to size the network on the basis of peak load demand.

FN20. Workpaper part B1 §43.1 p. 2 of 8.

FN21. Toll and Carrier Access Service Cost Study Manuals (Case 28425) - Incremental Cost Study Manual, pp. 21-28.

Moreover, the study lacks persuasive assurance that present customers do not bear an undue share of the costs of future growth. The analysis of fill factors, for example, is limited at best. Verizon properly points to the various steps we took in the Network Elements Proceeding to ensure that costs were properly spread over time, and similar measures would be required here.

Sprint's study's failings in this area may not be fatal--it might be possible, with adequate data, to devise adjustments that could produce a reasonable result--but they seriously weaken the study overall.

b. Technology Choice

Verizon contends Sprint has failed to satisfy the TELRIC requirement that cost studies assume the use of the most efficient telecommunications technology currently available--specifically, "third generation" (3G) wireless technology. Verizon cites the definition of 3G on Sprint's website as "an industry term for a collection of international standards and technologies targeted at increasing efficiency and improving the performance of mobile wireless networks," and points to Sprint's acknowledgement that the technology not only provides new services but also is the most efficient technology now available for delivering calls on wireless networks.

Verizon challenges Sprint's explanation that 3G technology was not "currently available" when Sprint conducted its study, asserting that the claim requires consideration of two issues: as of when availability should be measured, and when 3G technology became available. With regard to the former question, Verizon argues that the cost study, like the prefiled testimony it accompanied, should speak as of August 2001, when it was filed, and not, as Sprint would have it, as of April 2001 (when the study was prepared) or June 2001 (when it was first filed as an attachment to the arbitration petition). With respect to the latter question, Verizon asserts that Sprint interrogatory responses suggest that while 3G technology could not have been deployed by April or June or August 2001, it could have been identified as the forward-looking technology and included in a cost study on any of those dates. Verizon maintains as well that the feasibility of conducting a 3G-based cost study during Spring

2001 is confirmed by press releases and news bulletins, including some from Sprint itself, that document plans to deploy 3G technology as well as its actual deployment in various parts of the country. [FN22] Verizon concludes that

FN22. Verizon's Initial Brief on Issue No. 1, pp. 30-32.

by April 2001, the industry in general, and Sprint in particular, had evaluated 3G technology, determined its capabilities, made firm decisions to deploy it, and had developed cost estimates. Accordingly, it is ludicrous to suggest that it would not have been possible--and, under TELRIC standards, necessary--to include 3G technology in a wireless-network cost study that was prepared in April 2001, filed in June of that year, and adopted by Sprint's witnesses in August. [FN23]

FN23. Id., p. 33.

And use of the more efficient 3G technology, according to Verizon, would have reduced Sprint's call termination costs.

Sprint replies that 3G services still have not been launched, even though more than a year has elapsed since its cost study was filed. It notes as well that 3G refers not to a single product but to a technology development whose various components became available at different times. "Although Sprint PCS anticipates launch [of 3G] during the summer of 2002, 3G is still not a completed product. Rather, 3G is a new technology that is in its final stages of development.... Until a technology is in fact 'currently available' it is inappropriate to anticipate its use in a cost study." [FN24]

FN24. Sprint's Reply Brief, p. 10.

To be properly considered "currently available" for purposes of being reflected in a TELRIC study, a technology need not be actually deployed but its use must be reasonably foreseeable; TELRIC studies, as has often been pointed out, should not be based on "fantasy networks." An instructive example of how these distinctions are drawn is provided by our treatment of GR-303 technology at various stages of the First Network Elements Proceeding. [FN25]

FN25. See, for example, Cases 95-C-0657 et al., First Network Elements Proceeding, Order Directing Rate Reductions (issued October 21, 1999); Order Granting in Part Petition for Rehearing (issued January 29, 1998).

If that method of analysis is applied here, it seems inescapable that Sprint should have considered 3G technology in its study. Sprint now anticipates that 3G will be launched in the summer of 2002, but its use was clearly foreseeable at the time Sprint filed its case here. Sprint argues as well that 3G is not a single product but a technology development whose components will become available at different times, but that suggests an agenda for analysis rather than an exemption from it: Sprint should have made a presentation on the various components of 3G, the forecast timing of their deployment, and the allocation of their costs to the services at issue here.

In sum, Sprint's omission of 3G technology from its study seriously calls into question its having met its burden of proof.

c. Cost of Capital

Sprint's study used a rate of return, 13.18%, that was within the range identified as reasonable for Verizon by Verizon's witness in the Second Network Elements Proceeding. Verizon regards this as an inadequate basis for estimating Sprint's cost of capital, arguing, among other things, that even if reliance on Verizon's cost were permissible, the cost to be relied on should be not Verizon's request but the much lower figure--10.5%--that we actually allowed in the Second Elements Proceeding. Verizon discredits as well Sprint's claim that use of the higher, requested figure is warranted by its having a higher risk than Verizon, asserting that Sprint has shown no quantitative link between its claimed increased risk and the higher cost of capital it relies on. It disputes Sprint's calculation that it has a "debt premium" of 29.3% over Verizon's, but contends that even if the calculation were credited, it would warrant increasing the cost of capital only

from the allowed 10.5% to 11.2%, not to the 13.18% figure used by Sprint. [FN26]

FN26. Verizon's Initial Brief on Issue No. 1, p. 35, n. 78.

Sprint replies that its rebuttal testimony showed why its cost of capital exceeds that allowed for Verizon in the Second Elements Proceeding. It notes its lower debt rating (Baa1/BBB+ in contrast to Verizon's A1/A+) and its higher debt rate, and asserts that "given current events, it is difficult to believe that Verizon maintains that Sprint PCS is not at substantially greater risk than Verizon in the telecommunications market." [FN27]

FN27. Sprint's Reply Brief, p. 11.

There can be little doubt that Sprint's recognized cost of capital should exceed Verizon's; as suggested by the comparison between the two companies' debt ratings, its risk is certainly greater. Sprint's presentation may not be fully persuasive and might warrant adjustment, but the record would permit setting a reasonable cost of capital for purposes of analysis.

d. Definition of Services at Issue

Verizon contends that Sprint's model fails to separately consider the costs of terminating traffic from Verizon customers, which are the only costs at issue here. Instead, it includes as well traffic coming from other carriers and originating traffic as well as terminating traffic.

Sprint's position, as set forth in its initial brief, is that TELRIC does not require the disaggregation or deaveraging that Verizon seems to contemplate and that "the TELRIC cost standard for a network element is total cost divided by total demand." [FN28] It maintains that Verizon cites no supporting authority for the assertion that Sprint should separately calculate costs associated with each type of traffic transported on its network.

FN28. Sprint's Initial Brief, p. 21, citing rebuttal testimony of its witness Farrar, p. 9.

The two issues--geographic/carrier deaveraging and limitation to terminating traffic--are considered in order.

i. Deaveraging by Region or Carrier

Disputing Sprint's view of the TELRIC requirements with respect to deaveraging, Verizon asserts that TELRIC recognizes geographic deaveraging where significant cost differences exist and notes the FCC's requirement for three-zone rate deaveraging. [FN29] Verizon's own reciprocal compensation rates are not deaveraged, it explains, given our finding that only its loop costs-- not included in reciprocal compensation--varied enough by area to warrant deaveraging. But Sprint claims that a variety of its costs are traffic-sensitive and properly included in reciprocal compensation, and, according to Verizon, it is obligated to examine whether those costs vary by region. It has not done so, Verizon claims, and it has neither rebutted Verizon's prima facie showing that Sprint's cost of terminating traffic in the Verizon service area differs from the cost in the Frontier service area nor removed Frontier-related costs from its model.

FN29. 47 C.F.R. §51.507(f).

Sprint disputes the premise of cost differential, contending that the nature of wireless service means the wireless end-user could be anywhere when receiving the call, and call termination costs therefore are unrelated to the location of the carrier from which the call is placed. It reiterates its claim that the TELRIC standard is total cost divided by total demand, and sees no supporting authority for Verizon's assertion that there must be separate calculations for each type of traffic.

Sprint's position is reasonable. The costs at issue here are those of termination, and a wireless customer may be located anywhere. As Sprint suggests, there is no need to differentiate costs on the basis of the carriers originating the calls.

ii. Originating vs. Terminating Traffic

Verizon contends that Sprint's model determines

the cost per minute of use (MOU) on the basis of total minutes of use delivered to or originated by Sprint's customers, disregarding the difference in costs between originating and terminating minutes evidenced by Verizon's study in the Second Network Elements Proceeding and by our having there set separate switch usage rates for the two functions. It contends that originating a call involves the use of many functions not required in terminating one [FN30] and that Sprint has not addressed itself to the issue despite Verizon's prima facie showing of cost differential.

FN30. Verizon's Initial Brief, p. 37, citing its panel testimony, pp. 32-34.

Sprint replies that here, too, Verizon is attempting to impose additional requirements not imposed by TELRIC or the FCC. In any event, it continues, a wireless network, in contrast to a landline system, incurs greater costs to terminate than to originate calls, given the need for a mechanism by which the receiving handset can locate the caller.

Reciprocal compensation recognizes the specific costs associated with terminating calls. Sprint's failure to distinguish the costs of originating minutes from those of terminating minutes is a serious flaw. And its conjecture that wireless networks incur termination costs that exceed origination costs is at this point unproven.

e. Feature Costs

Verizon contends that Sprint failed to exclude from its study the costs of switch hardware associated with the provision of features such as three-way calling and call waiting even though we have recognized that the costs of providing vertical features are not properly included in transport and termination rates. It notes Sprint's rebuttal testimony conceding that the study "should be modified to exclude a portion of the central processor which is utilized by feature activation," [FN31] and it suggests the modification would be significant, pointing to Sprint's statement that in its affiliated land-line local network in Florida, approximately 43% of the central processor is utilized by features.

Verizon notes that Sprint has presented no evidence for its suggestion that feature activation with respect to wireless service would account for a smaller percentage of processor use.

FN31. Id., p. 38, citing Sprint's witness' Farrar's rebuttal testimony, p. 10.

Sprint replies that it has excluded all "explicit feature costs." [FN32] And it insists that the needed adjustment to remove central processor costs would not be significant, given that the percentage of processor costs associated with features is expected to be less for wireless than for wireline and that the cost of the central processor itself is not a substantial portion of Sprint's total costs.

FN32. Sprint's Reply Brief, p. 13.

Sprint makes a fair case that the amount of the needed adjustment would be relatively small. The failure to remove central processor costs is a flaw in its study, but not an irreparable one.

2. Overall Conclusion on TELRIC Compliance

The most serious flaw in Sprint's study from the TELRIC point of view is its failure to take account of a forward-looking technology that, though not deployed at the time the study was submitted, was certainly foreseeable and likely to be deployed before too long. A technology of that sort should be included in proper TELRIC study and, among other things, its costs allocated among the various services that use it. In addition, the study fails to properly estimate forward-looking demand. For those reasons, among others, we cannot conclude that it complies with TELRIC requirements.

Costs of Mobility

The parties disagree in a fundamental way over how to treat for reciprocal compensation purposes the mobility associated with wireless service. Verizon maintains that mobility is a premium function distinct from transport and termination and that its clearly substantial costs should be segregated and borne by the customers electing the

premium service instead of being recovered through reciprocal compensation costs imposed on customers as a whole. Sprint insists that mobility is unavoidably part of the essence of wireless service and that the costs of terminating a call to a mobile customer are costs of transport and termination no less than are the costs of terminating a call to a landline customer. The dispute is multifaceted, involving questions of fact, law, and policy. Verizon asserts it is a case of first impression and that no jurisdiction has yet addressed on the basis of a factual record a wireless carrier's case for asymmetric reciprocal compensation.

Verizon suggests two ways to handle Sprint's asserted failure to demonstrate what portion of its costs are attributable to mobility. In its view, we could hold that Sprint had failed on that account to meet its burden of proof, or we could presume that any excess of delivery costs on a mobile system above delivery costs on a landline system is attributable to mobility, inasmuch as landline call delivery is the most efficient way to deliver calls to a fixed location. Either way, Verizon contends, the result would be to limit Sprint to symmetrical transport and termination rates. Sprint, in contrast, contends that mobility is not an optional feature in a wireless network and that wireless carriers, like others, are entitled under the law to recover their transport and termination costs. As described further below, it asserts that the FCC has recognized the right of wireless carriers to recover their unique costs (including those of mobility) and that Verizon cites no legal basis for its position that mobility costs are to be excluded.

The parties' arguments are organized and presented around several sub-issues; our conclusions are presented at the end of the section.

1. The Nature of Wireless Mobility

Citing the huge difference between Sprint's claimed termination costs of 3.9¢ per minute and Verizon's own termination costs of 0.14¢ per minute, Verizon attributes most of that added cost to the decision of the wireless subscriber to use a premium service that provides mobility. Verizon points as well to the exclusion of wireless subscribers' telephone numbers from directory listings (unless the subscriber elects to purchase a listing), and it suggests that practice reflects the expectation that wireless customers will pay for incoming calls and therefore should have the ability to control them. The calling party, in contrast, has no way of knowing whether the number being called is wireless and should not be held to have made a decision to incur the associated costs. And even if the calling party in some sense benefits from being able to complete the call to the wireless number, Verizon argues, it is not benefit that is at issue but cost causation.

Verizon goes on to identify a series of vertical features and other services that facilitate the completion of landline calls or the delivery of messages but that are not reflected in reciprocal compensation rates; these include call waiting, voice messaging service, call forwarding (which provides a limited form of mobility benefit), and foreign exchange arrangements. It suggests that each of these services provides a landline customer a capability, similar to that of a wireless customer, to receive a call that the customer would otherwise not be able to receive. In each case, the cost is considered to be caused by and recoverable from the customer subscribing to the premium service, and in none of these cases is the cost included in reciprocal compensation.

Verizon disputes the pertinence of Sprint's argument that mobility is not an optional, separately purchased feature of wireless service, contending that the wireless subscriber has the option of switching to wireline service and that "to say that mobility is a non-optional feature of wireless service is no more cogent than saying that the call forwarding functionality is a non-optional feature of call forwarding service. Once a customer is defined as a subscriber to a particular service, then in a sense his or her option not to take the service disappears by definition. But this ignores the option not to subscribe in the first place." [FN33] Verizon likewise denies the relevance of Sprint's argument that wireless phone service should not be regarded as a luxury, contending that the issue is one of cost

causation, not of the character of wireless service.

FN33. Verizon's Initial Brief on Issue No. 1, p. 45, n. 95 (emphasis in original).

Sprint disputes any suggestion that wireless service is "premium" or "luxury," citing a statement by Verizon's chairman that "wireless isn't a luxury, it's a necessity," [FN34] noting the large number of wireless users in the United States, contending that wireless service represents the best chance for actual competition in the residential market, and quoting statements by the FCC that wireless service is "comparable" to telephone exchange service [FN35] and that wireless networks (specifically paging networks) should be subject to asymmetric compensation because of differences in the service provided. [FN36] It points, for example, to the FCC's statement in the Local Competition Order that "the record contains no estimates of the cost of CMRS termination. That cost is generally considered to be greater than the cost of LEC termination; but only one oral, ex parte estimate of CMRS cost has been offered; 2.25 to 4.0 cents per minute," in contrast to the LEC termination cost of from 0.2 to 1.3 cents. [FN37] Sprint likewise disputes Verizon's effort to characterize mobility as an optional feature, contending that mobility is an inherent feature of wireless technology and that Verizon, in effect, is arguing that the only aspects of wireless networks that can be reflected in the cost study are those that mirror the wireline network. Sprint maintains that view runs counter to the FCC's determinations, next discussed.

FN34. Sprint's Initial Brief, p. 22, citing the quotation to the rebuttal testimony of its witness Hunsucker, p.4.

FN35. Local Competition Order, ¶1013; Verizon responds that the FCC is here discussing not the treatment of costs but whether CMRS providers are entitled to demand interconnection.

FN36. Local Competition Order, ¶1092. Verizon responds that the cited paragraph refers to the lower termination costs of paging networks and therefore denies the presumption of symmetric compensation to paging carriers.

FN37. Local Competition Order, ¶1117, cited at Sprint's Reply Brief, p. 14.

2. Rate Treatment of Mobility Costs

Verizon argues that because §252(d)(2) of the 1996 Act permits recovery only of costs "of" or "associated with" call termination, the called party should bear the costs of mobility, which have the distinct cost causative features already discussed. It contends that result is required both by the FCC's rules and by our orders.

Verizon points to the FCC's statements, in the Local Competition Order, that recoverable costs of interconnection and unbundled network elements are those "directly attributable to the specified element, as well as a reasonable allocation of forward-looking common costs," [FN38] and that "costs must be attributed on a cost-causative basis. Costs are causally related to the network element being provided if the costs are incurred as a direct result of providing the network elements, or can be avoided, in the long run, when the company ceases to provide them." [FN39]

FN38. Local Competition Order, ¶682.

FN39. Id., ¶691.

Sprint relies in part, for its contrary view, on a statement by the FCC in its Reciprocal Compensation Notice of Proposed Rulemaking. Because both parties refer to it, it is quoted here at length:

To assist parties in helping us to explore the broader question of moving to a unified interconnection regime raised in this proceeding, we review the application of the Commission's current orders and rules regarding asymmetrical reciprocal compensation for LEC-CMRS interconnection. Under the language of section 252(d)(2)(A) of the Communications act, [footnote omitted] CMRS carriers are entitled to the opportunity to demonstrate that their termination costs exceed

those of the ILECs. The "equivalent facility" language of sections 51.701(c) and (d) of the Commission's rules was not intended to require that wireless network components be reviewed on the basis of their relationship to wireline network components. Nor, given the language of the statute, was it intended to have the effect of barring a CMRS carrier from receiving compensation for the additional costs that it incurs in terminating traffic on its network if those costs exceed the ILEC's. Instead, a cost-based approach-- one that looks at whether the particular wireless network components are cost sensitive to increasing call traffic--should be used to identify compensable wireless network components. [footnote omitted] Thus, if a CMRS carrier can demonstrate that the costs associated with spectrum, cell sites, backhaul links, base station controllers and mobile switching centers vary, to some degree, with the level of traffic that is carried on the wireless network, a CMRS carrier can submit a cost study to justify its claim to asymmetrical reciprocal compensation that includes additional traffic sensitive costs associated with those network elements. We note that, under our rules, the CMRS carrier bears the burden of justifying in its analysis precisely what are its additional costs, and demonstrating that its analysis complies with all applicable Commission rules. [footnote omitted] [FN40]

FN40. In the Matter of Developing a Unified Intercarrier Compensation Regime, CC Docket No. 01-92, Notice of Proposed Rulemaking, (rel. April 27, 2001), ¶104.

Sprint regards this statement as unequivocally recognizing the right of CMRS carriers to recover their additional costs of providing transport and termination, including mobility costs, and it disputes Verizon's policy arguments in favor of a different result. Verizon responds that the quotation is from a notice of proposed rulemaking, not an order, and that the FCC has, in fact, never ruled on the subject here at issue, but only directed its staff to issue a letter, responding to an inquiry by Sprint, that called attention to and summarized the language from the Notice of Proposed Rulemaking. Verizon denies Sprint's charge that it seeks to subordinate law to policy, contending that its position is based on sound law and that it is Sprint that relies on policy considerations by seeking subsidies for wireless service, characterizing that service as the only viable form of facilities-based competition. [FN41]

FN41. Verizon's Reply Brief on Issue No. 1, pp. 14-15, citing Sprint's Initial Brief, p. 10.

More substantively, Verizon disputes Sprint's reading of the breadth of the cited provision, denying that it permits recovery of every traffic-sensitive cost actually incurred in delivering a call on a wireless network. Rather, it requires the wireless provider to demonstrate that the costs it is seeking to recover comply with the FCC's rules, and those rules, Verizon continues, allow for recovery only of costs causally associated with the element or function being studied and otherwise allowable under TELRIC. Verizon suggests Sprint is reading ¶104 as a tacit repeal--a very unlikely step--of TELRIC's cost causation aspect and that so broad an interpretation of the paragraph would imply as well that costs should be allowed without regard to other TELRIC limitations, such as the exclusion of retail costs.

Verizon argues further that we have accepted in principle the exclusion from reciprocal compensation rates of the portion of local switching costs associated with vertical features, and it insists that Sprint offers no convincing basis for distinguishing mobility from vertical features such as caller ID. It argues that its own position in the network elements case, just as here, involved not whether costs are incurred at the originating end or at the terminating end, but whether they are causally associated with transport and termination. The distinction to be drawn, in its view, is between demand for a feature and demand for call delivery.

3. Economic Efficiency

Verizon contends that economic theory calls for the exclusion from a rate of costs that are not caused by the decision of the ratepayer to use the service. It warns against over-investment in wireless

service--and under-investment in alternatives that might provide greater overall total benefit for the same resources--as a result of allowing wireless subscribers to avoid some of the costs caused by their decision and thereby encouraging them to purchase the service even when their additional benefit is less than society's total resource cost. It warns as well against extending the inefficiencies of the reciprocal compensation regime--which the FCC has recognized--by allowing providers of premium services to shift their high costs to other carriers. To the extent denying Sprint's request here would require it to set higher retail rates, those higher rates would not be "artificially inflate[d]," as Sprint's witness had argued [FN42]; rather, they would be properly set to recover the costs imposed by the customer's decision to use a premium service.

FN42. Verizon's Initial Brief on Issue No. 1, p. 53, citing direct testimony of Sprint witness Hunsucker, p. 12.

As already noted, Sprint disputes the premise, which Verizon here takes as proven, that mobility is a premium layer superimposed on transport and termination.

4. Consistency with Retail Usage Rates

Verizon contends that its proposal is consistent with, while Sprint's proposal runs contrary to, the assumptions underlying both the reciprocal compensation construct and current retail usage rates. Verizon identifies four assumptions underlying reciprocal compensation:

(a) the originating carrier is compensated by its end user for the end-to-end carriage of the call;

(b) the originating carrier, by handing the call off to another carrier for termination, avoids costs that are roughly equal to the compensation that it pays to the terminating carrier;

(c) the terminating carrier incurs additional costs roughly equal to the compensation that it receives; and

(d) the terminating carrier is not compensated for these costs by its customer. [FN43]

FN43. Id., p. 54.

Verizon argues, first, that inasmuch as Sprint's retail rates are based on the premise that the wireless subscriber pays for incoming calls, [FN44] assumption (d) fails in a wireline-to-wireless context, and allowing Sprint to recover mobility costs through intercarrier compensation would overcompensate it. Meanwhile, Verizon's retail rates contemplate all-wireline calls and do not recover the costs of mobility. As a result, requiring Verizon to pay Sprint for the cost of mobility would impose on it obligations for which it would not be compensated by its own end users, contrary to assumption (a). It would also undermine assumption (b), inasmuch as the payments requested by Sprint do not correspond to costs avoided by Verizon. If Verizon were required to bear the costs, it would have to be allowed to pass them on to its customers; but that would simply shift the problem without eliminating it, inasmuch as neither Verizon nor its customers should be required to bear the costs of a premium service offered by Sprint and chosen by Sprint customers. Verizon contends that doing so would afford a substantial subsidy to Sprint, with a correspondingly dramatic anticompetitive effect.

FN44. Id., citing Sprint's response to Interrogatory VZ-SPCS-80 and rebuttal testimony of Sprint witness Hunsucker, p. 6.

As noted, Sprint regards the costs avoided by Verizon as irrelevant. With regard to Verizon's allegation of cost subsidy, it contends that wireless carriers offer the only meaningful possibility for facilities-based competition.

5. Discussion

Whether wireless is a luxury service is a matter of opinion--some might regard it as inferior to landline service for various reasons--and whether mobility is the essence of wireless service or a mere incident of it is a metaphysical question not likely to be definitively decided here. Several points can be

asserted with some degree of certainty, however.

On the one hand, Sprint is right that the FCC does not limit the costs that may be recognized in reciprocal compensation to those mirroring an ILEC's costs. A CLEC, be it landline or wireless, is entitled to show that its recognizable transport and termination costs exceed the ILEC's and that it is entitled to asymmetric reciprocal compensation on that basis. And while Verizon properly warns against placing too much weight on statements by the FCC in a notice of proposed rulemaking, the FCC appears willing to recognize not only that a CLEC's costs may differ from an ILEC's, but that there may be technological differences between the ILEC and the CLEC that require recognizing different categories of cost.

On the other hand, the FCC has not spoken definitively to the wireless costs that may be allowed, and Sprint has the burden of proof with respect to its claim for costs exceeding Verizon's by a factor of more than thirty. [FN45] For reasons noted in the previous and following sections, Sprint has not borne that burden. We need not resolve issues related to the relationship of Sprint's cost estimate to the mobility provided by wireless service or to the nature of that mobility, for this record simply does not permit us to conclude that Sprint's surprisingly high figure represents a reasonable, TELRIC-compliant estimate of the traffic-sensitive costs of transport and termination properly recovered in reciprocal compensation.

FN45. Verizon's traffic-sensitive costs of transport and termination, as determined in the UNE Order, are $0.00107 per minute of use. The UNE Order estimated that Verizon's switching costs were 34% traffic-sensitive and 66% non-traffic-sensitive, implying a total cost per minute of use that is still less than one-tenth of Sprint's estimate of traffic-sensitive costs.

Traffic Sensitive v. Non Traffic Sensitive Costs

There is no dispute that the FCC rules limit intercarrier compensation to the additional traffic-sensitive (TS) costs of providing transport and termination. Sprint notes that the FCC has identified the elements of a wireless network properly included in a wireless cost study so long as they are demonstrated to be traffic-sensitive, and it maintains that all of these components are, in fact, traffic-sensitive. It would exclude, as non-traffic-sensitive (NTS), only the cost of the hand set.

1. Sprint's Presentation

Sprint recognizes that wireless networks contain more traffic-sensitive network elements than do landline networks but sees that as no reason to deny recovery through reciprocal compensation of all traffic-sensitive cost elements. In addition, it disputes Verizon's allegation that by not excluding "access" costs from its study, it has necessarily included non-traffic-sensitive costs. Sprint questions the pertinence of the non-traffic-sensitive elements excluded by Verizon from its own cost study, such as loop ports, on the grounds that such components simply do not exist in a wireless network which, by its very nature, does not dedicate line ports to individual customers. In further contrast to a wireline network, a wireless network requires no installation of a dedicated loop when a customer purchases a handset; "the wireless network simply does not have a component analogous to the wireline [non-traffic-sensitive] loop." [FN46] Also included in "access costs" as Verizon uses the term are the infrastructure costs associated with the ability to provide service in the first place. Sprint maintains that the fixed costs associated with switches, transport and signaling are properly included in transport and termination when those resources are shared and vary to some degree with the level of traffic, and it asserts that Verizon likewise includes such costs in its studies. [FN47] More generally, Sprint argues that "access costs" are a category invented by Verizon, unrelated to the FCC's TS/NTS distinction.

FN46. Sprint's Initial Brief, p. 26, citing the rebuttal testimony of Sprint witness Farrar, p. 14.

FN47. Id., pp. 26-27.

Sprint goes on to discuss each of the traffic-sensitive components of its network.

a. The Mobile Switching Center

The mobile switching center (MSC) is described by Sprint as "the primary point of interconnection to the public switched telephone network, and [it] performs much of the initial call set up functions." [FN48] It has two primary components, the 5E Processor and the Executive Cellular Processor (ECT), and Sprint maintains that each of them is traffic-sensitive inasmuch as increasing the number of minutes of use while assuming a fixed number of subscribers will require additional capacity. Sprint notes that it initially required five MSCs to meet demand but that the number has grown to nine, and it cites its witness Mitchell's statement that

FN48. Id., p. 13.

Since MSCs do not have line-side connections, the decision to install a second (or subsequent) MSC is driven entirely by the volume of traffic, and not by the number of subscribers. In contrast, in cost proxy models of wireline networks a second switch may be required if the number of lines served exceeds an engineering threshold, even if the processor capacity of the first switch is not fully utilized. Given the shared and traffic sensitive nature of MSC(s), a forward-looking economic cost-based methodology should include MSC costs in the additional costs of call termination. [FN49]

FN49. Id., pp. 14-15, citing direct testimony of Sprint witness Mitchell, p. 20.

b. Backhaul Facilities

Backhaul refers to connectivity between the MSC and the cell sites, usually established through a T1 line that is limited in the number of minutes it can transmit. Accordingly, Sprint contends, as traffic volumes increase, the number of T1 lines must be increased, and the functionality is traffic-sensitive.

c. Base Station Transceiver Subsystem/Cell Sites

The base station transceiver subsystem (BTS) is located at the cell site and "performs call setup, softer hand-offs, RF conversion, and power amplification." [FN50] Sprint's witness Sabatino asserted that

FN50. Id., p. 15.

The BTS is extremely traffic sensitive. A single sector of a BTS can generally process only 20 calls at one time before call quality begins to degrade and calls begin to be dropped. As minutes of use increase, the ability of a BTS to handle these minutes must be increased. [FN51]

FN51. Id., citing direct testimony of Sprint witness Sabatino, p. 10.

d. Towers and Antenna

Sprint acknowledges the apparent counter-intuitiveness of regarding structures such as towers and antennas as traffic-sensitive, but it explains that when the capacity of a BTS is exhausted, additional towers must be built to support additional BTS units. Accordingly, even if the number of subscribers remains constant, additional minutes of use require the addition of towers to provide service. Sprint witness Mitchell compared the costs of these structures to the cost of land and building required to house an incumbent's wirecenters, costs that the FCC has held could be recovered by incumbents as part of the unbundled local switching element and that are included in the traffic-sensitive cost of local switching. [FN52]

FN52. Id., p. 17, citing direct testimony of Sprint witness Mitchell, p. 25.

e. Spectrum

Sprint explains that the spectrum used in wireless transmission, in contrast to landline local loops, is not dedicated to a single end-user customer but is a shared resource that must be augmented as additional traffic is generated by end-users. "It is assigned to a subscriber from the pool of available channels only for the duration of a call and is then

released for use by another call." [FN53]

FN53. Id., p. 18, citing direct testimony of Sprint witness Mitchell, p. 26.

2. Verizon's Presentation

Verizon begins with a theoretical discussion, with analogy to railroad freight service, of the distinction between traffic-sensitive and non-traffic-sensitive costs. The former, which in the railroad analogy encompass the number of cars to be hauled, the amount of fuel consumed, and the associated labor costs, are "scalable" i.e., they can readily be increased or decreased to handle greater or lesser amounts of cargo. Non-traffic-sensitive costs include roadbed, license, and other startup costs, including the locomotive and the first freight car, which are not scalable. The non-traffic-sensitive costs are incurred regardless of how much freight is hauled and will not be reduced if output drops as long as production is not totally discontinued.

In addition to those "baseline" costs, Verizon would categorize as non-traffic-sensitive in the wireless context the costs that vary with the number of subscribers rather than with the number of minutes of use. Because these costs vary with subscription levels, Verizon maintains, they should be recovered from the subscribers themselves, either in nonrecurring or recurring monthly charges, and should be excluded from the reciprocal computation calculation. Verizon characterizes both types of costs--infrastructure and subscriber-sensitive--as "access" costs that are not traffic-sensitive, and it contends that Sprint has not even sought to distinguish those costs from those that are properly regarded as traffic-sensitive. Instead, Sprint has taken the position, without support, that all of its facilities are traffic-sensitive except for the handset.

Verizon challenges Sprint's premise that "shared" facilities are inherently traffic-sensitive, noting that the railroad contemplated in its analogy can carry freight for multiple customers and that its baseline costs are not thereby made traffic-sensitive. According to Verizon, Sprint takes the position that as long as a facility would have to be augmented in order to handle increased volumes of traffic, the entire cost of the facility itself must be deemed traffic-sensitive. [FN54] Verizon disputes in this regard what it characterizes as the "facile leap from the premise that a particular facility is 'traffic-engineered' (i.e., that its size varies to some extent with traffic) to the conclusion that the facility's entire cost is properly regarded as traffic-sensitive." [FN55] In Verizon's view, the need for augmentation in the long run to meet increased demand does not mean that the entire cost of a facility is traffic-sensitive. It offers the hypothetical of a facility with $1 million of non-traffic-sensitive costs and .1¢ per minute of traffic-sensitive costs and a typical loading of 1,000 minutes. The total associated cost would be $1,000,001, of which $1 million would be independent of traffic and $1 would be due to the effect of traffic. Under Sprint's theory, however, according to Verizon, the entire $1,000,001 would be treated as traffic-sensitive.

FN54. Verizon's Initial Brief on Issue No. 1, pp. 64-66, citing various statements by Sprint's witnesses.

FN55. Id., p. 66 (emphasis in original).

Verizon cites as well the wording of ¶104 of the FCC's Reciprocal Compensation Notice of Proposed Rulemaking, cited above, which permits recovery of costs only to the extent that the facility is traffic-sensitive, and it points to our decision in the Second Network Elements Proceeding not to treat all costs of the local switch as traffic-sensitive even though switch facilities would have to be augmented in the long run to meet increased demand. Verizon likewise challenges Sprint's reference to the treatment of land and buildings costs in the Second Network Elements Proceeding, explaining that land and building costs were not treated entirely as traffic-sensitive but were allocated, in accordance with a reasonable mechanism, between traffic-sensitive and non-traffic-sensitive segments. Similarly, shared interoffice transport costs, which are scalable, were treated as traffic-sensitive but structure

investment--poles and conduit--were properly allocated between non-traffic-sensitive and traffic-sensitive segments. Verizon reiterates its general contention that the mere fact that facilities have to be augmented in the long run to handle increased traffic does not demonstrate that the entire cost of the facility is traffic-sensitive. And, it insists, the burden of proving the portion that is traffic-sensitive falls on Sprint.

Though disavowing any ability to conduct a quantitative analysis of Sprint's costs, Verizon offers a qualitative analysis said to show that a substantial portion of those costs should be regarded as non-traffic-sensitive. It argues, first, that baseline ("coverage") costs are non-traffic-sensitive and substantial. These costs are analogous to the railroad's roadbed and are caused not by additional traffic but are, instead, the prerequisite to serving any volume of traffic. It would include the infrastructure required to locate a customer, to encode and deliver communications between the handset and the point of interconnection with Verizon and, in general, to provide "coverage"-- the ability to serve--over the defined service area. Verizon identifies some of the equipment needed for this purpose, including a minimal BTS capability in each cell. Verizon adds that its own study in the Second Network Elements Proceeding excluded from transport and termination costs the costs of the baseline network consisting largely of loops and the non-traffic-sensitive port component of switching. Only the traffic-sensitive cost of switching as well as the costs of interoffice transport, which are scalable, were included in the traffic-sensitive category.

Verizon would also identify as non-traffic-sensitive the costs that vary with the number of subscribers rather than with the level of usage. It asserts that such subscriber-specific costs exist in wireless networks; they include the costs of equipment needed to register customers on the network and track their locations so that they can make and receive calls.

3. Replies

The reply briefs bring the dispute between the parties into somewhat sharper focus. Verizon charges Sprint with disregarding the fact that if the number of minutes of use were to approach zero, the network would diminish not to a zero-cost, zero-equipment network but to some baseline network representing the minimum investment needed to maintain coverage throughout the service area. That minimum investment, Verizon insists, is not traffic-sensitive. Also non-traffic-sensitive is the portion of the investment, not calculated by Sprint, that varies with the number of customers rather than the number of minutes of use. The term "access," which Sprint questions, refers simply to "coverage," as just described, and, Verizon says, is used generally by economists to denote the concept. Finally, Verizon sees no significance in the fact that wireless components are not dedicated to particular customers, arguing that they are not thereby made traffic-sensitive and that in the Second Elements Proceeding we assigned to the NTS category portions of the switching investment that were not dedicated to particular customers.

Sprint renews its claim that "access" is a category invented by Verizon and not used by the FCC; and it asserts that Verizon relies not on the testimony of its witnesses but on "an economic treatise discussing the fixed costs of providing railroad service." [FN56] It insists it followed the method of analysis required by the FCC, determining whether a given network component was dedicated or shared and, if shared, whether it was "cost sensitive to increasing call traffic." Maintaining that Verizon's sole example of access costs are those associated with local loops and line ports, Sprint argues those costs are excluded from reciprocal compensation not because they are "baseline" network costs but because they are NTS costs of facilities dedicated to individual customers. It suggests that Verizon's novel theory of a baseline system implies that in sparsely populated areas there would be no traffic-sensitive costs at all.

FN56. Sprint's Reply Brief, p. 16.

Sprint recognizes that wireless networks have a greater proportion of traffic-sensitive costs than do

wireline networks: "Wireless networks are, by design, extremely traffic-sensitive. No equipment is dedicated to individual users, because those users are mobile and the network must be able to respond no matter where the user is located." [FN57] But it sees no reason to deny recovery of those costs on that account.

FN57. Id., p. 19.

Charging Verizon with flawed analysis, Sprint asserts that even though some tandem switch costs are "baseline" in Verizon's sense--they must be incurred before any call can be tandem-switched--the FCC nevertheless classifies them as traffic-sensitive because the entire tandem switch is a shared resource. Similarly, it argues, a wireline telephone network must incur minimum switching and transport costs in order to provide "coverage," yet the FCC method considers all costs of non-dedicated switching and transport to be traffic-sensitive. So, too, it contends, all wireless costs not dedicated to individual subscribers or interconnecting carriers should be considered traffic-sensitive and subject to reciprocal compensation.

3. Conclusion

It would be neither surprising nor unreasonable to discover that wireless termination costs overall are more traffic-sensitive than landline termination costs. But it would be both surprising and unreasonable to conclude that all wireless costs (except those of the handset) are traffic-sensitive. Sprint argues to that effect largely on the premise that no part of the wireless network (except, again, for the handset) is dedicated to individual customers and that only such dedicated investment can be considered non-traffic-sensitive. That premise, however, is incorrect. Landline loop investment, for example, is excluded from reciprocal compensation because it is non-traffic-sensitive, even though the feeder portion of the loop is not dedicated to single users. And in the Network Elements Proceeding, we adopted an explicit allocation of switching costs--clearly a shared resource--between traffic-sensitive and non-traffic-sensitive components. [FN58]

FN58. Sprint appears to overstate the FCC's determination with respect to tandem switching costs. The FCC ruled that "Tandem switching costs may be recovered through usage-sensitive charges, or in another manner consistent with the manner that the incumbent LEC incurs those costs." (47 C.F.R. §51.509(e); emphasis supplied.) That suggests usage-sensitive charges for tandem switching are an option, not a requirement, and Local Competition Order ¶824, which refers to the possibility of flat-rated tandem rates, confirms that understanding. The non-dedicated nature of tandem investment does not appear to require treating it as totally traffic-sensitive. See, more generally, 47 C.F.R. §51.507(c): "(c) The costs of shared facilities shall be recovered in a manner that efficiently apportions costs among users. Costs of shared facilities may be apportioned either through usage-sensitive charges or capacity-based flat-rated charges, if the state commission finds that such rates reasonably reflect the costs imposed by the various users."

When all is said and done, much wireless investment, though not "dedicated" to individual users, will depend (setting aside for present purposes issues related to mobility) on both the number of customers and the level of usage. Sprint would reduce Verizon's "baseline" network analysis to an absurdity by claiming it implies that there would be no traffic-sensitive costs at all in a sparsely populated area. But Sprint's theory is similarly vulnerable to that sort of challenge, for it implies, taken to the extreme, that zero usage means zero cost, even if the network stands ready to serve.

As the party with the burden of proof, Sprint was obligated to show the allocation of costs between traffic-sensitive and non-traffic-sensitive components. It took the view that all costs are traffic-sensitive. Verizon has gone forward with a presentation that calls that result into question, at least prima facie, and Sprint has failed to rebut it. Accordingly, Sprint has, again, not carried its burden of proving asymmetric reciprocal compensation to be warranted.

Overall Conclusion on Issue #1

For the reasons already described, Sprint has failed to carry its burden of proving asymmetric reciprocal compensation to be warranted. Accordingly, its interconnection agreement with Verizon should provide for symmetric reciprocal compensation, consistent with the unrebutted presumption adopted in the FCC's method.

TANDEM TRANSIT SERVICE (ISSUE 2(a))

The parties continue to disagree over the charges that Sprint should be required to pay when its traffic transits Verizon's network to a third party. [FN59] This "transit service" is generally used where the traffic between Sprint and the third party is not abundant enough to justify the cost of a direct connection.

FN59. Issue 2 initially involved as well the charges to be paid when traffic from a third party transits Sprint's network and terminates to Verizon; that issue has been resolved by the parties.

Verizon's proposed wording (in §7.2.4 of the Agreement) would provide for Sprint to pay Verizon a transit fee plus "any additional charges or costs that the terminating [LEC] imposes or levies on [Verizon] for the delivery or termination of such traffic, including any switched exchange access service charges." Sprint objects to being required to pay all charges assessed on Verizon regardless of their validity, arguing that if such charges could be thus recovered indirectly, by billing Verizon, there would be no incentive for the carriers imposing them to negotiate a direct billing arrangement with Sprint, under which Sprint would be able to question the charges. It urges us to reject Verizon's proposal and instead require Verizon to provide to the terminating carrier sufficient call detail records to permit proper billing and to direct Verizon to dispute any charges that may be unlawful, thereby requiring the terminating carrier to directly bill Sprint.

Sprint agrees that Verizon should not be put at financial risk for covering charges disputed between Sprint and a third party, but it contends that what places Verizon at risk is its decision to pay the improper charges and that Verizon should not be permitted to then shift the risk to Sprint through a contractual provision requirement reimbursement. It notes that it has offered to indemnify Verizon for claims arising from refusal to pay improper charges but says Verizon regards that as insufficient, preferring to protect itself by simply serving as the collection agent of the terminating third party.

Verizon, meanwhile, insists the provision simply affords it protection in the event the terminating carrier improperly bills Verizon for terminating the call instead of billing Sprint directly. It objects to being put at financial risk of covering payments due or disputed between Sprint and the terminating carrier, especially since it has no obligation to offer tandem transit service and does so only as an accommodation. Disputing Sprint's suggestion that the proposed billing arrangements will vitiate the terminating carriers' incentive to negotiate agreements with Sprint directly, Verizon suggests the remedy is for us to enforce the obligation of independent terminating carriers to negotiate directly with Sprint in good faith. And it maintains the onus of challenging termination charges imposed by a third party should rest on Sprint, not Verizon.

Verizon contends that we are addressing a similar issue in Case 00-C-0789, where we obligated CLECs to enter into interconnection agreements directly with independent ILECs in certain circumstances, and it notes that Sprint, in that proceeding, is arguing that wireless carriers should not be required to enter into such interconnection agreements. Verizon objects to allowing Sprint to "complain in this proceeding that it does not have the necessary privity of contract to challenge terminating charges imposed by independents, while at the same time resisting efforts by the Commission to create appropriate incentives for independents to enter into appropriate agreements with Sprint to govern such charges." [FN60]

FN60. Verizon's Initial Brief on Non-Cost Issues, p. 5. Sprint responds that it has, in fact, negotiated

agreements with several independent ILECs and other CLECs.

Finally, Verizon cites a decision by the Maryland Commission resolving the same issue in its favor on the grounds that it would be unfair to require Verizon to bear losses in the event of disputes between Sprint and a third party.

Each side here is attempting to protect a legitimate interest. Sprint wants to avoid being liable for incorrect charges that Verizon, which can simply pass them on to Sprint, has no incentive to challenge. Verizon wants to avoid being at risk for paying amounts disputed between Sprint and a third party.

The best way to resolve the matter, of course, is through direct billing of Sprint by the third party. Failing that, proper incentives are fairly preserved by Verizon being able to pass on to Sprint one-half of the third-party costs at issue. The interconnection agreement should so provide.

CONDITIONS FOR REQUIRING CONNECTIONS TO NEW TANDEMS (ISSUE 3)

For purposes of relieving traffic congestion, Verizon sometimes requests interconnected CLECs to shift traffic to new tandem switches. Sprint agreed in general to do so but proposed five conditions to be met before it would be obligated to establish a connection at Verizon's new tandem. Verizon initially objected to all of those conditions but the parties have now agreed on three of them; two remain in dispute and are here discussed. As a general matter, Verizon asserts that Sprint's cooperation with Verizon to alleviate tandem congestion is obligatory, not discretionary, and that Sprint therefore should not be able to unreasonably condition that cooperation.

Traffic Volume

Sprint requests a condition that it not be required to establish connections to any tandem where less than a DS-1 volume of traffic is exchanged with that tandem. In the absence of such volumes, it argues, the expense associated with the dedicated facility would not be justified.

In objecting to the condition, Verizon asserts that the total traffic exchanged between Sprint and Verizon at each Verizon tandem in New York typically exceeds the DS-1 level and that if Sprint does not establish direct connections to each tandem, Verizon would be forced to route Sprint's traffic through multiple tandems, an inefficient and costly process that leads to tandem exhaustion. Verizon asserts that "pursuant to industry standards in the local exchange routing guidelines ("LERG"), Verizon requires that all CLECs and CMRS providers establish trunk groups to each tandem that carries local traffic." [FN61]

FN61. Verizon's response to Sprint's arbitration petition (July 3, 2001), p. 13, incorporated by reference at Verizon's Initial Brief on Non-Cost Issues, p. 5.

Sprint claims that regardless of actual traffic volumes, it is simply seeking protection in the event traffic volumes do not exceed the threshold level. It contends that any double switching Verizon would be required to do in the absence of a direct Sprint connection is the result of its own network design and that, in any event, if the amount of traffic were small, so would be the cost imposed on Verizon. It suggests it is willing to accommodate Verizon's new network architecture but is also entitled to some minimum protections.

Verizon responds that it designs its network to avoid dual tandem switching wherever possible. More generally, it warns that while the volume of traffic exchanged between Verizon and Sprint would make the condition moot in most instances involving Sprint, including it in this agreement as Sprint nevertheless requests would make it available, through the 1996 Act's "opt-in" mechanism, to other, smaller carriers who might invoke the condition and refuse to move their trunks on the ground of low call volumes. The aggregate cost of such refusals, Verizon asserts, could be substantial.

Given the volumes of traffic exchanged between Sprint and Verizon, adoption of Sprint's condition here would afford Sprint little practical benefit. It would, however, put Verizon (and the network as a whole) at substantial disadvantage and risk if many smaller carriers were to opt in to the provisions. Accordingly, the equities clearly call for rejection of the condition, and it should be omitted from the agreement.

Timing

Sprint requests a condition that would permit it enough time in performing any conversion to avoid early termination provisions with third-party transport providers and to allow an orderly transition within its network. Verizon, which proposed a requirement that conversions be accomplished "as soon as reasonably possible," argues that it has no control over the terms of Sprint's third-party contracts and that the termination provisions in those contracts should not delay its efforts to relieve congestion. It objects to giving Sprint an unlimited amount of time to move its traffic, explaining that it provides notice of any such move at least six months in advance and moves its own traffic first; if a connecting carrier fails to meet its schedule, service quality could be impaired. It cites past delays in such movement and asserts that allowing time beyond the six-month notice that it will continue to offer would harm Verizon, other carriers and end-users.

Sprint maintains it is simply seeking to protect itself from third-party charges, just as Verizon attempted to do with respect to transit costs. It argues that if Verizon does not allow the time needed, it should pay the cost of early termination and that Sprint should not be required to breach its contracts in order to accommodate Verizon's engineering plans. Verizon responds that such an arrangement could create perverse incentives for Sprint to obtain lower prices for transport facilities by negotiating artificially long contracts with steep termination penalties, the costs of which it could then transfer to Verizon.

Sprint's interest in not having to incur early termination charges is entirely proper, and the condition should be included, with a proviso that Verizon may assume the obligation to pay the termination charge if its engineering requirements so warrant.

SEPARATE TRUNKS FOR TERMINATION OF IXC TRAFFIC (ISSUE 4)

Sprint objected to any requirement that it establish connections for termination of traffic from interexchange carriers at every access tandem, asserting that it should retain control over how it receives IXC traffic and should not be obligated to maintain more than one such connection per LATA. Verizon took the position that it has no obligation to deliver IXC traffic to Sprint at all under the 1996 Act but that it is willing to deliver inbound interLATA traffic received from IXCs to Sprint if Sprint, like all other carriers, orders trunks at Verizon's access tandems. If Sprint does not wish to do so, it may bypass Verizon's network and interconnect directly with the IXC.

Sprint was concerned about incurring the additional expense of maintaining access trunk groups at each access tandem solely to receive IXC traffic from Verizon. That concern was largely allayed at the technical conference, where it became apparent that Sprint had the ability to determine the routing of IXC traffic in the LERG in a manner that permitted it to limit the number of tandems to which it was required to establish direct connections. As a result, the dispute over §§4.2.1, 6.2.2, 6.2.3, and 6.2.4 of the interconnection agreement was effectively resolved.

To confirm these arrangements, Sprint proposed to modify §6.2.1 of the agreement to state that "If Sprint PCS chooses to subtend a [Verizon] access tandem, then Sprint PCS must identify in the LERG the Sprint PCS NPA/NXXs to be served by that access tandem." Verizon agrees to that wording, but only if it is accompanied by additional provisions that, first, limit those arrangements to exchange access traffic and leave the existing wording of § 6.2.1 in place for other traffic: "For Local and all other traffic, Sprint PCS's NPA/NXX must be

assigned by Sprint PCS to subtend the same Verizon access or local Tandem that a Verizon NPA/NXX serving the same Rate Center subtends as identified in the LERG." In addition, Verizon would add wording exonerating it from any "responsibility for exchange access traffic that fails to be completed as a result of Sprint PCS's LERG designations for it NPA/NXX(s)" and disavowing any obligation on Verizon's part to provide Sprint multi-tandem switching for delivery of exchange access traffic.

In support of its additional provisions, Verizon argues that, until the technical conference, Sprint had never challenged the wording of §6.2.1 or put it in issue. The only change warranted now is one limited to the exchange access traffic discussed at the technical conference. It contends as well that responsibility for delivering traffic to Sprint at the designated tandem rests with the IXC, not with Verizon, and that Sprint should not be permitted to shift costs to Verizon and impose inefficiencies on the network by making decisions that require Verizon to provide multi-tandem switching.

Sprint objects to Verizon's additional terms, contending they are ambiguous and introduce new conditions that repeat or run counter to other provisions of the agreement. It notes that its own proposed wording is substantially identical to that in the recently approved interconnection agreement between Verizon and Global NAPs and urges that we adopt either its wording or only the first sentence of Verizon's.

The additional wording sought by Verizon properly limits the change to the exchange access traffic discussed at the technical conference and otherwise clarifies related matters. It should be included in the agreement.

The Commission orders:

1. The remaining issues posed by the petition for arbitration filed by Sprint Spectrum L.P. d/b/a Sprint PCS and the response of Verizon New York Inc. are resolved in the manner described in this order.

2. The parties shall complete the preparation of an interconnection agreement consistent with the determinations in this order and shall file an executed copy of that interconnection agreement within 30 days of the issue date of this order.

3. This proceeding is continued.

END OF DOCUMENT