

In the Matter of the Interconnection Contract Negotiations Between AT&T OF THE MOUNTAIN STATES, INC., and U S WEST COMMUNICATIONS, INC., Pursuant to 47 U.S.C. Section 252. )

DOCKET NO. 96-087-03

In the Matter of the Petition for Arbitration, Consolidation, and Request for Agency Action of MCIMETRO ACCESS TRANSMISSION SERVICES, INC., Pursuant to 47 U.S.C. § 252 (b) of the Telecommunications Act of 1996. )

DOCKET NO. 96-095-01

ORDER ON RECONSIDERATION

ISSUED: June 9, 1998

BY THE COMMISSION:

We consider and clarify herein certain issues raised in Petitions for Reconsideration filed by parties to the captioned arbitrations which seek reconsideration of decisions made by the Commission in an Arbitration Order issued April 28, 1998.

We accept and approve, pursuant to USC 47 § 252(e) but subject to this Order on Reconsideration, all provisions of, respectively, a fully executed Agreement for Local Wireline Network Interconnection and Service Resale ("interconnection agreement") between AT&T of the Mountain States, Inc. and US West Communications, Inc. ("USWC"), as filed with the Commission on May 27, 1998, and a separate fully executed interconnection agreement filed by USWC and MCI metro Access Transmission Services, Inc. ("MCI"), with the Commission on May 28, 1998. We approve all provisions of the interconnection agreements filed on the above dates that comport with the Arbitration Order. We reconsider and clarify three issues in this Order. Those issues include Issue 3.-.31-- Shared Transport, Issue 7.-.39 -- Unbundled Network Element Platform and Issue 7.-.41 -- Operational Support Systems ("OSS"). With regard to the latter two issues, we order the parties, in accordance with ¶ 17.1 of the interconnection agreement, to file amendments to the interconnection agreement reflecting the following policy decisions we make on reconsideration.

At the outset, we acknowledge our failure to recognize in the Arbitration Order the Order on Petitions for Rehearing issued October 14, 1997 by the Eighth Circuit Court of Appeals which vacated CFR § 51.315(b). <sup>(1)</sup> Our Arbitration Order mistakenly concluded in part that the "Eighth Circuit's retention of 47 CFR § 51.315(b) forms a basis for concluding that shared transport is required by law." In vacating § 51.315(b), which prevented an incumbent from separating network elements it currently combines, the Eighth Circuit held that § 251(c)(3) of the 1996 Act does not prohibit an incumbent from separating network elements that are already combined within its network before furnishing them to new entrants. It further held that an incumbent is not required to perform any recombination of elements on behalf of an entrant. Accordingly, we recant from reliance on § 51.315(b) as a basis for prohibiting USWC from separating or recombining network elements.

### **Issue 3.-.31-- Shared Transport**

We concluded in the Arbitration Order that AT&T/MCI should be able to share common transport routes including end office to end office links that predominantly carry USWC traffic. USWC asks that we reconsider that decision and instead require USWC to offer each of the network elements which comprise local interoffice transport on an unbundled basis. It argues that shared transport is not a network element but rather a finished service consisting of combinations of switching and interoffice transport elements. USWC insists that CLEC access to USWC's local interoffice network must be rate-configured such that a CLEC must separately purchase end-office switching with custom routing, tandem switching with custom routing, and dedicated interoffice transport, and then combine these elements itself. In sum, USWC argues that the 1996 Act and Eighth Circuit's decision established that the Commission may not permit AT&T/MCI to purchase shared transport as an unbundled network element because it constitutes a combination of two or more elements. AT&T/MCI, in contrast, support the conclusion drawn in the Arbitration

Order that shared transport is an unbundled network element.

In the Arbitration Order, we consolidated shared transport with the unbundled network element platform for decision because shared transport was the only unbundled network element under consideration that incorporated a combination of essential local interoffice facilities. Shared transport was the only unbundled network element combination for which ample evidence was entered on the arbitration record. On reconsideration, we will not reverse the shared transport decision made in the Arbitration Order. We reaffirm our concurrence with conclusions reached in the FCC's Shared Transport Order and current FCC rules. <sup>(2)</sup> We further reaffirm our finding that AT&T/MCI's ability to provide the services they seek to offer would be impaired insofar as the transport and routing methods proffered them by USWC are unduly prejudicial relative to the method USWC uses to route and transport its own traffic. <sup>(3)</sup> We found USWC's local interoffice transport proffer to be discriminatory, inefficient and contrary to § 251(d)(2)(B) of the 1996 Act as reflected in 47 CFR § 51.309(a), § 251(c)(3) as reflected in 47 CFR § 51.313(b), § 251(c)(2)(C) and UCA § 54-8b-2.2(1)(b)(ii). Finally, we exercised the jurisdiction conferred upon us by UCA § 54-8b-2.2 (5) to resolve issues necessary for the competitive provision of local exchange services.

USWC also argues that shared transport will act to deter interoffice facilities investment, thus conflicting with a legislative policy favoring facilities-based competition. In the Arbitration Order, we expressed a policy preference to avoid duplicative capital investment made at the expense of capitalizing technological innovation or distorting CLEC investment strategy, particularly with regard to interoffice transport investment where technology solutions exist to vastly improve the capacity of sunk fiber investment. Given evidence of circuit-switched network congestion and nascent deployment of network architectures that would mitigate that congestion by off-loading data traffic, we found cause to minimize the societal cost for transmission and routing investments used to provide existing and new public telecommunications and information service products.

### **Issue 7.-.39 -- Unbundled Network Element Platform**

In briefs, the parties exhibit polar interpretations of § 251(c)(3) of the 1996 Act. <sup>(4)</sup> USWC seeks clarification of whether the Arbitration Order requires USWC to provide other unbundled network element platforms besides shared transport. Extending the logic underlying the Eighth Circuit's vacation of § 51.315(b), USWC argues it is contrary to § 251(c)(3) to allow AT&T/MCI access to its network elements on a bundled as opposed to an unbundled basis. USWC interprets § 251(c)(3) as requiring it to provide access to network elements only on an unbundled (as opposed to a combined) basis. Thus, AT&T/MCI would be precluded from purchasing any assembled platform(s) of combined network elements (or any lesser existing combination of two or more elements) in order to offer competitive services. USWC asserts that to permit acquisition of already combined elements at cost-based rates for unbundled access would obliterate the distinction in subsections §§ 251(c)(3) and (4) between access to unbundled network elements on the one hand, and the purchase at wholesale rates of an incumbent's retail services for resale on the other. USWC avers that the unbundled network element platform price established by a forward looking economic cost model would be less than the wholesale price for its resale products based on an avoided retail cost standard. Finally, USWC asserts that the Eighth Circuit "has established that AT&T/MCI's entry strategy is contrary to the Act and thus unlawful."

AT&T/MCI argue on reconsideration that § 251(c)(3) mandates that access to network elements for purposes of recombination be provided on non-discriminatory terms and conditions. That mandate, they assert, raises issues of parity with regard to the manner of access USWC itself uses to self-provision network elements. On a presumption that this Commission concurs in the Eighth Circuit's reading of § 251(c)(3) in the Order on Rehearing, <sup>(5)</sup> AT&T/MCI ask us to decide specifically how the interconnection agreement will provide AT&T/MCI access to U S WEST's network to accomplish the combination of network elements USWC believes it must separate, and, under what terms and conditions (including price) elements will be available. As characterized by AT&T/MCI, USWC's response to the vacation of C.F.R. § 51.315(b) is to "vandalize its network by ripping apart network elements that new entrants order." That characterization is far from hyperbole as evidenced by USWC's Petition for Reconsideration. AT&T/MCI accuse USWC of seeking to impose artificial costs and compliance with discriminatory business processes attendant to the separation and reassembly of previously assembled network elements. AT&T/MCI insinuate that unbundling to USWC may mean an anti-competitive disassembly of network elements that do not necessarily have to be disassembled to transact a purchase of essential facilities by AT&T/MCI. Finally, AT&T/MCI allege that separation will cause outages when consumers physically transfer service to a CLEC.

USWC acknowledges that the Eighth Circuit, in interpreting § 251(d)(3) of the 1996 Act, preserved state authority and state commission jurisdiction over implementation of § 251. AT&T/MCI observe that the primacy of state authority was expressly preserved by the 1996 Act, <sup>(6)</sup> asserting that USWC endorses or disparages that preservation as it serves its business objectives in state and federal regulatory proceedings. In this instance, Utah law must be consistent with § 251 of the Act or it is preempted by federal law, according to USWC. USWC asserts that any state law which purports to require it to leave unbundled network elements bundled, or to provide network elements on a combined basis is unlawful and contrary to the Act. Citing UCA § 54-8b-1.1(6) & 54-8b-2.2, it argues that there is no provision in Utah law that requires it to leave unbundled network elements assembled or to recombine elements, asserting that the 1995 Utah Reform Act, like the Federal Act, only requires that it unbundle network elements for sale to CLECs.

In stark contrast, AT&T/MCI argue that Utah law complements the purposes of the federal Act and furthers legislative policy objectives. They assert that UCA §54-8b-2.2(1)(b)(ii) grants the Commission statutory authority to prevent USWC from separating network elements when ordered in combination by a CLEC. AT&T/MCI assert that if USWC, in providing itself a finished local exchange service, does not separate unbundled network elements and subsequently recombine them for a new customer, but rather uses the same combined network elements as part of that customer's new telecommunications service, then it is discriminatory and unreasonable for USWC to impose those requirements and costs on

AT&T/MCI as a prerequisite to furnishing them network elements. We agree.

AT&T/MCI rightfully assert that the interconnection agreement contemplates network element combinations. In the arbitration record, however, AT&T/MCI neither itemized network element combinations nor defined an unbundled network element platform other than shared transport. They alleged that unspecified elements may not require separation when ordered by a CLEC to provide telecommunications service. With regard to the availability of the unbundled network element platform, we find switched access tariffs instructive insofar as they have historically defined parameters of network functionality for exchange access to originate and terminate telecommunication services. Access rate designs establish a backdrop for defining which network elements, with their attendant software-enabled self-diagnostics and control channel capability, are logically combined to form an unbundled network element platform. <sup>(7)</sup> We conclude that unbundled network element platforms are required by state and federal law when the platform represents a discrete set of hardware and software components engineered, systematically, to provide network features, functions and capabilities used by an incumbent to provide certain service types, or for example, service in a geographic area, or to some or all customer classes. We find that AT&T/MCI should not be precluded from launching products from unbundled network element platforms.

We shall define the unbundled network element platform as including not only shared transport but other combinations of network elements required by a CLEC where the CLEC directly provides at least one or more of the essential facilities or services (as defined by Commission rule R746-348-7) necessary to provide a finished service. Regarding the issue of access to unbundled network element platforms for the purpose of combining discrete network elements, there is insufficient evidence on this record for us to decide the issue. Access to unbundled network element issues will be decided by order in Docket No. 94-999-01 [*In the Matter of Collocation and Expanded Interconnection*], Phases 3A and 3C, and to some degree by rule in Docket No. 97-R365-01 [*Intercarrier Service Quality*] which address collocation and Operational Support System ("OSS") issues. Pending the conclusion of those dockets, as an interim policy matter we order USWC to provide AT&T/MCI unfettered access to network points of interconnection, including collocation space, feeder/distribution interfaces and network interface device protectors for the purpose of allowing AT&T/MCI to combine network elements.

We addressed cost aspects associated with the combination or disassembly of unbundled network elements in the Arbitration Order. We found therein and reaffirm here, in concept, that:

"separating and recombining unbundled network elements ordinarily combined in USWC's network is illogical, inefficient and violates state and federal law. We find it illogical, inefficient and discriminatory for USWC to use available combinations of elements to provide its own services, while requiring entrants to incur the delay and expense of separating and recombining them. Signaling networks and integrated software-defined operational support and network administration systems render shared transport a logically integrated system, or platform of network elements performing transport and routing functions. These integrated systems are not rationally disassembled or easily reassembled. We find that such action by USWC would impose costs on competitive carriers that incumbent LECs would not incur in violation of § 251(c)(3) of the 1996 Act."

§ 251(c)(3) of the 1996 Act clearly conveys to AT&T/MCI a right to procure combinations of network elements from an incumbent on non-discriminatory terms. We find the non-discrimination mandate of § 251(c)(3) compelling with regard to network element combinations. We find on efficiency, equity and parity grounds that no disassembly and reassembly of network elements purchased by AT&T/MCI should occur if the cost of disassembly and recombination would not similarly be incurred by USWC in providing the same or substitutable service. Stated differently, if, from a network operations and control perspective, no physical disconnection of hardware or software elements is required within a given combination of elements to fulfill a new, change or disconnect service order, then no disconnection or disassembly within that combination should occur for AT&T/MCI. We include any software-executed line changes such as dial tone activation or deactivation, or changes to features, functions and capabilities that tend a line in that judgment. Network elements ordinarily combined in USWC's service provisioning process should not be unnecessarily unbundled and reassembled in order for AT&T/MCI to provide service if USWC would not similarly incur the same unbundling and reassembly process. However, our decision is intended to relieve AT&T/MCI from incurring the cost of reassembly only when USWC itself would not incur that cost. If USWC necessarily incurs a cost burden for disassembly and recombination, then AT&T/MCI must similarly perform any necessary recombination of network elements forming a platform.

We find credence in AT&T/MCI's argument that the act of separating and reconnecting network elements heightens the possibility of service transfer errors and delays the advent of competitive market benefits. We find cause to minimize public inconvenience as service is migrated between competitive providers. For that reason, any disaggregation of network elements by USWC must in our view be an essential task necessary for the connection of network elements controlled by USWC with network elements controlled by AT&T/MCI. The disaggregation must be an essential and necessary task requisite to providing a finished service.

In the Arbitration Order, we found that the functionality and capabilities of a "network element" are subsumed in the statutory definition of the term. The Eighth Circuit sustained the FCC rule <sup>(8)</sup> which defines a network element as including the functionality of the facilities and equipment comprising an incumbent's network. The House/Senate Committee of Conference added the definition of network element to section 3 of the Communications Act. The Joint Conference Report defined network element "to describe the facilities, equipment and the features, functions and capabilities that a local exchange carrier must provide". Like the Joint Conference Report, Commission Rule R746-348-2 defines network element to mean "the features, functionalities and capabilities of network facilities and equipment used to transmit, route, bill or otherwise provide public telecommunications service." The same rule defines "unbundling" to mean the disaggregation of facilities and functions into multiple network elements and services that *can be* individually purchased" by a CLEC. The plural reference to facilities and the use of the permissive term "can", as opposed to a mandatory connotation, conveys the permissive orientation we held in promulgating terms for access to essential network facilities.

Section 7 of the above-cited rule defines essential facilities and services in Utah which shall be used to demarcate an unbundled network element platform. It requires telecommunications corporations to make available and timely provide network facilities and services. It further allows in subsection B for any person to petition the Commission for a finding that a facility is or is not essential.

We reaffirm here a conclusion reached in the Arbitration Order that "the disaggregation inherent in the definition of unbundling goes to the pricing and availability of a network element rather than to whether or not a facility can be further separated into discrete network functions dedicated for exclusive use." We further reaffirm that "unbundling" provides an opportunity for a CLEC to separately purchase an element but does not in our view require that each media element in the network be literally unbundled and separately provided. USWC in its words has "hundreds of unbundled network elements" comprising its local interoffice network in the Salt Lake City local calling area, all and each of which would be available to AT&T/MCI as unbundled network elements in the interconnection agreement. Taking USWC's approach to its logical conclusion implies that it would separately charge for every piece of hardware and software involved in the transmission, routing and switching of AT&T/MCI traffic. Such an approach would become unworkable from the standpoint of costing, pricing, billing and invoice verification.

We find that severing already-assembled elements solely to preclude their being offered in combined form would result in an inefficient, artificial and undue imposition of cost. We deem costs discriminatory, inefficient and artificial when they would not necessarily be incurred by USWC. Encumbering CLECs with such costs cannot be legitimized under the guise of the Eighth Circuit's Order on Rehearing. We find such a result inconsistent with the public interest. Despite USWC arguments to the contrary, we conclude that entrants opting to enter the market using sound engineering judgment regarding configuration of purchased unbundled network elements should not be subjected to heightened capital and business risk. USWC did not historically incur such risk as a monopoly supplier of telephone service. AT&T/MCI will incur far greater entry risk today in a multiple supplier market dominated by USWC which retains market power in many product markets in Utah. We conclude that economic efficiency and the parity principles in state and federal statutes should not be needlessly sacrificed for a misinformed legal ruling that frustrates state and national legislative policy goals.

We noted in the Arbitration Order that finished retail products purchased from USWC at permanent wholesale discounts reflecting avoided retail cost are priced substantially less than the sum price for an equivalent combination of network elements purchased from interim unbundled element price schedules. We found no evidence of price distortions between avoided cost discounts and unbundled network element prices that create the arbitrage opportunity advanced by USWC. We still find no available resale service where the sum of interim UNE prices for the recurring, non-recurring and usage prices for a combination of assembled UNEs <sup>(9)</sup> would be less than or equal to the price of an equivalent wholesale service reflecting an avoided cost discount established in Docket No. 94-999-01 (Phase I Order).

We do not by this decision intend to eviscerate resale as an available entry vehicle under the 1996 Act. Entrants are free to choose that mode of entry to secure the now more advantageous ordering and provisioning milieu. We note that we here decide in conceptual terms the rules of engagement for how AT&T/MCI shall access the public network. The economic essence of our decision relates not so much to what combination of network elements AT&T/MCI may purchase from USWC to provide finished service, but rather what the purchase price is. As permanent prices are established during the course of Docket No. 94-999-01, we will be mindful of any price arbitrage opportunity that would arise from exploiting a price differential between wholesale prices and the sum of UNE prices that form a service equivalent to one purchased for resale.

#### **Issue 7.-.41 -- Operational Support Systems ("OSS")**

Pursuant to § 252(d) we must provide a schedule for implementation of the terms of the interconnection agreement. We concur with AT&T's representation of the intent of our interim orders issued March 25, 1997 and December 24, 1996 in this arbitration. We conclude that the interconnection agreement should reflect only EDI implementation dates, including a date for the unbundled network element platform. We so find because USWC's Interconnect Mediated Access ("IMA") does not comply with our prior order that "EDI architectures and interfaces will best serve the public interest". We adopt the EDI pre-order availability dates enumerated in correspondence to the Commission from counsel for AT&T and USWC dated June 4, 1998 and May 29, 1998, respectively. We order that paragraphs 9.1 through 9.1.5 of Attachment 7 to the interconnection agreements filed by the parties on May 27 and May 28, 1998 be amended as follows:

9.1 Operational Support Systems shall be available for preordering, ordering, provisioning, maintenance, repair and billing under the following target schedule:

9.1.1 Service Resale for POTS and Multiline Hunt Group up to 12 lines by 1/1/98;

9.1.2 Complex Business services by 2/28/99;

9.1.3 Interim Number Portability by 9/30/98;

9.1.4 Unbundled Network Platform by 2/28/99;

9.1.5 Other elements within the Agreement by 2/28/99 or as agreed to by the Parties.

#### **ORDER**

NOW, THEREFORE, IT IS HEREBY ORDERED as follows:

- Within thirty days from the date hereof, U.S. WEST COMMUNICATIONS, INC., and AT&T OF THE MOUNTAIN STATES, INC., and U.S. WEST COMMUNICATIONS, INC., and MCImetro ACCESS TRANSMISSION SERVICES, INC., pursuant to UCA §54-8b-2.2 (1) (d), § 252 (e) of the 1996 Act and ¶ 17.1 of the interconnection agreements approved herein, shall separately submit for this Commission's approval amendments to the above-referenced interconnection agreements which embody the decisions made herein.
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DATED at Salt Lake City, Utah, this 9th day of June, 1998.

/s/ Stephen F. Mecham, Chairman

(SEAL) /s/ Constance B. White, Commissioner

/s/ Clark D. Jones, Commissioner

Attest:

/s/ Julie Orchard

Commission Secretary

1. Iowa Utils. Bd. v. FCC, Nos. 96-3321 etc., Order on Petitions for Rehearing (8th Cir. October 14, 1997). The Arbitration Order only considered the Eighth Circuit's initial decision issued July 18, 1997 which did not vacate 47 CFR § 51.315(b). That regulation states: "Except upon request, an incumbent LEC shall not separate requested network elements that the incumbent LEC currently combines."

2. The FCC concluded in its Local Interconnection Order that "incumbent LECs are obligated under section 251(d)(2) to provide access to shared transport....as an unbundled network element." The Eighth Circuit upheld FCC rules found in 47 CFR § 51.319 which itemize and define seven unbundled network elements incumbent LECs must make available, including interoffice facilities. The FCC defines interoffice transmission facilities in 47 C.F.R. §51.319(d)(1) as "incumbent LEC transmission facilities dedicated to a particular customer or carrier, or *shared* by more than one customer or carrier, that provide telecommunications between wire centers owned by incumbent LECs or requesting telecommunications carriers." [emphasis added]. Finally, we note that the Eighth Circuit on October 30, 1997 denied a USWC Motion for Stay of the FCC's Shared Transport Order. See Southwestern Bell et al v. FCC; Nos. 97-3389 etc.

3. Those methods included tandem-routing all AT&T/MCI traffic which we found likely to decrease interconnection service quality by exacerbating call blocking. We further found that limiting AT&T/MCI's interconnection method to dedicated transport and routing facilities would increase the financial and administrative cost for AT&T/MCI to an amount greater than the cost of facilities shared by joint users, including USWC. We concluded both arrangements were contrary to law.

4. § 251(c)(3) imposes a duty on incumbent local exchange carriers to "provide, to any requesting telecommunications carrier for the provision of a telecommunications service, non-discriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms and conditions that are just, reasonable and non-discriminatory ..... . An incumbent local exchange carrier shall provide such unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service." In vacating 47 C.F.R. § 51.315(b), the Eighth Circuit took a literal and narrow view of network unbundling as evidenced by its conclusion that "Section 251(c)(3) requires an incumbent LEC to provide access to the elements of its network only on an unbundled (as opposed to a combined) basis". The Court reasoned that the Act "indicates that the requesting carriers will combine the unbundled elements themselves; the Act does not require the incumbent LECs to do all of the work. Moreover, the fact that the incumbent LECs object to this rule indicates to us that they would rather allow entrants access to their networks than have to rebundle the unbundled elements for them."

5. The United States Supreme Court will hear oral argument in October, 1998 on appeal of the Eighth Circuit's decision that incumbents are not required to recombine unbundled network elements for competitors (No. 97-830). Other state and federal regulators disagree with the Eighth Circuit's reading of § 251(c)(3). See for example, April 6, 1998 letter from Joel Klein, DOJ, Antitrust Division to John O'Mara, Chairman, New York Public Service Commission addressing, among other issues, the "Eighth Circuit invalida[tion of] the FCC rule forbidding incumbent LECs from separating unbundled elements that are currently combined, except on the request of the carrier purchasing those elements. We believe the Eighth Circuit's decision rests on an incorrect reading of section 251(c)(3) of the Act, and we have asked the Supreme Court to reverse this aspect of

the decision. At the present time, however, section 251(c)(3) has been construed so as to not require incumbent LECs to provide pre-assembled combinations of elements under federal law." Also see Pre-Filing Statement of Bell Atlantic- New York, dated April 6, 1998, before the New York Public Service Commission in Case 97-C-C271 [In the matter of Petition of New York Telephone Company for Approval of Its Statement of Generally Available Terms and Conditions pursuant to Section 252 of the Telecommunications Act of 1996 and Draft Filing of Petition for InterLATA Entry pursuant to Section 271 of the Telecommunications Act of 1996], wherein Bell Atlantic agrees to provide CLECs in New York "combinations of network elements, and the complete Unbundled Network Element Platform to provide CLECs with residential and business POTS service and residential and business Basic Rate Interface ISDN service."

6. See for example 47 USC § 261(c), § 251(d)(3) and § 252(e)(3).

7. On this point, we seek evidence regarding the degree to which disassembly of essential facilities affects the network element, system and service layers of the OSS infrastructure, particularly where the underlying network elements and/or attendant OSSs are Telecommunications Management Network ("TMN")-compliant assets.

8. CFR § 51.307(c) requires USWC to provide access to an unbundled network element, which includes that elements "features, functionality and capabilities," in a manner allowing AT&T/MCI to provide any telecommunications service that can be offered by means of that network element. Subsection (d) requires that access to the facility or function of network elements be separate from access to the facility or function of other network elements, for a separate charge. Subsection (e) requires USWC to provide technical information about its network facilities sufficient to allow AT&T/MCI to achieve access to unbundled network elements.

9. We note that the forward looking economic cost models under consideration in Docket 94-999-01 produce network element costs that include capital and operating costs incidental to the initial installation and combination of network elements that combine to form the network in addition to operating expenses for maintenance, network operations and corporate overheads.