(Decision No. C93-1433){PRIVATE }

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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IN THE MATTER OF THE INVESTIGATORY DOCKET CONCERNING INTEGRATED SERVICES DIGITAL NETWORK.	))))	DOCKET NO. 92I-592T INTERIM DECISION RE: JURISDICTION

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Mailed Date: November 22, 1993
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STATEMENT

BY THE COMMISSION:

This docket is an investigatory proceeding into the many aspects of Integrated Service Digital Network ("ISDN").[1] The docket was opened as a result of work begun in the commission's Basic Service rulemaking proceeding in Docket No. 92R-282T. the commission concluded in that proceeding that more information concerning ISDN was necessary in order to make informed decisions regarding the commission's jurisdiction over the deployment and offering of ISDN, as well as a number of ancillary issues surrounding the deployment of ISDN. The commission concluded that it would be prudent to address first the question of this commission's jurisdiction over the service.

On April 20, 1993, a hearing was held in this Docket No. 92I-592T to hear evidence on factual issues that the parties believed were relevant to the question of the commission's jurisdiction over ISDN.

[1] Unless otherwise noted in this decision, references to "ISDN" will be to narrowband ISDN.

U S WEST Communications, Inc. ("U S WEST"); El Paso County Telephone Company ("El Paso"); AT&T Communications of the Mountain States, Inc. ("AT&T"); Colorado Office of Consumer Counsel ("OCC"); and Prodigy, Inc. ("Prodigy") submitted testimony and exhibits. Statements of Position were subsequently filed by these parties as well as by MCI Telecommunications Corporation ("MCI").[2] Based upon the record before us, the commission concludes that we have jurisdiction over ISDN as a means of providing "basic local exchange service."[3]

DISCUSSION

A. Position of the Parties.

1. U S WEST Communications, Inc.

Mr. Michael Williams, director of Product and Market Issues of U S WEST, provided the commission with an excellent general explanation of the technical aspects of ISDN. With respect to deployment of ISDN, he urges us to view ISDN from a marketing perspective which focuses on the needs of the customer rather than on the available technology. Mr. Williams first identifies customer needs and then suggests that products and services other than ISDN also are available to meet some of these customer needs.

Mr. Williams also urges us to recognize the distinction between "access" and "platforms," and "services" and "technologies." Mr.

[2] U S WEST, El Paso, and OCC requested a second extension of time to file Statements of Position. We find that good cause has been stated and these requests will be granted.

[3] This includes both Basic Rate Interface ("BRI") and Primary Rate Interface ("PRI").

Williams' opinion is that ISDN is more of an access technology than a platform upon or by which information is manipulated and processed. Similarly, he argues that ISDN is a technology capable of delivering digital services and functions more than it is a service itself.

Moreover, Mr. Williams argues that ISDN is a "premium" method of providing access because it is an "optional alternative that offers capabilities over and above that which is available on a standard or average basis."[4] He notes that this definition of "premium," and the technical configuration of ISDN are consistent with the definition of "premium service" in section 40-15-102(21), C.R.S. (1993).[5]

Mr. Williams also points out several shortcomings of ISDN, including lack of full motion video, inter-operability and "plug and play," its reliance on outside power, and lack of availability. But most importantly, he cautions that it is potentially expensive to deploy, that there is little demand for the service except among high volume users, and that narrowband ISDN may soon be outdated by broadband ISDN.

In its legal brief, U S WEST argues that its only obligation under Articles 1 to 7, Title 40, and cases such as *Ephraim Freight-ways, Inc. v. Public Utilities Commission*, 380 P.2d 228 (Colo. 1963) is to provide "adequate service." U S WEST argues that House Bill 1336

[4] *See* Exhibit 2, at 18.

[5] "Premium service" is defined as "any enhanced or improved product or service offered by a telecommunications provider which is not functionally required for the provision of basic local exchange or interexchange service and which the customer may purchase at his [or her] option."

(enacted in 1987) restricted the doctrine of "regulated monopoly" to "basic local exchange service," and that the commis-sion's authority to revoke certificates of authority is therefore restricted to those circumstances where it finds inadequate basic local exchange service.

The next step of U S WEST's argument is to contend that ISDN is not "necessary" to provide the dial tone and local usage necessary to place or receive a call and, therefore, does not fall within the statutory definition of "basic local exchange service," section 40-15-102(3) C.R.S. (1993). According to U S WEST, ISDN is more appropriately classified as a premium service[6] because it is an enhanced service or product that is not functionally required for the provisioning of basic local exchange service.

U S WEST also asserts that the commission has no authority to require U S WEST to deploy ISDN, but rather acquires authority to regulate the service only when it is voluntarily deployed by a local exchange provider. This argument is premised on section 40-4-101(2) which it argues requires a regulated telephone utility to file tariffs before offering a service, but which contains no corresponding statutory authority for the commission to file such tariffs or otherwise to require the utility to file tariffs.[7]

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[6] *See* section 40-15-301(2)(b), C.R.S. (1993).

[7] The Commission does not address this particular legal argument in this decision. Questions concerning deployment, including our legal authority to require its deployment, will be addressed at a later date.

Finally, U S WEST discusses the problems of deploying ISDN on a mass market basis, including: (1) the fact that only 21 percent of the Denver-metro access lines are served from digital switches and upgrading the remaining 79 percent would involve an enormous capital outlay; (2) ISDN requires the ubiquitous deployment of SS7 ("Signalling System 7") which is difficult to justify economically; (3) connectivity problems; and (4) the improvidence of proceeding with ISDN deployment without first reviewing the Washington and Omaha trials.[8] The Company also notes that there is not a broad base demand for ISDN and, more importantly, that it may be a technology that will be quickly out-dated by newer technology, primarily broadband ISDN.

2. El Paso County Telephone Company

El Paso submitted the testimony of Russell Rowe and Joe Alexander, its corporate counsel and general manager, respectively. El Paso's testimony was similar to U S WEST's testimony, but focused on El Paso's circumstances as a rural telecommunications provider, serving primarily the area east of Colorado Springs. Mr. Rowe argued that ISDN is not functionally necessary for providing dial tone and placing or receiving a call. He further posited that the commission does not have authority to require El Paso to deploy ISDN on demand. Mr. Rowe represented that El Paso considers ISDN to be within the

[8] U S WEST deployed ISDN on a limited basis in Olympia, Washington. This trial was undertaken to better understand what it actually takes to satisfy customer needs. The Omaha, Nebraska, trial focused on applying what it has learned in Washington and also focusing on the economies and processes of providing ISDN-based services.

commission's jurisdiction to regulate only as a "premium service" under Part 3 of Title 40.

Mr. Alexander testified that El Paso's switches are not capable of providing ISDN because they are not SS7-equipped. According to Mr. Alexander, loop lengths would also limit ISDN's deployment to only 10 percent of its access lines. And, the cost of replacing or enhancing these facilities would double El Paso's rate base and likely result in increased rates. Because of the rural nature of El Paso's service territory, El Paso does not believe there is sufficient demand to justify deployment of ISDN. Like U S WEST, El Paso expresses concern that ISDN may not be the best long term investment when viewed in the light of fiber and broadband ISDN technologies.

3. AT&T Communications of the Mountain States, Inc.

In contrast with the positions taken by U S WEST and El Paso, AT&T sees ISDN as the next step in the evolution of the basic local exchange network. Ms. Rosemary Harris, a member of the technical staff at AT&T Laboratories, reviewed the history of the telephone network evolution from the use of live operators who manually connected calls, to the state-of-the-art digital central office switches. Ms. Harris characterized the deployment of ISDN as the last step in the digitalization of the telecommunications network.

Ms. Harris argues that because of the monopoly the local exchange area companies ("LECs") have over the local exchange network, and the LECs' position that the decision regarding whether or not to deploy

ISDN is solely within their discretion, residential and small business customers cannot have access to the benefits of ISDN. The commission, she argues, must exercise its regulatory authority to make available ISDN services to the captive telephone users.

Ms. Harris takes issue with a number of contentions of U S WEST. First, she argues that there are presently no competitive alternatives to ISDN. Existing analog lines cannot carry information at the speed or volume possible using ISDN. Second, and with respect to demand and justification for capital outlay for the deployment of ISDN, Ms. Harris posits that deployment of ISDN will foster the development and usage of many new services. She draws an analogy between ISDN and television, and points out that in the case of television, the demand grew after it was introduced. Third, she takes issue with U S WEST's contention that ISDN may soon be outdated. In the view of AT&T witness Harris, ISDN Basic Rate Interface ("BRI") will be the principal method to deliver digital services to residential and small business customers for "a long time to come." Exhibit 7, at 15-16. Finally, Ms. Harris notes that U S WEST's local network is becoming a digital network replacing the analog network, and therefore concludes that ISDN is not a premium service because it is functionally required to provide customers access to the digital basic local exchange network.

Ms. Harris's factual evidence that the digital network is replacing the analog network is the basis for AT&T's argument in its legal brief that ISDN is basic local exchange service. In distinction

to U S WEST and El Paso, which argue that ISDN is a premium service that cannot be classified as basic local exchange service since it is not "necessary" to place or receive a call, AT&T argues that ISDN meets the statutory requirement of basic local exchange service in that, where deployed, it provides the dial tone and local usage necessary to place or receive a call. It also cites to the legislative declaration that the goal of the regulatory structure is not only to foster competition but to protect and maintain the availability of high-quality telecommunications services. Deployment of ISDN, AT&T argues, is consistent with this legislative purpose because it brings high-quality telecommunications services to Colorado.

AT&T also argues that broadband ISDN, which is what U S WEST believes is the more appropriate investment, will not be ubiquitous for 25 years and that U S WEST is delaying deployment of ISDN for competitive reasons. If, argues AT&T, the commission permits U S WEST to delay implementation of ISDN now, and broadband is not available for 25 years, the legislative goal to provide high quality telecommunication services will have been defeated.[9]

4. **Prodigy, Inc.**

Prodigy witness Dr. Lee Selwyn asserts that ISDN is a basic local exchange service. Much like AT&T, Prodigy emphasizes that U S WEST's monopoly in the local exchange market prevents anyone other than U S WEST from bringing ISDN to local users. Prodigy also traces the

[9] *See* Brief of AT&T, at 8-9.

evolution of the local network over time from cord switchboards to electronic switching and states that regulators have historically promoted the public interest by mandating technological enhancements. Enhancements to the telephone network, argues Prodigy, eventually become essential elements to basic local exchange.

Like other parties whose services necessarily rely upon the local exchange network, Prodigy argues ISDN is the next evolutionary change in the telephone network. For example, it alleges digital connectivity became the standard for interoffice and interexchange service in the 1970s and that U S WEST has been upgrading the next layer of its network--the central office switches--since the mid-1980s. ISDN would extend digital communication from the workplace to the home. Moreover, says Prodigy, current and ongoing developments in information transfer technologies require high speed data transmission, and this cannot be accomplished by modem technology.

In this same vein, Dr. Selwyn argues it is unfair to ratepayers, who have already paid enormous sums for upgrading portions of the network to digital technologies, to deny them the benefits of the digital technology they purchased. Prodigy points to the fact that U S WEST has spent $1 billion since 1985 to upgrade its switches, and has contributed millions of dollars to BellCore[10] for research in this area. It also points to the fact that 67 of U S WEST's Colorado

[10] BellCore is a corporation which conducts research on telecommunication-related technologies. The regional Bell operating companies, including U S WEST, fund BellCore research.

switches are currently upgraded to digital capabilities, and that by 1995, 70 percent of the switches will have similar capabilities. It argues that the cost of making the "last mile" available to the customer is insignificant in comparison to what has already been spent by ratepayers for digital technology.

The legal arguments set forth in Prodigy's legal brief are similar to those advanced by AT&T and other proponents of ISDN. Prodigy rejects El Paso's contention that the statutory definition of basic local exchange service "freezes" the commission's jurisdiction over the network to the outmoded technology of analog plain old telephone service (often referred to as "POTS"). It argues that Colorado statutes assume technology will change and improve, and cites to the legislative declaration[11] that it is the policy of the state to protect and maintain the "wide availability of high-quality telecommunications services."

Prodigy argues that legislative sensitivity to technological evolution and the continued need to regulate the network in light of the new developments is further reflected in the commission's jurisdiction over "new products and services necessary for the provision of basic local exchange service."[12] The legislature, argues Prodigy, clearly contemplated under this section that the network would evolve and that the commission would have jurisdiction over

[11] Article 15 of Title 40 of the Colorado Revised Statutes governing regulation of intrastate telecommunications services.

[12] *See* Section 40-15-102(19), C.R.S. (1993).

the enhancements that become part of basic local exchange service as a result of that evolution.

Prodigy explains that "dial tone" simply means the incoming signalling tone and that "call" refers to any attempt to make a connection across the public network. It urges the commission not to construe these terms in a static manner, but rather as evolving terms consistent with the legislative declaration.

Prodigy also argues that ISDN has no effective competition and, therefore, cannot be regulated under Part 3. Prodigy asserts that modem technology is not a viable substitute for ISDN because of the slower speed of modems. Similarly, broadband ISDN is not a competitive alternative because it is not sufficiently deployed by U S WEST.

Finally, Prodigy argues that ISDN is not a premium service under Part 3 because, for the reasons argued earlier, it is the next evolutionary step of basic local exchange service.

5. Colorado Office of Consumer Counsel

Dr. Mark Cooper filed testimony on behalf of the OCC. Dr. Cooper, like Dr. Selwyn and Ms. Harris, testified that ISDN is the next step in the evolution of basic local exchange service. It is an upgrade in the network resulting in an improvement in the dial tone offered to subscribers.

Dr. Cooper argues that, just as access by residential subscribers to the switched analog network is a monopoly which only U S WEST can

control, access by residential customers to ISDN is only possible through this monopoly. Unless the commission makes ISDN ubiquitously available, he argues, competitive alternatives to ISDN will not develop, and services that could make use of ISDN technology also will not develop.

Dr. Cooper argues that the definition of basic local exchange service is not restricted to any particular technology or qualities, but rather, is related to functionality. He asserts that ISDN should be treated as an element of basic local exchange service and, further, that it is necessary for adequate and sufficient service.

Dr. Cooper agrees with Mr. Williams that ISDN is neither a product nor a service. He concludes, therefore, that it cannot be a new product or service which may be partially or completely deregulated under Part 3 or 4. Dr. Cooper argues in the alternative that, if the commission determines that ISDN should be treated as a product or service, then it should find that ISDN is a product or service "necessary" to "place or receive a call" within the local exchange area. In this manner, the term "necessary" within the statutory definition of "basic local exchange service" is deemed to relate not to technological requirements, but rather to an evolutionary determination of what constitutes adequate and efficient service. This is consistent with section 40-3-101(2), C.R.S. (1993) which states that "[e]very public utility shall *furnish, provide, and maintain* such service, instrumentalities, *equipment, and facilities* as shall promote the safety, health, comfort, and convenience of its

patrons, employees, and the public, *and as shall in all respects be adequate, efficient,* just, and reasonable." [emphasis added.]

Finally, like Prodigy, Dr. Cooper concludes that ISDN is not entitled to relaxed regulatory treatment because there are no competitive alternatives to ISDN.

6. MCI Telecommunications Corporation

MCI offered no witnesses at the hearing but filed a Statement of Position and Supplemental Statement of Position. Briefly, MCI adopts the same positions offered by AT&T, Prodigy, and the OCC. It argues that the commission has jurisdiction over ISDN as a basic local exchange service or alternatively as a new product or service that is necessary for the provisioning of basic local exchange service. As asserted by the OCC, MCI argues there is insufficient record to conclude that PRI is subject to emerging or effective competition and, therefore, is entitled to relaxed regulatory treatment.

7. Commission Staff

The commission staff submitted a legal brief in which it agrees with U S WEST that ISDN is neither a service nor product, but simply a technology. Staff argues that how information is transmitted over the network is irrelevant to the commission's jurisdiction under Title 40, Article 15, C.R.S. (1993). The statutes giving jurisdiction to the commission are not stated in terms of technologies, but as service or products. Staff concludes that the commission's jurisdiction is

not limited, or "frozen," to services or products delivered by a particular technology. For example, the fact that U S West is currently providing 1FR services in some cases through ISDN does not convert 1FR service to a Part 3 service.

FINDINGS OF FACT

There is no dispute among the parties that the public telecommunication networks will become digital networks. Currently, 30 percent of U S WEST's digital central office switches could be equipped with ISDN capabilities.[13] U S WEST itself predicts that broadband ISDN will become competitively deployed in the next few years. AT&T asserts that, and the assertion was unrebutted, the national and international telephone networks are quickly evolving into a global digital network. Several states already have been equipped to some substantial degree with ISDN. At the local level, interoffice communications are now primarily digital. Mr. Williams acknowledged during cross-examination that U S WEST's current capital investment plans call for large investments in fiber optic for new access lines over the next several years. It is simply undisputed that the telecommunications network architecture, including the architecture of the basic local exchange network, is undergoing, and will continue to undergo, a rapid and significant evolution, and that digital technology is a primary component of that evolution.

[13] *See* OCC Exhibit 3.

It is also undisputed that the telephone network has evolved significantly since the time of its inception, and the fact that these evolutionary changes have become the norm for the commission's understanding of "basic local exchange service" is particularly relevant to our consideration of the matter currently at issue. Live operators manually switching telephone calls were replaced in the 1920s and 1930s with electromechanical switches, and in the 1970s these electromechanical switches were, in turn, quickly being replaced by analog stored program control electronic switching systems. In turn, these switches are now generally being replaced by digital switches. Multi-party lines involving 2, 4, 6, and 8 parties on a single loop were once considered adequate service. Now, the norm for adequate basic service has evolved into single-party lines.[14] Likewise, other upgrades in telephone lines and other facilities have been routinely incorporated into the local network and created new standards for what is considered basic local exchange service.

[14] See Rule 17.1 ("Basic Telephone Service Standard"), 4 Code of Colorado Regulations 723-2.

Indeed, U S WEST acknowledges this point even as it relates to current technological improvements. Mr. Williams testified that SS7 and digital central office switches are no longer premium services where they are deployed but are considered standard or basic services.[15] Similarly, he acknowledges that broadband ISDN could become the natural evolution of the network and become a basic, not premium, service.[16]

This evolution in what is considered adequate basic local exchange service is clearly evident in other dockets. For example, U S WEST is in the second phase of its Rural Facilities Improvement Program ("RFIP I and II"). This program calls for enormous upgrades to its local network to eliminate most of the remaining multi-party lines.[17] The cost of this program is recovered in part as a surcharge to basic local exchange customers. Similarly, U S WEST is currently implementing the Switch and Facilities Enhancement Program ("SAFE") which will upgrade switches to more technologically advanced systems, including digital switches.[18] And like the RFIP I and II programs, the cost of these upgrades is paid for in part by basic local exchange customers.

Independent telephone companies also are implementing similar upgrades to their networks. Using funds made available through the

[15] *See* Transcript, at 78-80.

[16] *See* Transcript, at 90.

[17] *See* Decision No. C93-36, Docket No. 92A-109T.

[18] *See* Decision No. C89-1709, Docket No. 89A-474T.

Colorado High Cost Fund,[19] small LECs have upgraded multi-party lines to single-party lines and replaced electromechanical central office switches with digital switches, and completing other upgrades as well. The cost of these upgrades is collected in part from subscribers of basic local exchange service.[20]

From a functional perspective, ISDN is an improvement in the efficiency of single-party service. With ISDN, a pair of copper wires which presently provides single-party service will have the functional capability to carry several channels over the same single pair. For example, ratepayers who currently have one pair of copper wires to their homes will have the functional equivalent of two or more telephone lines using ISDN.

A similar analogy can be made regarding SS7 and the "D" channel of ISDN. SS7 is a software technology that utilizes a separate channel over which telemetry signals are sent to manipulate how the telephone call is treated. Its cost is recovered in part from subscribers of basic local exchange service. U S WEST acknowledges that SS7 is an incremental evolution in the local network and, therefore, is not a premium service.[21] Like SS7, the "D" channel for ISDN is also a separate channel over which telemetry information is transmitted. It provides telemetry functions for ISDN very much like SS7 provides

[19] The Colorado High Cost Fund, created pursuant to section 40-15-208 (1992), is to provide financial assistance to small LECs "to help make basic local exchange service affordable."

[20] *See* section 40-15-201 to 208, C.R.S. (1993).

[21] See n.15.

telemetry for interoffice service. Thus, the commission sees the "D" channel as an evolution in basic local exchange service.

We also find that the digital upgrades to the local network that have already occurred are being paid for at least in part by basic local exchange customers. These upgrades have taken place either through the normal capital expenditure process of the utilities, or through innovative programs such as the Colorado High Cost Fund, RFIP I and II, and the SAFE program. In all these cases, U S WEST and the independent telephone companies have been proponents of recovering the cost of some or all of the upgrades deployed under the programs from basic local exchange ratepayers. While not essential to our decision here, the commission finds it inequitable for LECs to treat these digital upgrades as part of basic local exchange for purposes of recovering their costs, but then to dispute the same treatment when the question of regulatory jurisdiction is raised.

Moreover, the commission's assertion of jurisdiction over ISDN is consistent with the regulatory purpose of the commission. Regulation is the mediator between the public and the utility where the service has monopolistic attributes. U S WEST has a monopoly over its service network. The conversion of this monopoly network from analog to digital will not alter its monopoly. The commission's oversight will be as crucial then as it is now.

CONCLUSIONS OF LAW

In 1987, the Colorado General Assembly separated telecommunications products and services into three categories. Part 2 services are fully regulated by the commission.[22] Part 3 services also are fully regulated by the commission, but, with a proper showing and commensurate finding by the commission of emerging or effective competitive forces, a Part 3 service or product may be entitled to relaxed regulation or de-regulation.[23] Part 4 services and products are legislatively deemed to face full competition from other providers and, for that reason, are fully exempt from regulatory oversight.[24]

Part 2 services include "basic local exchange services." "Basic local exchange service" is defined as the telecommunications service which provides a "dial tone and local usage necessary to place and receive a call."[25] "Telecommunications service" itself is defined as the "electronic or optical transmission of information between separate points by prearranged means."[26]

It is undisputed that ISDN provides dial tone and the local usage necessary to place or receive a call. But the LECs urge that the statute defining basic local exchange service should be interpreted so that the commission is constrained in what we can require LECs to provide as basic local exchange service to those features that

[22] *See* section 40-15-201 to 208, C.R.S. (1993).

[23] *See* section 40-15-301 to 308, C.R.S. (1993).

[24] *See* section 40-15-401 to 404, C.R.S. (1993).

[25] *See* section 40-15-102(3), C.R.S. (1993).

[26] *See* section 40-15-102(29), C.R.S. (1993).

are "necessary" to place or receive a voice telephone call. This is not the correct interpretation of this provision.

In drafting this statute, the legislature demonstrated more than a modicum of foresight. The language in the statute is drafted in such a manner as to allow for continued State oversight over essential utility services, through the commission, in an evolutionary manner. Thus, the statute does not define "basic local exchange service" in terms of a technology. And, wisely, the statute does not attempt to describe the nature of "adequate service." It simply states that basic local exchange service is the service that provides a dial tone and local usages that are necessary to access the network, and leaves it to time and technology, and thoughtful regulatory oversight, to fill in the details. For example, if new technology were developed which increased the conductivity of copper wires, eliminated the need for boosters on the lines, or increased the efficiency of existing central office switches so that the number of switching connections made increased three-fold, the commission would clearly have the authority to set the standard for basic local exchange service to incorporate the new, more efficient technology.

ISDN is not different from the examples offered. It is an evolution in the efficiency of the facilities providing basic local exchange service. The commission has the discretion to conclude, based on adequate evidence, that basic local exchange service will be delivered by analog technology, or through the use of more efficient digital technology. Both technologies produce a dial tone and local

usage necessary to place or receive a call. Again, the statute does not restrict the technology that can be used to provide dial tone and local usage.

Under the interpretation of the telecommunications statutes proffered by the LECs, the commission would be forced to conclude today that an LEC which continued to offer only a manually-operated switchboard and multi-party service would be offering adequate basic local exchange service. Such a system, after all, would have a dial tone and local usage necessary to place or receive a call. On the other hand, a neighboring LEC which had upgraded its local network to a digital network before passage of the 1987 Telecommunications Act, would be held to a different and higher standard for "adequate service" merely because its pre-Act technology would have been "frozen" by the 1987 Telecommunications Act. We do not believe that the legislature intended to devise a telecommunications framework that would result in a patchwork of standards governing "adequate service."

Nor can the commission find that the legislature intended to "freeze" the deployment of technological advancements in our state--in fact, the opposite intent is quite clear. The legislature was hopeful that it had established a framework that would foster the continued upgrading of Colorado's telephone network to make available "high-quality telecommunications services." Clearly, the legislature intended that the commission have authority to direct a monopoly provider to upgrade antiquated service to meet the

commission's determination, based upon evidence in a hearing record, regarding the technology and utility practices necessary to deliver adequate service to the customers of the basic local exchange. RFIP I and II, SAFE, and Commission Docket No. 92F-289T, *Turnbow v. U S WEST*, are but a few examples of programs and cases where this commission has implemented a policy resulting in required, uniform upgrades of basic local exchange facilities from their pre-1987 status.

We agree with the argument propounded by many of the parties to this proceeding that the legislature contemplated an evolving, improving basic local telephone network and that the State's interest in that network be monitored through the continued exercise of jurisdiction by the utility commission. This legislative intent is evident not only because the statute avoids tying commission jurisdiction to specific technology, but also from the fact that the legislature gave the commission jurisdiction over "new products and services that are necessary for the provision of basic local exchange service." [27] This clearly demonstrates that the legislature contemplated that evolution of the local exchange network would not divest the commission of its authority to regulate basic local exchange service.

Additional support for this statutory interpretation is found in the definition of "telecommunications services." [28] This definition includes service options which were in nascent stages with

[27] *See* section 40-15-201(2)(f), C.R.S. (1993).

[28] *See* section 40-15-102(29), C.R.S. (1993).

little demand at the time the section was written, but which were clearly evolving as the new standard. The definition includes, for example, optical transmission (which is heavily used in digital communication), "information" transmission, and traditional "voice" transmission.

In this regard, the commission also rejects the foundational theory underlying the LECs' argument that the commission may not order deployment of certain technological improvements to facilities, *i.e.*, their argument that the question of whether a particular service is "premium" or "standard" is dependent upon the LEC's pecuniary-interest-driven decision to deploy it. If the telecommunications industry has developed improvements which the commission, in the responsible exercise of its constitutional and statutory authority, determines to be necessary for the adequate and efficient provision of basic local exchange service, it is this commission's obligation to ensure that those improvements are deployed. It cannot be sound public policy to conclude that the standard of adequacy of essential monopoly services will be left to the unfettered discretion of the LECs.

Finally, we note that our decision here is consistent with this commission's past decisions and with the decisions of other state utility commissions. In our recent decision in Re Proposed Rules Regarding Basic Telephone Service, 4 CCR 723-2, Docket No. 92R-282T, Decision No. C92-1642, the commission found that the proposed rules concerning basic local exchange service were intended to reflect a

"standard for adequate service in light of evolving public expectations and changing technology."

Other jurisdictions have come to the same conclusion. For example, in *Re Least-Cost Investments, Energy Efficiency, Conservation and Management of Demand for Energy In Re: Authority to Order Utilities to Implement Demand Side Management Programs*, 122 PUR4th 153 (Ver. 1991), a state statute requiring utilities to provide "reasonably adequate service" was held to establish an evolving standard.

> The concept of "reasonably adequate service, accommoda-tion, and facilities" has been, and must be, an evolving one. We cannot expect the legislature to mandate in statute the precise contours of utility programs and technologies. It is the task of the regulatory process to make these determinations on the basis of the evidence in the hearing record. Ultimately, it must be within the power of the state (acting through its utility commission) to direct a monopoly provider of essential services to employ the up-to-date technology and utility practices necessary to deliver adequate service to its customers and to minimize the utility's revenue requirement.

See, also, *Re General Telephone Company of California*, 15 CPUC 2d 599, Application 83-08-02, Case 82-10-08, Decision 84-07-108.

Having found that the next evolution in the local network will be digital technology, and given the commission's legal conclusions that the definition of basic local exchange service neither defines "adequate service" nor freezes technology at a given stage of development, the commission concludes that we have Part 2 jurisdiction over ISDN as a means of providing basic local exchange service.

The commission believes that it is premature to differentiate between narrowband ISDN BRI and narrowband ISDN PRI for purposes of

determining jurisdiction. The parties neither argued nor presented evidence that differentiated between these two interfaces, other than to discuss their technical differences. Thus, the record in this proceeding does not provide an adequate basis for distinction between these two interfaces for regulatory purposes. At this point, the commission concludes that the two interfaces are simply technical parameters to a technology over which we have jurisdiction.

Given the scope of the issues raised in the hearing and in the legal briefs, it is also appropriate to indicate here what the commission is not deciding today. First, the commission does not conclude that adequate basic local exchange service requires ISDN. The commission simply concludes here that we have jurisdiction over ISDN if it is provided.

Second, the commission does not by this decision intend to express any conclusion that narrowband ISDN should be ubiquitously deployed. While digital technology will undoubtedly be so deployed, the extent to which narrowband ISDN should be deployed is neither discussed nor resolved here. U S WEST and El Paso have raised important and difficult issues regarding the extent to which narrowband ISDN should be deployed. Some of these issues include questions regarding the demand for such services, the period of time over which such services should be deployed, the impact of planned cable and broadband ISDN deployment on the decision to deploy narrowband ISDN, and the costs of ISDN deployment. These issues have not been addressed by this commission to date.

THEREFORE THE COMMISSION ORDERS THAT:

1. The commission grants the motions for a second extension of time to file statements of position filed by U S WEST Communications, Inc.; the Colorado Office of Consumer Counsel; and El Paso County Telephone Company.

2. The commission concludes that it has jurisdiction over Integrated Service Digital Network (Basic Rate Interface and Primary Rate Interface), but does not conclude that Integrated Service Digital Network is necessary for adequate basic local exchange service.

3. The commission must now look to a number of other issues surrounding Integrated Service Digital Network, including if, when, and how it should be deployed in Colorado. Again, this is an investigatory proceeding to gather as much information as possible so that we can better understand what the issues are and how best to resolve them. Therefore, the commission will, by separate order, set prefiling dates for testimony and exhibits, and other hearing dates. The parties are ordered to file with this commission on or before 20 days after the effective date of this order, information regarding the following matters:

a. A list of issues the party believes the commission should address next.

b. Dates for prefiled direct testimony and exhibits and prefiled rebuttal testimony and exhibits.

c. Available prehearing conference dates between June and August 1994.

d. Available hearing dates between June and August 1994.

This Order is effective on its Mailed Date.

ADOPTED IN OPEN MEETING June 23, 1993.

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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Commissioner

JOINED IN PART BY CHAIRMAN ROBERT E. TEMMER
AND COMMISSIONER VINCENT MAJKOWSKI.

CHAIRMAN ROBERT E. TEMMER JOINING IN PART AND DISSENTING IN PART:

I join in this decision in all respects, except that I respectfully dissent from that portion of the decision that grants U S WEST, OCC, and El Paso a second extension of time to file Statements of Position. I believe all participants should be mindful of trying

to minimize the costs involved and the time consumed in our proceedings. When an advance schedule has been established so that everyone is aware of due dates, steps should be taken in advance to make sure the dates can be complied with. Such steps could include: ordering a transcript in advance of the hearing and specifying an availability date that would allow time for the preparation of a statement of position; or, making a decision that a statement of position would be prepared without a transcript. I do not believe the parties took such steps in this case.

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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Chairman

COMMISSIONER VINCENT MAJKOWSKI JOINING IN PART AND DISSENTING IN PART:

I concur in granting U S WEST's, OCC's and El Paso's motions for extensions of time to file statements of Position, and I dissent as follows:

It is this Commissioner's position that narrowband ISDN basic rate interface ("BRI") is the next technological evolution of basic service in regulated telecommunications service and basic local exchange services. Therefore, narrowband ISDN BRI, which can operate on a single pair of copper wire (the same single pair of copper wire that was and is used to evolve telecommunications services from the analog to digital environments), should be classified under Part 2 of Article 15, Title 40, services fully regulated by the commission. I also am of the opinion that narrowband ISDN primary rate interface, or anything in excess of this, should initially be classified as Part 3, emerging competitive telecommunications services, because of their enhanced capabilities which, I believe, are outside the scope or definition of basic service.

I concur that this Commission has jurisdiction over ISDN. I believe narrowband ISDN BRI should be ubiquitously deployed just as digital technology is being deployed. This technology has caused the next evolution of basic service.

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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Commissioner

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