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Federal Communications Commission
Office of Secretary

In the Matter of
Federal-State Joint Board on Universal Service

SUMMARY OF REPORT AND ORDER

CC Docket No. 96-45

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FOREWARD

The Federal Communications Commission ("FCC" or "Commission") issued its Universal Service Report and Order on May 8, 1997. The decision implements statutory requirements for reform of the Universal Service System established by the Telecommunications act of 1996. It totals almost 500 pages plus hundreds of pages of appendices (which are not summarized herein). The FCC also contemplates issuance of a number of future Public Notices and the convening of a new Federal-State Joint Board to address unresolved issues, including the sizing of the high cost subsidy fund.

We have done our best to represent the FCC's decision accurately on a range of issues within a short space and in a consistent format. However, many supporting arguments have been truncated and rephrased. Accordingly, in all cases, it is advisable to review the actual text of the Report and Order. The summary contains citations to paragraph numbers in the FCC's original text.

The Order is effective 30 days after publication of a summary of the Order in the Federal Register.

* * *

If you have any questions concerning this memorandum or the Report and Order, please call R. Michael Senkowski, Jeffrey S. Linder, Robert J. Butler or Gregory J. Vogt at 202-429-7000.

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I. INTRODUCTION (¶ 1-20)

Goals (¶ 2) Consistent with the explicit statutory principles of § 254, the FCC seeks to achieve four critical goals. First, all of the universal service objectives established by the Act must be implemented, including those for low-income individuals, consumers in rural, insular, and high cost areas, schools, libraries, and rural health care providers. Second, rates for basic residential service must be maintained at affordable levels. Third, affordable basic service must continue to be available to all users through an explicit universal service funding mechanism. For the present, this goal will be achieved by maintaining the existing high cost mechanism at current funding levels, picking a platform mechanism by December 1997, and implementing a forward-looking economic cost mechanism for universal service for non-rural carriers starting January 1, 1999. Fourth, the benefits of competition must be brought to as many consumers as possible. To implement this goal the implicit subsidies in interstate access charges must be addressed in the access charge reform proceeding.

The Current And Future Rules (¶ 3) These rules reflect virtually all of the Joint Board's recommendations and fulfill the universal service goals established by Congress. The FCC will, however, seek additional factfinding and deliberation by the Joint Board, and further coordination with individual state commissions, during approximately the next fifteen months. With the benefit of further recommendations from the Joint Board, specifically on the implementation of support for rural, insular, and high cost areas, the Commission will act not later than August 1998 to harmonize the universal service program with new state actions and competitive conditions.

Old Implicit Subsidies Are Made Explicit (¶ 6, 9-12) Today, universal service is achieved largely through implicit subsidies. The Commission currently has in place some explicit support mechanisms directed at increasing network subscribership by reducing rates in high cost areas (the high cost fund and Long Term Support) and at making service affordable for low-income consumers (the Lifeline and Link Up programs). The current "system," however, consists principally of a number of implicit mechanisms at the state and, to a substantially lesser extent, federal levels designed to shift costs from rural to urban areas, from residential to business customers, and from local to long distance service.

Through this Order and the accompanying *Access Charge Reform Order*, the FCC establishes rules that will identify and convert existing federal universal service support in the interstate high cost fund, the dial equipment minutes (DEM) weighting program, Long Term Support (LTS), Lifeline, Link Up, and interstate access charges to explicit competitively neutral federal universal service support mechanisms. The FCC will provide universal service support to carriers serving rural, insular, and high cost areas through a mechanism based on forward-looking economic costs beginning on January 1, 1999, for areas served by non-rural LECs, and establish the process to determine a forward-looking economic cost methodology for areas served by rural LECs.

States Have A Significant Role (¶ 7) In addition to the FCC's role, Congress also entrusted the states with a role in universal service, including expressly granting states the

authority "to adopt regulations not inconsistent with the Commission's rules to preserve and advance universal service," and requiring every telecommunications carrier that provides intrastate telecommunications services to "contribute, on an equitable and nondiscriminatory basis, in a manner determined by the state, to the preservation and advancement of universal service in that state" when such state establishes universal service support mechanisms. States traditionally have promoted universal service by, among other things, assuring affordable residential access by explicitly and implicitly subsidizing and pricing basic telephone service at levels associated with very high telephone subscribership rates, currently 94.2%.

All Universal Service Costs Are *Not* Removed From Interstate Access Charges (¶ 13) Section 254 does not compel the FCC to immediately remove all universal service costs from interstate access charges. Under the FCC's timetable, over the next year implicit interstate universal support will be identified and made explicit, as provided by § 254(e). Moreover, as with any implicit support mechanism, universal service costs are presently intermingled with all other costs, including the forward-looking economic cost of interstate access and historic costs associated with the provision of interstate access services. The FCC cannot remove universal service costs from interstate access charges until it can identify those costs, which it will not be able to do even for non-rural incumbent local exchange carriers (ILECs) before January 1, 1999.

The FCC Has No Jurisdiction Over Local Rates And Subsidies (¶ 14) The FCC does not attempt to identify existing implicit universal service support presently effected through intrastate rates or other state mechanisms, nor does it attempt to convert such implicit intrastate support into explicit federal universal service support. The Commission, in light of § 2(b) of the Communications Act, does not have control over the local rate-setting process, which generally has aimed at ensuring affordable residential rates.

Universal Service Funding Will Be Forward-Looking, Explicit And Portable (¶ 15) Federal universal service support will be distributed based on the interstate portion of the difference between the forward-looking economic cost of providing service and a nationwide revenue benchmark. The amount of support will be explicitly calculable and identifiable by competing carriers, and will be portable among competing carriers, *i.e.*, distributed to the eligible telecommunications carrier chosen by the customer. It will be funded by equitable and non-discriminatory contributions from all carriers that provide interstate telecommunications services. Pursuant to the *Access Charge Reform Order,* federal universal service support received by ILECs must be used to satisfy the interstate revenue requirement otherwise collected through interstate access charges. Accordingly, interstate implicit support for universal service will be identified and removed from interstate access charges, and will be provided through explicit interstate universal service support mechanisms.

No Increase In Primary Residential Line SLC (¶ 16) The FCC will not permit any increase in the primary residential line SLC and will not order the creation of any additional end-user charges for local service over these lines. The primary reason for not mandating the recovery of universal service contributions through basic rates, directly raising charges for basic access through an increase in the primary residence SLC, or adopting any new end-user

charge from the local telephone company to the residential consumer for basic access is that the United States has high subscribership today, and the FCC does not want to undermine the presumably "affordable" existing rates.

The Existing High Cost/Low Income Programs Will Be Largely Unchanged Until 1999 (¶ 18-19) The FCC will retain, with some limited modifications, the existing explicit high cost and low-income support programs until January 1, 1999, but make collection more equitable and nondiscriminatory and allow carriers other than ILECs to receive support. The total amount of federal high cost support (both implicit and explicit) will not decline materially, but will be restructured. Over time, it will be necessary to adjust the universal service support system to respond to competitive pressures and state decisions so that the support mechanisms are sustainable, efficient, explicit, and promote competitive entry. The FCC expects to use both prescriptive (i.e., regulatory) and more permissive (i.e., market-based) approaches to complete this task.

II. EXECUTIVE SUMMARY (¶ 21-42)

Principles (¶ 21) The FCC will follow the six principles set forth in § 254(b) as well as competitive neutrality. (See page 7 below.)

Definition Of Universal Service (¶ 22) The definition of supportable services includes: voice grade access to the public switched network, with the ability to place and receive calls; Dual Tone Multifrequency (DTMF) signaling or its functional equivalent; single-party service; access to emergency services, including in some instances, access to 911 and enhanced 911 (E911) services; access to operator services; access to interexchange services; access to directory assistance; and toll limitation services for qualifying low-income consumers. Eligible carriers must offer each of the designated services in order to receive universal service support. A carrier that currently is unable to provide single-party service may petition its state commission to receive universal service support for a designated period of time while the carrier completes the network upgrades needed to offer single-party service. Further, because some carriers currently may be unable to provide access to E911 service and toll limitation services, carriers may receive, for a specified period of time, universal service support while completing network upgrades required for them to offer these services. In addition, all business and residential connections that are currently supported will continue to be supported until the forward-looking methodology for high cost companies is operational. Finally, the FCC will convene a Federal-State Joint Board to review the definition of universal service on or before January 1, 2001.

Affordability (¶ 23) States should monitor rates and non-rate factors, such as subscribership levels, to ensure affordability.

Carriers Eligible For Universal Service Support (¶ 24-25) Pursuant to § 214(e), eligible carriers must offer and advertise all the services supported by federal universal service support mechanisms throughout their service areas using their own facilities or a combination of their own facilities and resale of another carrier's services. The term "facilities" in

§ 214(e)(1) means any physical components of the telecommunications network that are used in the transmission or routing of the services designated for support under § 254(c)(1). A carrier that offers the federally supported services through the use of unbundled network elements, in whole or in part, satisfies the facilities requirement of § 214(e). Eligible carriers are not required to offer the supported services wholly over their own facilities because the statute allows an eligible carrier to offer those services through a combination of its own facilities and resale. Section 214(e), however, precludes an eligible carrier from offering the supported services solely through resale in light of the statutory requirement that a carrier provide universal service, at least in part, over its own facilities.

The statute affords state commissions the primary responsibility for designating service areas served by *non-rural* carriers. States should, however, not designate service areas that are unreasonably large because unreasonably large service areas will discourage competitive entry by increasing the expenses associated with such entry. For similar reasons, and to promote competitive neutrality, state commissions should not designate service areas that are based on ILECs' study areas. Section 214(e)(5) requires a service area served by a *rural* telephone company to be that company's existing study area, unless the states and the Commission, after taking into account the findings of the Joint Board, establish a different definition. To minimize potential procedural delays associated with the federal-state cooperation that is required to alter the definition of a service area served by a rural carrier, the FCC establishes expedited procedures by which the definition of such an area may be changed in accordance with § 214(e)(5). Retaining the study areas of rural telephone companies as rural service areas is generally consistent with § 214(e)(5), the policy objectives underlying § 254, and with the FCC's decision to use a rural ILEC's embedded costs to calculate that company's support under the modified existing high cost mechanisms. States are nevertheless encouraged to consider disaggregating a non-contiguous service area of a rural telephone company into service areas composed of the contiguous portions of that area because some wireless carriers may be unable to provide service in non-contiguous service areas. The FCC encourages state commissions to submit to the Commission reports detailing the status of unserved areas in their states.

High Cost Support (¶ 26) A cost methodology based on forward-looking economic cost should be used to calculate the cost of providing universal service for high cost areas because it best reflects the cost of providing service in a competitive market for local exchange telephone service. The FCC believes that a cost methodology can be designed based upon such consistent assumptions as economic depreciation, forward-looking cost of capital, and forward-looking outside plant cost, including reasonable profits. However, the cost methodologies presented to the FCC thus far are not sufficiently reliable to be used to determine universal service support at this time. Consequently, the FCC will issue a Further Notice of Proposed Rule Making (FNPRM) to establish a universal service support mechanism based on forward-looking economic cost for non-rural carriers. The FCC should adopt a forward-looking mechanism for non-rural carriers by August 1998, which will take effect on January 1, 1999. That mechanism will allow a state either to use the Commission's cost methodology or develop its own cost study, within the FCC guidelines, to determine the level of universal service support for carriers in that state. Until the forward-looking mechanism takes effect on

January 1, 1999, non-rural carriers will continue to receive high cost loop support and LTS based on the existing universal service mechanisms. Rural carriers will continue to receive support based on their embedded costs using the current mechanisms with some modifications. The FCC will continue to work with the Joint Board regarding the development of appropriate forward-looking economic cost mechanisms for rural carriers and continue to explore the use of competitive bidding as a mechanism to provide universal service.

Support For Low-Income Consumers (¶ 27-28) There will be three broad categories of changes to the Lifeline and Link Up programs: (1) Lifeline will be made available in all states, territories, and commonwealths of the United States, the state matching requirement will be modified, and the federal Lifeline support amount will be increased; (2) the contribution and distribution of low-income support will be made competitively and technologically neutral by requiring equitable and nondiscriminatory contributions from all providers of interstate telecommunications services, consistent with §§ 254(d) and (e), and allowing all eligible telecommunications carriers to receive support for offering Lifeline and Link Up service; and (3) low-income consumers will be provided with access to certain services and policies including voice grade access to the public switched network, the ability to place and receive calls, DTMF signaling or its functional equivalent, single-party service, access to emergency services, including in some circumstances, access to 911 and E911, access to operator services, access to interexchange services, access to directory assistance, and toll-limitation services, at the customer's request, to the extent that carriers are capable of providing them, Finally, for low income customers there will be a prohibition on the disconnection of local service for non-payment of charges incurred for toll calls and a prohibition on requiring service deposits from Lifeline customers who elect toll blocking.

Support For Schools And Libraries (¶ 29) Schools and libraries are permitted to receive telecommunications services, Internet access, and internal connections at discounted rates from telecommunications carriers, In addition, discounts are provided for Internet access and internal connections provided by non-telecommunications carriers.

Competitive Bidding, Price, Cap (¶ 30-31) Schools and libraries must seek competitive bids for all services eligible for § 254(h) discounts. The lowest corresponding price, defined for each telecommunications carrier bidding to serve a school or library as the lowest price that carrier charges to similarly situated non-residential customers in its geographic service area for similar services, shall constitute the ceiling for that carrier's competitively bid pre-discount price for interstate rates. The FCC expects state commissions to require the same for intrastate rates. In areas in which there is only one bidder, that bidder's lowest corresponding price would constitute the pre-discount price. Discounts from 20 percent to 90 percent for all telecommunications services, Internet access, and internal connections are adopted, with the level of discounts correlated to indicators of poverty and high cost for schools and libraries. Finally an annual cap of $2.25 billion on the amount of funds available to schools and libraries is set.

Eligibility, Consortia, Accountability (¶ 32-34) All schools falling within the definition contained in the Elementary and Secondary Education Act of 1965 and meeting the criteria of § 254(h), whether public or private, shall be eligible for universal service support. A library meeting the definition contained in the Library Services and Technology Act that is also funded as an independent entity is eligible for support. Schools and libraries should be permitted to participate in consortia for purposes of aggregating their demand with others. However, eligible schools and libraries participating in consortia may receive universal service support only if such consortia are composed of other eligible schools and libraries, eligible health care providers, and ineligible public sector (governmental) members, with one exception. A consortium may include ineligible private sector entities if those entities are receiving tariffed rates or market rates from providers that do not file tariffs. Further, § 254(h)(3) restricts any resale whatsoever of services purchased pursuant to a § 254(h) discount. Finally, in order to provide for accountability on the part of schools and libraries, these entities must: (1) conduct internal assessments of the components necessary to use effectively the discounted services they order; (2) submit a complete description of services they seek so that it may be posted for competing providers to evaluate; and (3) certify to certain criteria under penalty of perjury.

Support For Health Care Providers (¶ 35-37) Support for health care providers is subject to a $400 million annual cap and is available to all public and not-for-profit health care providers located in rural areas. Any telecommunications service of a bandwidth capacity up to and including 1.544 Megabits per second (Mbps) that is necessary for the provision of health care services is eligible for support, but there are limits on the services that each rural health care provider may obtain. Telecommunications carriers must charge eligible rural health care providers a rate for each supported service that is no higher than the highest tariffed or publicly available commercial rate for a similar service in the closest city in the state with a population of 50,000 or more people, taking distance charges into account. Each health care provider that lacks toll-free access to an Internet service provider may receive the lesser of the toll charges incurred for 30 hours of access to an Internet service provider or $180 per month in toll charge credits for toll charges imposed for connecting to the Internet. Carriers providing supported telecommunications services to health care providers will be entitled to treat the amount eligible for support as an offset against their annual universal service obligation and receive a reimbursement for any amount by which the support due the carrier exceeds the obligation in any one year. Non-telecommunications providers providing supported services to health care providers will receive direct reimbursement for the eligible amount.

Interstate Subscriber Line Charge/Carrier Common Line Charges (¶ 38) LTS will be removed from carrier common line (CCL) charges. This change will be effectuated in the access charge reform proceeding. Payments similar to LTS will be provided out of the new universal service support mechanisms to rural telephone companies that currently receive LTS or competitors that win subscribers from such carriers. The current $3.50 cap on the SLC is maintained for primary residential and single-line business lines.

Administration Of Support (¶ 39-42) All telecommunications carriers that provide interstate telecommunications services must contribute to the support mechanisms. In addition, providers of interstate telecommunications on a non-common carrier basis and payphone aggregators must contribute to the support mechanisms pursuant to the Commission's permissive authority over "other providers of interstate telecommunications." Contributors whose contribution would be less than the administrator's administrative cost of collecting the contribution will be exempt from contribution and reporting requirements under the *de minimis* exemption contained in § 254(d). Contributions will be assessed against end-user telecommunications revenues, revenues derived from end users for telecommunications and telecommunications services, including SLCs. Support for the programs for schools, libraries, and rural health care providers be assessed based on interstate and intrastate telecommunications revenues. For the balance of the support mechanisms, the FCC will assess contributions for support for the high cost and low-income programs on interstate telecommunications revenues. Recovery of universal service contributions is permitted through the contributing carrier's interstate rates. For ILECs subject to price caps, universal service contributions may be added to the carrier's common line basket, and recovered in the same manner as common line charges. NECA is appointed the temporary administrator of the support mechanisms, subject to changes in NECA's governance that render it more representative of non-ILEC interests. The FCC shall also create a Federal Advisory Committee to recommend a neutral, third-party permanent administrator of the support mechanisms.

III. PRINCIPLES (¶ 43-55)

Section 254(b) (¶ 43-45) The universal service program will be consistent with the six principles set forth in § 254(b): (1) quality services should be available at just, reasonable, and affordable rates; (2) access to advanced telecommunications and information services should be provided in all regions of the Nation; (3) consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas; (4) all providers of telecommunications services should make an equitable and non-discriminatory contribution to the preservation and advancement of universal service; (5) there should be specific, predictable and sufficient [f]ederal and [s]tate mechanisms to preserve and advance universal service; and (6) elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services.

Competitive Neutrality (¶ 46-48) In addition, universal service support mechanisms and rules should be competitively neutral. In this context, competitive neutrality means that universal service support mechanisms and rules neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another.

Technological Neutrality (¶ 49-52) The principle of competitive neutrality in this context should include technological neutrality. Technological neutrality will allow the marketplace to direct the advancement of technology and all citizens to benefit from such development. The concept of technological neutrality does not, however, guarantee the success of any technology supported through universal service support mechanisms, but merely provides that universal service support should not be biased toward any particular technologies. The FCC anticipates that a policy of technological neutrality will foster the development of competition and benefit certain providers, including wireless, cable, and small businesses, that may have been excluded from participation in universal service mechanisms if we had interpreted universal service eligibility criteria so as to favor particular technologies.

Principles Rejected By The FCC (¶ 53-56) The FCC refused to adopt the following universal service principles offered by commenters: (1) making universal service offerings accessible to individuals with disabilities; (2) promoting access to affordable telecommunications services to other groups and organizations, including minorities and community-oriented organizations; (3) promoting economic efficiency; (4) providing access to select services such as interactive services; and (5) minimizing the size and growth of the fund.

IV. DEFINITION OF UNIVERSAL SERVICE: WHAT SERVICES TO SUPPORT (¶ 56-107)

A. Designated Services (¶ 58-87)

The FCC adopted the Joint Board's recommendation and defined the "core" or "designated" services that will be supported by universal service support mechanisms as: single-party service; voice grade access to the public switched network; DTMF signaling or its functional equivalent; access to emergency services; access to operator services; access to interexchange service; access to directory assistance; and toll limitation services for qualifying low-income consumers. In arriving at this definition, the Commission adopted the Joint Board's analysis and recommendation that, for purposes of § 254(c)(1), the Commission define "telecommunications services" in the functional sense, rather than on the basis of tariffed services. The Commission also adopted the Joint Board's analysis and finding that all four criteria enumerated in § 254(c)(1) must be considered, but not each necessarily met, before a service may be included within the general definition of universal service, should it be in the public interest.

Single-Party Service (¶ 62) The FCC adopted the Joint Board's finding that the term "single-party service" means that only one customer will be served by each subscriber loop or access line. Eligible carriers must offer single-party service in order to receive support regardless of whether consumers choose to subscribe to single- or multi-party service. In addition, to the extent that wireless providers use spectrum shared among users to provide service, we find that wireless providers offer the equivalent of single-party services when they offer a dedicated message path for the length of a user's particular transmission. The FCC concurred with the Joint Board's recommendation not to require wireless providers to offer a single channel dedicated to a particular user at all times.

Voice Grade Access to the Public Switched Network (¶ 63-64) The FCC concluded that voice grade access includes the ability to place calls, and thus incorporates the ability to signal the network that the caller wishes to place a call. Voice grade access also includes the ability to receive calls, and thus incorporates the ability to signal the called party that an incoming call is coming. Accordingly, the FCC adopted the Joint Board's recommended definition of voice grade access to the public switched network among the core services designated pursuant to § 254(c)(1). The FCC also adopted the Joint Board's recommendation that voice grade access should occur in the frequency range between approximately 500 hertz and 4,000 Hertz for a bandwidth of approximately 3,500 Hertz. Although the FCC concluded that certain higher bandwidth services should be supported under § 254(c)(3) for eligible schools, libraries, and rural health care providers, the FCC declined to adopt, pursuant to § 254(c)(1), a higher bandwidth than that recommended by the Joint Board.

Support for Local Usage (¶ 65-70) The FCC agreed with the Joint Board that the Commission should determine the level of local usage to be supported by federal universal service mechanisms and that the states are best position to determine the local usage component for purposes of state universal service mechanisms. The FCC is concerned that, unless it is able to quantify an amount of local usage that must be provided without additional charge to the consumers by carriers receiving universal service support for serving rural, insular, and high cost areas, the FCC believes there is a potential that the consumer would have to pay additional per-minute fees and would not receive the benefits universal service is designed to promote. The FCC intends to consider this possible scenario in its Further Notice of Proposed Rulemaking ("FNPRM") on a forward-looking economic cost methodology, which will be issued by June 1997.

DTMF Signaling (¶ 71) The FCC adopted the Joint Board's recommendation to include DTMF signaling or its digital functional equivalent among the supported services.

Access to Emergency Services (¶ 72-74) The FCC included telecommunications network components necessary for access to emergency services, including access to 911 and E911, among the supported services. For universal service purposes, the FCC defined access to E911 as the capability of providing both ANI and ALI. The Commission noted that wireless carriers are not required to provide ALI until October 1, 2001. Nevertheless, the Commission concluded that the telecommunications network components necessary for such access will be supported by federal universal service mechanisms for those carriers that are providing it. The Commission also recognized that wireless providers will be providing access to E911 in the future to the extent that the relevant locality has implemented E911 service. In addition, because the *Wireless E911 Decision* established that wireless carriers are required to provide access to E911 only if a mechanism for the recovery of costs relating to the provision of such services is in place, there is at least the possibility that wireless carriers receiving universal service support will be compensated twice for providing access to E911. The FCC intends to explore whether the possibility is in fact being realized and, if so, what steps we should take to avoid such over-recovery in a Further Notice of Proposed Rulemaking. Consistent with the Joint Board's recommendation, the FCC chose to support the telecommunications network components necessary for access to 911 service and access to

E911 service, but not the underlying services themselves, which combine telecommunications service and the operation of the PSAP and, in the case of E911 service, a centralized database containing information identifying approximate end user locations.

Access to Operator Services (¶ 75) The FCC adopted the Joint Board's recommendation to include access to operator services in the general definition of universal service. For the purposes of defining the core § 254(c)(1) services, the FCC defined "operator services" as "any automatic or live assistance to a consumer to arrange for billing or completion, or both, of a telephone call."

Access to Interexchange Service (¶ 76-79) The FCC adopted the Joint Board's recommendation to include access to interexchange service among the services supported by federal universal service mechanisms. The FCC concluded that access to interexchange service means the use of the loop, as well as that portion of the switch that is paid for by the end user, or the functional equivalent of these network elements in the case of a wireless carrier, necessary to access an interexchange carrier's network. The FCC did not include equal access to interexchange service among the services supported by universal service mechanisms. Equal access to interexchange service permits consumers to access the long distance carrier to which the consumer is presubscribed by dialing a 1+ number.

Access to Directory Assistance and White Pages Directories (¶ 80-81) The FCC also adopted the Joint Board's recommendation to include access to directory assistance, specifically, the ability to place a call to directory assistance, among the core services pursuant to § 254(c)(1). The FCC did not support white pages directories and listings.

Toll Limitation Services (¶ 82) The FCC included toll limitation services for qualifying low-income consumers among those that will be supported pursuant to § 254(c).

Access to Internet Services (¶ 83) The FCC agreed with the Joint Board's determination that Internet access consists of more than one component. Specifically, the FCC recognized that Internet access includes a network transmission component, which is the connection over a LEC network from a subscriber to an Internet Service Provider, in addition to the underlying information service. Voice grade access to the public switched network usually enables customers to secure access to an Internet Service Provider, and, thus, to the Internet. The FCC concluded that the information service component of Internet access cannot be supported under § 254(c)(1). To the extent customers find that voice grade access to the public switched network is inadequate to provide a sufficient telecommunications link to an Internet service provider, the FCC concluded that such higher quality access links should not yet be included among the services designated for support pursuant to § 254(c)(1).

Other Services (¶ 84-87) The FCC concluded that, at this time, no other services that commenters have proposed to include in the general definition of universal service substantially meet the criteria set forth in § 254(c)(1). The Commission will, however, review the services supported by universal service mechanisms no later than January 1, 2001. The FCC also found that the issues relating to the telecommunications needs of individuals with disabilities, including the accessibility and affordability of services, will be addressed in the

context of the Commission's implementation of § 255. The FCC declined to define universal service by transport and termination requirements rather than services, and did not require eligible carriers to offer the designated services on an unbundled basis.

B. Feasibility of Providing Designated Services (¶ 88-93)

The FCC concluded that eligible carriers must provide each of the designated services in order to receive universal service support. The FCC concluded that in three limited instances, however, the public interest requires that it allow a reasonable period during which otherwise eligible carriers may complete network upgrades required for them to begin offering certain services that they are currently incapable of providing. A carrier that is otherwise eligible to receive universal service support but is currently incapable of providing single-party service, toll limitation service, or access to E911 in the case where the locality has implemented E911 service may, if it provides each of the other designated services, petition its state commission for permission to receive universal service support for the designated period during which it is completing the network upgrades required to that it can offer these services. A carrier that is incapable of offering one or more of these three specific universal services must demonstrate to the state commission that "exceptional circumstances" exist with respect to each service for which the carrier desires a grant of additional time to make network upgrades. A carrier can show that exceptional circumstances exist if individualized hardship or inequity warrants a grant of additional time to comply with the general requirement that eligible carriers must provide single-party service, toll limitation service, and access to E911 when the locality has implemented E911 service and that a grant of additional time to comply with these requirements would better serve the public interest than strict adherence to the general requirement that an eligible telecommunications carrier must be able to provide these services to receive universal service support. The period during which a carrier could receive support while still completing essential upgrades should extend only as long as the relevant state commission finds that "exceptional circumstances" exist and should not extend beyond the time that the state commission deems necessary to complete network upgrades. Where a state has ordered a carrier to provide single-party service within a specified period pursuant to a state order that precedes the release date of this Order, the carrier may rely upon the timetable established in that order and receive universal service support for the duration of that period.

C. Extent of Universal Service Support (¶ 94-96)

In light of the FCC's determination to adopt a modified version of the existing universal service support system for high cost areas, the FCC concluded that all residential and business connections in high cost areas that currently receive high cost support should continue to be supported for the periods set forth in § VII below. For rural telephone companies, this means that both multiple business connections and multiple residential connections will continue to receive universal support at least until January 1, 2001. The FCC intends, however, to continue to evaluate the Joint Board's recommendation to limit support for primary residential connections and businesses with a single connection as it further develops a

means of precisely calculating the forward-looking economic cost of providing universal service in areas currently served by non-rural telephone companies.

D. Quality of Service (¶ 97-102)

Based on the Joint Board's recommendation that the Commission not establish federal technical standards as a condition to receiving universal service support, the FCC concluded that the Commission should rely upon existing data, rather than specific standards, to monitor service quality at this time. The FCC also declined to expand, solely for universal service purposes, the category of telecommunications providers required to file ARMIS service quality and infrastructure reporting data, which currently includes all carriers subject to price cap regulation that collectively serve 95 percent of access lines. Consequently, the FCC will rely upon service quality data provided by the states in combination with those data that the Commission already gathers from price cap carriers through existing data collection mechanisms in order to monitor service quality trends. Although the FCC encourages state commissions to share information with the Commission, the FCC did not establish a specific type of data that should be submitted.

The FCC also concluded that states may adopt and enforce service quality rules that are competitively neutral, pursuant to § 253(b), and that are not otherwise inconsistent with rules adopted in this Order. In light of the existing state mechanisms designed to promote service quality, the FCC concluded that state commissions are the appropriate fora for resolving consumers' specific grievances regarding service quality. The Commission may, in the future, however, address the need for federal service quality standards, in particular, with respect to states that currently do not have such standards in place. In addition, the Commission may address broader, more wide-ranging service quality issues during its ongoing monitoring of service quality trends.

The FCC agrees with the Joint Board's conclusion that, to the extent the Joint Board recommended, and the FCC adopts, specific definitions of the services designated for support, these basic capabilities establish minimum levels of service that carriers must provide in order to receive support. For example, the FCC concluded that voice grade access to the public switched network should occur in the frequency range between approximately 500 Hertz and 4,000 Hertz for a bandwidth of approximately 3,500 Hertz. Although not a service quality standard per se, this requirement will ensure that all consumers served by eligible carriers receive some minimum standard of service.

V. AFFORDABILITY (¶ 109-126)

Defining Affordability (¶ 110-113) The Commission agrees with the Joint Board's conclusion that the assessment of whether rates are affordable includes not just an absolute component (based on the consumer's means) but also a relative component (based on the consumer's ability to meet the cost without hardship). Thus, the concept of affordability that the Commission adopts encompasses a consideration of factors other than rates, including

subscribership levels, local calling area size, consumer income levels, cost of living, and population density.

Non-rate Factors Relevant in Assessing Affordability (¶ 114-117) Subscribership levels generally correlate with affordability; however, because telephone service often is considered to be a necessity, some consumers may subscribe despite the economic hardship imposed by the cost. Accordingly, other factors must be considered to determine whether rate levels impose a hardship on subscribers. One factor that the Commission identifies is whether the size of the local calling area permits subscribers to call hospitals, schools and other essential community services without incurring a toll charge. The Commission's definition of affordability also includes consideration of per capita income and cost of living, calculated on a local level, not nationally. Finally, variations in the way states structure rates will be considered.

The Role of State Commissions (¶ 118) Recognizing these many local and regional factors, the Commission adopts the Joint Board recommendation that state commissions should exercise primary responsibility for determining affordability of rates and serve as a forum for consumer challenges to affordability of intrastate rates for both local and toll service. The Commission declines to designate national affordable rates.

The FCC's Role (¶ 119-123) The rules provide that if statewide subscribership levels fall, the FCC and the affected state will work together informally to determine the cause of the drop in subscribership. The Commission declines, on the one hand, to provide for mandatory federal intervention in states where subscribership is more than a certain percent below the national average or, on the other hand, to require a "statistically significant" drop before federal intervention can occur. The Commission identifies certain off-shore areas such as Puerto Rico as having demonstrably low subscribership levels and announces that it will launch a further proceeding to deal with such situations. Finally, the Commission commits to "actively monitor" subscribership across a variety of income levels and demographic groups and encourages states to do likewise.

VI. CARRIERS ELIGIBLE FOR UNIVERSAL SERVICE SUPPORT (¶ 127-198)

A. Eligible Telecommunications Carriers (¶ 130-181)

Eligibility Criteria (¶ 134-147) The Commission concurs in the Joint Board's finding of a lack of either legal authority or compelling policy reasons supporting the supplementation of the statutory criteria for determining carriers' eligibility for support enumerated in § 214(e)(1). For example, the Commission does not require carriers to meet all obligations that the states impose on ILECs and does not impose special conditions on wireless carriers as a condition of eligibility. Consistent with the view that it lacks authority to depart from the statutory eligibility criteria, the Commission also finds itself unable to alter an eligible carrier's duty to serve an entire service area, notwithstanding technological limitations.

Measures to Insure Compliance with Requirements Governing Advertising and Relinquishment of Eligible Carrier Designation (¶ 148-149) In agreement with the Joint Board's recommendation, the Commission declines at this time to adopt nationwide standards governing eligible carriers' obligations to advertise the availability of and charges for supported services throughout their service areas. Rather, the Commission defers to the states to establish any necessary guidelines in the first instance. Although the Joint Board did not make any recommendation regarding carriers' requests to relinquish their eligibility designations, the Commission concludes that it need take no further action to implement the statutory provision, which merely reserves the matter for state action.

"Facilities"-related Issues (¶ 150-180) The Commission accomplishes two purposes by defining the "facilities" that a carrier must provide to satisfy § 214(e) as "any physical components of the telecommunications network that are used in the transmission or routing of the services" designed for universal service support. First, the definition is broad enough to avoid imposing substantial entry barriers for potential competitors. Second, it insures that "pure" resellers are not eligible. In a further effort to reduce entry barriers and encourage competition, the Commission concludes that a carrier that offers any of the services designated for universal service support, either in whole or in part, over facilities that are obtained as unbundled network elements pursuant to § 251(c)(3) satisfies the statutory eligibility requirements. The Commission also finds that the statute does not require a carrier to use its "own facilities" to provide each of the designated services; a carrier will meet the conditions for receiving support by providing *at least one* such service. Finally, the Commission concludes that the facilities a carrier is using need not be physically located in the carrier's service area for purposes of determining its eligibility for support.

Safeguards against Misuse of Funds (¶ 181) The Commission concurs with the Joint Board in finding that additional rules addressing the potential misuse of support funds are unnecessary at this time. An increasingly competitive environment or, in the absence of competition, forward-looking high cost support mechanisms, regulation of access charges, and the availability of state monitoring all will insure that universal service support is used as intended. If these safeguards prove inadequate, the Commission can work with the Joint Board to consider the need for federal monitoring.

B. Definition of Service Areas (¶ 182-193)

Areas Served by Non-Rural Telephone Companies (¶ 184-185) Concurring in the Joint Board's recognition of state commissions' primary authority over designation of non-rural service areas, the Commission encourages state officials to avoid erecting entry barriers by establishing non-rural service areas that are unreasonably large. To this end, states are encouraged not to conform service areas to ILEC study areas, but to consider designating service areas that require ILECs to serve territories they have not traditionally served.

Areas Served by Rural Telephone Companies (¶ 186-191) As a starting point, the Commission adopts the Joint Board's recommendation that the current study areas of rural telephone companies be retained as the relevant service areas. In contrast with non-rural

service areas, over which the states have jurisdiction, the Commission finds that the states and the Commission must act in concert to set service areas for rural telephone companies and adopts procedures for states to obtain the agreement of the Commission in redefining rural service areas. In response to concerns of wireless carriers, the Commission encourages states to consider the need for contiguity in redefining service areas. The Commission also recognizes the need for coordination between changes in study areas and corresponding local service areas.

Support Areas (¶ 192-193) The Commission will continue to use study areas to calculate the level of high cost support carriers receive until January 1, 1999, but, consistent with the Joint Board's recommendation, it will calculate the amount of such support over areas no larger than wire centers after that date.

C. Unserved Areas (¶ 194-197)

No Rules Adopted (¶ 196-197) The Commission, like the Joint Board, finds that the record in the proceeding provides an insufficient basis for adopting rules governing how carriers should be selected to serve unserved areas. In anticipation of an eventual need for such rules, the Commission encourages state commissions to file reports detailing the status of unserved areas in their states with the Common Carrier Bureau. The Commission also announces its intention to undertake an inquiry, in cooperation with the Joint Board and the state commissions, on the possibility of using competitive bidding for selecting such carriers.

D. Implementation (¶ 198)

Disbursement of Funds Universal service support funds will be distributed to a carrier only after it has provided to the Administrator of the universal service support mechanisms appropriate evidence that the carrier has been designated as an eligible telecommunications carrier by the relevant state commission.

Modification of Rural Service Area The Commission's prior agreement to any newly defined area must be obtained through a petition from the state commission or the affected carrier. Such petitions are to be acted on by the Common Carrier Bureau.

VII. RURAL, INSULAR, AND HIGH COST (¶ 199- 325)

A. Overview (¶ 199-207)

Universal Service Support Mechanism (¶ 199-202) The FCC adopts a timetable to implement federal universal support mechanisms as required by § 254. Universal service support will be determined by subtracting forward-looking economic costs from a nationwide revenue benchmark. The revenue benchmark includes the price of local service and revenues from other services a carrier receives "as a result of providing service, including vertical service revenue and interstate and intrastate access revenues." The Federal mechanism will support 25 percent of these costs. The FCC leaves to states in the first instance to adopt a

mechanism to make explicit the support mechanism for existing implicit subsidies contained in state rates.

Mechanism Timetable (¶ 203-204) Not all carriers will begin using forward-looking economic costs at the same time or in an identical manner. Non-rural carriers will begin to receive support based on forward-looking economic costs on January 1, 1999. Rural carriers will begin using a forward-looking model at a date to be set later, but in no event earlier than January 1, 2001.

State Cost Studies (¶ 205-206) The FCC must coordinate federal universal service support levels with state forward-looking economic cost studies. The FCC recognizes that some states may not have the resources to conduct their own studies. The FCC invites states to submit their own cost studies consistent with FCC criteria, which must be consistent with the study used for determining state universal service support payments and may not impede provision of advanced services. These studies would be used by the FCC to determine federal universal service support. The FCC encourages the state to use the same cost methodology to the extent possible for both its universal service program and its pricing of unbundled network elements. By the end of June 1997, the FCC will adopt a further NPRM to seek comment on its own estimates of forward-looking economic costs and on competitive bidding. The FCC will continue to review competitive bidding to determine whether it could be used to determine universal service support.

B. Universal Service Support Based on Forward-Looking Economic Cost (¶ 223-272)

1. Scope of Costs To Be Supported (¶ 224-231)

Forward-looking costs (¶ 225-227) The proper measure of cost support is the forward-looking economic cost of constructing and operating the network facilities and functions used to provide supported services. This will approximate an efficient carrier's costs and will send the correct signals for entry, investment and innovation. Using an efficient carrier's costs will provide sufficient support to preserve and advance universal service and will avoid rewarding inefficiency. Support above efficient levels would lead to support for purposes other than providing, maintaining, and upgrading facilities and services for which support is intended, contrary to § 254(e). Use of forward-looking costs is the best method of estimating support because it encourages efficiency and allows more targeted support for smaller geographic areas.

Embedded Costs (¶ 227-229) Use of embedded costs is rejected because it sends the wrong signals to potential entrants and existing carriers, discourages prudent investment, subsidizes inefficient carriers and could jeopardize universal service to the extent that particular carriers' embedded costs are below their forward-looking economic costs. The FCC rejected Bell Atlantic's proposal to use state-averaged embedded per-line costs to set support levels because that methodology does not eliminate entirely disincentives to efficiency and would not target support to carriers serving high cost areas in states where the average embedded cost is relatively low.

"Legacy" costs (¶ 230) The FCC rejected arguments that carriers should be able to recover undepreciated plant and equipment in universal service support because no carrier produced specific evidence that use of forward-looking economic costs will deprive carriers of property without just compensation. Mechanisms created on the date of this Order provide support to carriers "in addition to other revenues associated with the provision of service," citing the FCC's companion Access Reform Order.

Construction Costs (¶ 231) The FCC rejected US West's proposal to compensate the first carrier in an area for its construction costs but compensate later entrants only for their operating costs, because this would discourage new entrants from building new facilities in high cost areas. The FCC announced that it would investigate in a future proceeding the issue of whether special circumstances might justify compensation of one-time costs with one-time payments.

2. Determination of Forward-Looking Economic Cost for Non-Rural Carriers (¶ 232-251)

Cost Proxy Models (¶ 232-237) Three cost proxy models were included on the record, the most recent versions of which were the Benchmark Cost Proxy Model 2 (BCM2), Hatfield 3.1, and the Telecom Economic Cost Model (TECM). The FCC thought that significant progress had been made and stated that BCM2 and Hatfield could be useful cost models for estimating universal service costs. These models showed improvement in defining discrete geographic zones that take into account different densities, assigning census block groups (CBGs) to the correct wire center, including costs of general support facilities, and recognizing multi-tenant housing. BCM and Hatfield also made improvements in accurately determining distribution of customers within CBGs so that outside plant can be accurately predicted.

Use of Existing Models (¶ 238-243) TECM should be excluded from further consideration because it fails to provide nationwide estimates of universal service support. The FCC could not reasonably evaluate the Hatfield or BCM2 models because of the divergence and frequency of changes in the data provided. The proponents have also used varying input values to determine the cost of universal service and in many cases they have not filed the underlying justification for the use of those values. Efforts to study the models have been hampered because of delays in submissions to the FCC and the constant updating of models to correct technical problems such as missing data. Because there are significant unresolved problems with each of the cost models, the FCC could not rely on any of them as currently constituted.

Future Model Development (¶ 244-245) The FCC will continue to review the BCM2 and Hatfield models by issuing a further NPRM by the end of June 1997. Selection of one model will occur by the end of 1997. At that time, the FCC will seek comment on that model and adopt a final methodology by August 1998 that will be used to determine universal service support for non-rural carriers starting on January 1, 1999.

Compliance with Section 254 (¶ 246) The FCC stated that its actions are consistent with § 254 because it has identified the services to be supported by universal service support mechanisms and it sets a specific timetable for implementing the forward-looking cost methodology. It made subsidies explicit by developing a plan to eliminate implicit subsidies in part through prescription and in part through competition.

State Role in Identifying Costs (¶ 247-248) States can provide assistance to the FCC in determining forward-looking costs because they are currently reviewing forward-looking cost studies to support unbundled network element pricing. Although that specific pricing cannot be used because it is largely interim in nature and includes costs for non-supported services, these cost studies can form the basis of determining forward-looking costs for supported services. State-conducted cost studies have the added benefit of improving regulatory consistency between unbundled network element cost calculations and universal service cost calculations and avoiding inefficient arbitrage. States must elect by August 15, 1997 whether to submit cost studies, which are due on or before February 6, 1998. Cost studies must comply with FCC criteria. The FCC will seek comment on those studies.

FCC Role in Cost Studies (¶ 248-249) The FCC will work with the Joint Board to establish a uniform cost study review plan to standardize the format of presentation of cost studies to facilitate review. If a state elects not to conduct its own study or the state study does not meet the FCC criteria for such studies, the FCC will determine the costs through its own methodology. The FCC will develop that methodology through further proceedings before the Joint Board pursuant to a June 1997 further NPRM, which will also seek information regarding issues such as actual cost of switches, cost of digital loop carriers, and location of customers in the lowest density areas.

Cost Study Criteria (¶ 250-51) Criteria for determining forward-looking economic costs are: (1) the technology used should be the least-cost, most-efficient and reasonable technology currently being deployed using current ILEC wire centers (loop design should not impede provision of advanced services and wire center line counts and average loop length must reflect actual ILEC data); (2) any network function associated with supported services must have an associated cost; (3) costs should be long-run, i.e., a period long enough so all costs are variable, not be embedded and be based on current costs, not list prices; (4) cost of capital must be either 11.25 percent or state authorized rate of return (will be examined further in future); (5) economic lives and future net salvage percentages must be in the FCC-authorized range, to be reevaluated in an NPRM to be issued shortly; (6) cost estimates must include all costs of providing services in the area, including multi-line business services, special access, private line and multiple residential lines; (7) a reasonable allocation of joint and common costs for shared services; (8) the cost study and underlying data, formulae, computations and software must be available to interested parties for review (underlying data should be verifiable, engineering assumptions reasonable and outputs plausible); (9) the cost study must allow critical assumptions and engineering principles to be modified, including, but not limited to, cost of capital, depreciation rates, fill factors, input costs, overhead adjustments, retail costs, structure sharing percentages, fiber-copper cross-over points and terrain factors; (10) the cost study must deaverage support calculations to the wire center

serving area level at least, and, if feasible, to even smaller areas such as CBG, census block or grid cell. A state cost study must be the same used to calculate state support levels. The FCC encourages states to use ongoing proceedings to develop permanent unbundled network element prices as the basis for the universal service cost study to prevent differences between unbundled network element pricing and universal service support.

3. Determination of Forward-Looking Economic Cost for Rural Carriers (¶ 252-256)

Support Mechanism for Rural Carriers (¶ 252-53) The FCC will commence a proceeding to determine a forward-looking economic cost mechanism for rural carriers by October 1998. Rural carriers will be able to use forward-looking economic costs only when the FCC determines that results are sufficient and predictable. The FCC encourages the Joint Board to establish a rural task force and report the results of the task force's findings on forward-looking economic costs to the Joint Board before the October 1998 FNPRM. The task force should include broad industry representation, including from rural carriers and carriers from remote and insular areas; its meetings and records should be open to the public.

Criteria for Mechanisms for Rural Carriers (¶ 254-256) The FCC will develop cost inputs and review a model's performance to target support narrowly to specific geographic areas that have high costs for the provision of universal service. It will also seek to promote the deployment of the most efficient technology available and the availability of advanced services. Mechanisms that include a cost model should take into account the particular characteristics of rural carriers that makes their costs higher and develop geographic areas that accurately reflect a rural carrier's costs. The FCC will also consider whether they should include a "maximum shift or change" feature to ensure that costs do not fluctuate more than an established amount from one year to the next. Although the record does not support adoption of competitive bidding as a support mechanism at this time, the FCC will examine whether a competitive bidding process for rural carriers meets the requirements of both §§ 214(e) and 254.

4. Applicable Benchmarks (¶ 257-267)

Establishment of Benchmark (¶ 257-59) The FCC will establish a nationwide benchmark based on average revenues per line for local, discretionary, interstate and intrastate access services, and "other telecommunications revenues that will be used with" cost models in a particular geographic area. A non-rural eligible telecommunications carrier could draw from the federal support mechanism if the forward-looking economic cost of serving the subscriber exceeds the benchmark. The FCC will establish separate benchmarks for residential and single-line business service.

Inclusion of Discretionary Services (¶ 260-261) Discretionary services are included because the costs associated with providing them are included in the cost models. Not including these services would unnecessarily increase the size of the support mechanism. Although competition could "reduce revenues from a particular service," competition will also lead to "the development of new services that will produce additional revenues per line and to