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Practical Solutions for Communications Policy

Payers and Receivers: Various Proposals for the High Cost Fund

Executive Summary

March 1, 1998; Revised March 5, 1998

Presentation at the March 1998 NARUC Meeting, Washington, DC

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Payers and Receivers: Various Proposals for the High Cost Fund
Executive Summary, cont.

Objective
This paper models options for the federal high cost fund (HCF) on a comparable basis that allows the reader to examine the effect on customers and states.

Focus of the Model
This paper only focuses on one portion of the new universal service fund — support for high-cost, non-rural companies. This paper does not discuss other current subsidies as well as new support mechanisms required by the *Telecommunications Act of 1996* (such as funding telecommunications for schools, libraries, and rural health care). **Figure 1** shows the universal service fund, which includes existing and new subsidies.

The 1998 total high cost fund is $1,723.6 million with $341.2 million for the non-rural companies and $1,382.4 million for the rural companies. The non-rural amount is replaced with the proxy models' results in modeling Options 2 to 6. The total amount is replaced with the proxy models' results in modeling Options 1A to 1C.

Some Questions to Ask about Options for the New Fund
There are certain questions that should be answered to determine if the new high cost fund meets the requirements of the *Act of 1996*, the needs of a competitive industry, and accomplishes the goal of supporting truly high-cost areas. Some of these questions are: Does the fund accomplish the goal of providing sufficient support to high-cost areas so that rates can be affordable? Is the fund competitively neutral? Is the revenue neutral? Is it explicit?

Modeling the Size of the Fund
The fund is sized at different revenue benchmarks (generally $30, $40, and $50) using both the BCPM and the HAI models. The resulting sizes probably will not be the amount produced in the final model adopted by the FCC. The illustrations and the range of amounts shown should be used as *indicator*s for the size of the fund and the impact on the states and the customers.

Modeling the Impact on Individual States
The accompanying paper contains charts where individual states can see, on a per line per month or on a per telephone number per month basis, whether the state is a net payer or net receiver of the fund. A state may need more or less than the amounts modeled in the paper. This paper does not recommend any method of reduction in prices for services. In evaluating the options in this paper, one of the questions that needs to be answered is "Will the state be better or worse off than it is today?" **(Figure 2)**.

Descriptions of FCC's Plan and the Various Options Modeled:
Hypothetical nationwide surcharges are calculated to allow comparisons among options **(Figure 3)**. Depending on the option, actual collection may be through service rates or end user charges.

- **Option 1A: Ad Hoc Proposal**
  Proposed by an ad hoc National Association of Regulatory Utility Commissioners (NARUC) work group **(Figure 3A)**. This option sends funds to those states with average costs above an established nationwide average. This option also sets rules for state distribution of these funds. It should be noted that the Ad Hoc proposal's calculations does not include high cost support for Alaska and Puerto Rico, or any current Long Term Support. Eligible states receive funds based on the following choices:

1. The lesser of embedded costs and incremental costs (results based on the proxy models).
2. The greater of the result from the above step and "hold harmless" data (current amount received from the old universal service fund, or USF).

- **Option 1B: Modified Ad Hoc Proposal — Proxy Model Results or "Hold Harmless"**
  This option is the same as Option 1A except that it omits embedded costs in determining the results **(Figure 3B)**.

- **Option 1C: Modified Ad Hoc Proposal — Proxy Model Results or "Hold Harmless" with 50% or 40% Interstate**
  This option is the same as Option 1A except that it omits embedded costs in determining the results, and changes the interstate support to 50% or 40% of the calculated support from the proxy models **(Figure 3C)**.

- **Option 2: $50 Interstate Benchmark; $30 State Benchmark**
  This option increases the support defined in Option 4A (the FCC Plan) for those areas with very high costs for providing local service **(Figure 3D)**.

- **Option 3: Density Zones**
  This option targets federal funds for the least populated areas of the country where costs are highest and where competition will probably develop more slowly, if at all **(Figure 3E)**.

- **Option 4A: FCC's Plan: 25% Interstate/75% State**

  In the FCC Plan, the high cost fund is based on a federal contribution of 25% of the calculated support and the states may be responsible for the remaining contribution of 75% **(Figure 3F)**. The plan also allows for an adjustment to interstate access to reflect the net of the following:
  1. Increases in interstate access to recover payments made by the local exchange companies into the fund for high-cost areas/low-income households, schools and libraries, and rural health care subsidy requirements; and
  2. Decreases in interstate access to reflect support received by the local exchange companies from the fund for their high-cost areas.

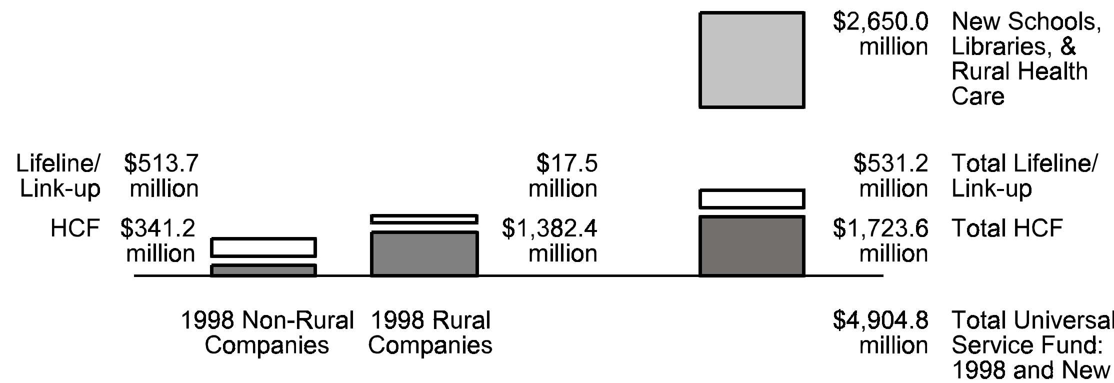
- **Option 4B: Modified FCC Plan: 40% Interstate/60% State**
  This option shows the impact of increasing the federal support from 25% to 40% and decreasing the potential state responsibility accordingly **(Figure 3G)**.

- **Option 5: Telephone Numbers**
  In this option, there is a nationwide surcharge applied to each telephone number per month on the customer's bill **(Figure 3H)**. This option is an overall approach to funding universal service without regard to past interstate/state jurisdictional distinctions. The entire fund is recovered from one mechanism and the federal fund recovers 100% of the support.

- **Option 6: Percentage of Retail Revenues**
  In this option there is a nationwide surcharge assessed as a percentage of total retail revenues on the customer's bill **(Figure 3I)**. This option is an overall approach with the entire fund being recovered using one mechanism. The basis for assessment of the dollars is a uniform percent charge on total retail revenues and the federal fund recovers 100% of the support.

For Option 5 and Option 6, to be competitively neutral, the surcharges should be applied entirely to the end user and must be applied by all companies to their customers.

Figure 1: Total Universal Service Fund — 1998 Subsidies and New Subsidies



	Dollars (in Millions)		
1998 Subsidies	**Non-Rural Companies**	**Rural Companies**	**Total**
Lifeline/Link-up: Renamed "Low Income Fund"	$513.7	$17.5	$531.2
1998 High Cost Fund (HCF):			
Long Term Support (LTS)	$124.5*	$346.6	$471.1
*Weighted Dial Equipment Minutes (DEM): Renamed "Local Switching Support"	0.0*	426.8	426.8
Old Universal Service Fund (USF): Renamed "High Cost Loop Fund"	216.7*	609.0	825.7
Total High Cost Fund	341.2*	1,382.4	1,723.6
New Subsidies**			
Schools and Libraries			$2,250.0
Rural Health Care Providers			400.0
Total Education and Health Care			2,650.0
Total Universal Service Fund (USF)			$4,904.8

* In modeling the options in this paper, the total high cost fund (HCF) for the non-rural companies is replaced by data from the proxy models (BCPM and HAI). This proxy model data is then added to the rural data. Non-rural companies are those LECs with a total of more than 100,000 access lines. Rural companies are those with a total of 100,000 access lines or less.

**The amounts are based on the maximum levels set by the FCC.

Figure 2: Comparison of Current and Proposed High Cost Fund Support (Option 4: FCC Plan, $30 Benchmark), Net Payers and Receivers per Access Line per Month, BCPM and HAI

	Difference between Current and Proposed (in dollars)					
	Net Receiver			**Net Payer**		
Amount of Benchmark (in dollars)	$30			$30		
	High	Low	Average	High	Low	Average
BCPM	$3.92	$0.00	$0.73	- $10.14	- $0.00	- $0.67
HAI	$1.26	$0.02	$0.21	- $10.22	- $0.07	- $0.35

Figure 3: Comparison of Various Options for the High Cost Fund: Hypothetical Monthly Surcharges

Figure 3A, Option 1A: Ad Hoc Proposal

	Option 1A: Nationwide Surcharge* (%)	**Interstate Fund: Net of 75% Interstate Incremental, Embedded, and "Hold Harmless" (in millions)**
Amount of Benchmark (in dollars)	Average Cost	Average Cost
BCPM	2.4%	$1,699 m
HAI	1.7%	$1,196 m

*This hypothetical surcharge is based on 1996 interstate retail revenues. The benchmark for the proxy models is set at average cost. For BCPM this is $34.20 and for HAI it is $21.38. The benchmark for embedded cost is set at 105% of average cost, $35.58.

Figure 3B, Option 1B: Modified Ad Hoc Proposal — Proxy Model Results or "Hold Harmless"

	Option 1B: Nationwide Surcharge* (%)	**Interstate Fund: Net of 75% Interstate Incremental and "Hold Harmless" (in millions)**
Amount of Benchmark (in dollars)	Average Cost	Average Cost
BCPM	6.2%	$4,461 m
HAI	3.5%	$2,514 m

*This hypothetical surcharge is based on 1996 interstate retail revenues. The benchmark for the proxy models is set at average cost. For BCPM this is $34.20 and for HAI it is $21.38.

Figure 3: Comparison of Various Options for the High Cost Fund: Hypothetical Monthly Surcharges, cont.

Figure 3C, Option 1C: Modified Ad Hoc Proposal — Proxy Model Results or "Hold Harmless"

	Option 1C: Nationwide Surcharge* (%)		**Interstate Fund: Net of 50% Interstate Incremental and "Hold Harmless" (in millions)**
Amount of Benchmark (in dollars)	Average Cost		Average Cost
BCPM	4.1%		$2,948 m
HAI	2.2%		$1,623 m

	Option 1C: Nationwide Surcharge* (%)		**Interstate Fund: Net of 40% Interstate Incremental and "Hold Harmless" (in millions)**
Amount of Benchmark (in dollars)	Average Cost		Average Cost
BCPM	3.3%		$2,358 m
HAI	1.8%		$1,299 m

*This hypothetical surcharge is based on 1996 interstate retail revenues. The benchmark for the proxy models is set at average cost. For BCPM this is $34.20 and for HAI it is $21.38.

Figure 3D, Option 2: $50 Interstate Benchmark; $30 State Benchmark

	Option 2: Nationwide Surcharge* (%)		**Interstate Fund: 100% above $50 plus 25% ($50 - $30) (in millions)**		**Remaining State Responsibility75% ($50 - $30) (in millions)**
Amount of Benchmarks (in dollars)	$30 and $50		$30 and $50		$30 and $50
BCPM	11.5%		$8,318 m		$3,352 m
HAI	3.5%		$2,556 m		$1,072 m

*This hypothetical surcharge is based on 1996 interstate retail revenues. This surcharge is for comparison purposes only. Actual collection is through service rates. The federal surcharge is the sum of costs above $50 and 25% of the difference between the $30 benchmark and the $50 benchmark. The remaining state amount is 75% of the difference between the two benchmarks.

Figure 3: Comparison of Various Options for the High Cost Fund: Hypothetical Monthly Surcharges, cont.

Figure 3E, Option 3: Density Zones

	Option 3: Nationwide Surcharge* (%)	**Interstate Fund (in millions)**	**Remaining State Responsibility (in millions)**
Amount of Benchmark (in dollars)	Zone 1 $30	Zone 1 $30	Zone 1 $30
BCPM	5.5%	$3,965 m	$7,704 m
HAI	3.3%	$2,410 m	$1,866 m

*This hypothetical surcharge is based on 1996 interstate retail revenues.

Figure 3F
Option 4A: FCC's Plan: 25% Interstate/75% State

	Option 4A: Nationwide Surcharge* (%)			**Interstate Fund (in millions)**			**Remaining State Responsibility (in millions)**		
Amount of Benchmark (in dollars)	$30	$40	$50	$30	$40	$50	$30	$40	$50
BCPM	5.5%	4.2%	3.9%	$3,938 m	$3,063 m	$2,820 m	$7,732 m	$5,109 m	$4,380 m
HAI	2.7%	2.3%	2.2%	$1,927 m	$1,693 m	$1,570 m	$1,701 m	$999 m	$629 m

*This hypothetical surcharge is based on 25% of 1996 interstate retail revenues. This surcharge is for comparison purposes only. Actual collection is through service rates.

Figure 3: Comparison of Various Options for the High Cost Fund: Hypothetical Monthly Surcharges, cont.

Figure 3G, Option 4B: Modified FCC Plan: 40% Interstate/60% State

	Option 4B: Nationwide Surcharge* (%)			Interstate Fund (in millions)			Remaining State Responsibility (in millions)		
Amount of Benchmark (in dollars)	$30	$40	$50	$30	$40	$50	$30	$40	$50
BCPM	7.6%	5.7%	5.1%	$5,484 m	$4,085 m	$3,696 m	$6,186 m	$4,087 m	$3,504 m
HAI	3.1%	2.6%	2.3%	$2,267 m	$1,893 m	$1,695 m	$1,361 m	$799 m	$503 m

*This hypothetical surcharge is based on 40% of 1996 interstate retail revenues. This surcharge is for comparison purposes only. Actual collection is through service rates.

Figure 3H, Option 5: Telephone Numbers

	Option 5: Nationwide Surcharge* per Telephone Number per Month (in dollars)			Total Fund (in millions)		
Amount of Benchmark (in dollars)	$30	$40	$50	$30	$40	$50
BCPM	$4.20	$2.94	$2.59	$11,670 m	$8,173 m	$7,201 m
HAI	$1.31	$0.97	$0.79	$3,628 m	$2,692 m	$2,198 m

*This hypothetical surcharge is based on 1996 total (interstate and state) retail revenues. This surcharge would apply to each telephone number per month. To be competitively neutral, this surcharge should be applied entirely to the end user and must be applied by all companies to their customers.

Figure 3I, Option 6: Percentage of Retail Revenues

	Option 6: Nationwide Surcharge* on Percentage of Retail Revenues(%)			Total Fund (in millions)		
Amount of Benchmark (in dollars)	$30	$40	$50	$30	$40	$50
BCPM	6.2%	4.3%	3.8%	$11,670 m	$8,173 m	$7,201 m
HAI	1.9%	1.4%	1.2%	$3,628 m	$2,692 m	$2,198 m

*This hypothetical surcharge is based on 1996 total (interstate and state) retail revenues. To be competitively neutral, this surcharge should be applied entirely to the end user and must be applied by all companies to their customers.

List of Participants in the Telecommunications Industries Analysis Project

February 1998

State Regulators	NARUC Representatives from: California Public Utilities Commission Florida Public Service Commission Illinois Commerce Commission Iowa Utilities Board Massachusetts Department of Telecommunications and Energy
Companies and Governments	AT&T Bell Atlantic BellSouth Corning GTE Kalona Cooperative Telephone MCI Telecommunications Corp. Nortel NTT America SBC Communications Inc. Sprint Sprint Local Telecom Division U S WEST

Sponsors:

Corporation for Public Broadcasting

Assisting with *public* data:

Bellcore
Federal Communications Commission
National Exchange Carrier Association
National Telecommunications and Information Administration

Background on the Telecommunications Industries Analysis Project

The Telecommunications Industries Analysis Project (TIAP), a seven-year-old research consortium, conducts and reports impartial research in the areas where network planning, business financials, and public policy (regulation and legislation) intersect. The participants actively work together to develop new options for telecommunications policies to meet the needs of consumers, governments, and companies in a changing, competitive environment. Participants include regulators, domestic and foreign telecommunications companies, materials and equipment manufacturers, and other communications-based organizations.

The purpose of the Project is to produce research and analysis that will assist policy makers in making informed decisions.

TIAP incorporates the following features:

- **Neutral setting**
  The Project provides a neutral setting, free of partiality, thereby ensuring objective and independent research.

- **Multiple viewpoints**
  Participants play an active role in the research and analysis, represent their own interests, and understand and assist in developing others' perspectives.

- **Analysis and results of alternatives**
  The Project provides research data, tools, and models for critical decision making.

- **Public distribution of research**
  Data used by this Project are publicly available. Research products become public domain information.