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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
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Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
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To: The Commission	)	

FURTHER COMMENTS OF
THE NATIONAL CABLE TELEVISION ASSOCIATION, INC.

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August 9, 1996

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SUMMARY

When the Federal Communications Commission began its proceeding to implement the universal service provisions of the *Telecommunications Act of 1996*, it specifically invited comment on the use of a cost proxy model to determine funding requirements for universal service. In the brief time since the FCC initiated this proceeding, the interest in developing a reliable, usable cost proxy model to inform universal service funding decisions has grown, and so has the sophistication of the several competing cost proxy models under consideration. Early on, the National Cable Television Association (NCTA) recognized the importance of developing a reliable cost proxy model that would help to put the cost of universal service in its proper perspective, by focusing on the forward-looking cost of providing basic local exchange service, based upon objective factors, rather than on the recovery of historical embedded costs.

In April 1996, NCTA submitted a comprehensive analysis of the original Benchmark Cost Model (BCM), focusing on the strengths and weaknesses of the BCM as a tool for achieving the universal service and local competition policy goals and mandates of the *Telecommunications Act.*[1] The April report, prepared by Economics and Technology, Inc., concluded that the original BCM satisfied many of the essential attributes of a useful cost proxy model, but that it also had several serious shortcomings that have the cumulative effect of substantially exaggerating the aggregate cost of basic local exchange service and of the universal service funding requirement. That report made several conceptual modifications that were required in order for a cost proxy model, such as the BCM, to serve as a framework for setting universal service support. The report also identified a number of specific errors in the method and assumptions of the original BCM.

Since then, two of the original Joint Sponsors, US West and US Sprint, have filed a revised model, the BCM2. Two competing models, the Hatfield Model sponsored by AT&T and MCI, and Pacific Bell's Cost Proxy Model (CPM), have also been submitted for consideration by the FCC and the Joint Board. Because the Hatfield Model is said to be undergoing significant revisions and is due to be re-released shortly, we have not undertaken an in-depth analysis of that model. Where feasible and instructive, however, we have provided a comparative analysis of the three models.

Regulators should not attempt to force a correlation between embedded costs and the results of a forward-looking cost proxy model

Purposely missing from our analysis is any attempt to reconcile the results of the BCM2 with the historical embedded costs of ILECs. A large part of the value in using a cost proxy model is that it is a simulation, divorced from the past investment decisions of the ILECs, and is forward-looking in nature. Attempting to force a correlation between embedded costs and the results of a cost proxy model is unproductive at best and, at worst, misleading. Similarly, there should be no expectation of a correlation between the existing high cost fund and the distribution of high cost support yielded by a cost proxy model. The way to "validate" a model, and the approach we have proceeded with, is to test the robustness of the logic underlying the model, to obtain up-to-date information for the data inputs to the model, and to subject the model to sensitivity analyses.

Because of the potential impact of a cost proxy model on the goals of achieving local competition and adequate, not inflated, universal service funding, it is encouraging that significant effort has been and continues to be devoted to improving the methods and assumptions of cost proxy models. Our analysis shows, however, that for all the hype associated with the long-awaited

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[1] *The Cost of Universal Service, A Critical Assessment of the Benchmark Cost Model*, Baldwin, Susan M. and Lee L. Selwyn, April 1996.

revisions to the BCM, there are at least as many steps in wrong direction as there are improvements. Many of the flaws revealed in our initial analysis are still present and in some cases have been compounded. Furthermore, the developers of the BCM2 have failed to support adequately, let alone facilitate, alternative analyses of critical public policy decisions.

Relative to the BCM, the BCM2 does correct or improve on certain specific flaws identified in our previous analysis. For example, the speed with which the BCM2 processes data is significantly faster than the original BCM, but limitations in the software still make it unwieldy and unduly time-consuming to obtain results for the entire country. Substantively, there have been some useful and appropriate refinements in the model's input assumptions, such as (1) to include the costs of the pedestal and network interface device, (2) to reflect the impact of slope, and (3) to exclude large portions of uninhabited land in the deployment of a network. These modifications clearly improve the reliability of the model's results.

Fundamental flaws in the BCM2 overshadow the improvements that the Sponsors have made

However, these modest improvements in the BCM2 are overshadowed by continuing (and sometimes worsening) fundamental flaws in areas previously identified as problematic in the original BCM. These include:

- *Excessive cost factor*: The cost factor applied to investment in the BCM2 is still out of line with the development of forward-looking costs in a competitive environment. Depreciation rates used to compute the cost factor are improperly inflated, because BCM2 fails to recognize that the economic lives for plant necessary to provide local exchange service is considerably longer than for the plant used to provider other services. Furthermore, the non-plant-related expenses that are assigned to each line are excessive, and reflect activities that disproportionately support services other than the primary residential line.

- *Use of an inappropriate fiber/copper crossover point:* the BCM2 continues to improperly define the crossover point for deployment of fiber versus copper feeder plant based on *engineering* rather than *economic* criteria. While the BCM2 provides some flexibility in specifying the crossover point, it still appears to limit the crossover to distances that overstate the costs of basic primary residential local exchange service.

- *Overstated switching costs:* The switch costs used in the BCM were extremely outdated and the assumptions used caused them to be further exaggerated. Our review of the BCM2 reveals substantial improvement in the accuracy of the costs associated with the switching module. However, the accuracy of the switching cost module would be improved further by modelling deployment of remote switching units in a forward-looking manner.

- *The primary residential line should be the beneficiary of economies of scale and scope inherent in ILECs' networks*: the BCM2 continues to attribute an excessive share of network costs to serving the primary residential line. In our earlier report, we described the underlying theory and general methodology associated with ensuring that the savings resulting from the economy of scale and scope inherent in an ILEC's network should be flowed back to primary line residential service. In Chapter 6, we illustrate this principle through an example.

- *Level of geographic aggregation for assessing the need for high cost support:* The need for universal service funding should be assessed at the wire center level. In a step backwards from the original BCM, the BCM2 prevents this type of analysis.

In addition to areas that we focused on in the April report, there are some changes in the BCM2 methodology that raise entirely new concerns, for example:

- *Excessive structure costs resulting from inconsistent modeling assumptions*: Although both the original BCM and the BCM2 espouse a "scorched node" approach, in the BCM2 the sponsors have *selectively* deviated from that assumption. By selecting "scorched node" for switching and "scorched earth" for structures, the BCM2 systematically develops costs that exceed those that would result were either design approach consistently applied.

Regulators should focus their efforts on improving the BCM2 and HM models rather than on overhauling the seriously deficient CPM

While we have not attempted an exhaustive analysis of the CPM in this report, in the process of comparing the three models before the FCC we have identified a number of serious deficiencies in the CPM. Many of the CPM's problems stem directly from its basic design, which relies heavily on unit cost inputs and network parameters that draw on unreviewable external models and company-proprietary data. In California, the ALJ presiding over the PUC's universal service proceeding recently concluded that numerous, major corrections had to be made to the CPM to achieve a reasonable estimate of universal service costs. The ALJ's adjustments to the CPM amounted to $1.45-billion in excluded costs, thereby eliminating *eighty-five percent* of the $1.7-billion statewide subsidy originally claimed by Pacific Bell in that proceeding.[2] Rather than undertake such a major overhaul to rehabilitate the CPM (which would not correct the "closed" nature of the CPM in any case), we continue to believe that regulators should focus efforts on improving the accuracy, verifiability, and ease of use of the BCM2 and HM models.

Ultimately, regulators will need to resolve the outstanding areas of controversy concerning the design and assumptions of any cost proxy model

Since the original BCM was filed in September 1995, regulators and interested participants have become significantly more sophisticated in their understanding of cost proxy models. In the process, the focus of the debate has progressed from a theoretical understanding of the theory of cost proxy models to also encompass the practical aspects of cost proxy model implementation. The original BCM has now been revised to the BCM2 and two other competing models are also actively being promoted by their respective sponsors. In this report, we conclude that the BCM2 requires further modification, and that, in particular, it needs to be modified simply to make it possible for regulators to incorporate a full spectrum of desired changes.

However, despite the progress that has been made, it is becoming increasingly evident that controversy will not simply yield to consensus in the cost proxy model debate. The several rounds of comments and supporting analyses have provided regulators with an extensive record. Where controversy still exists, regulators need to formulate an approach to resolve the key attributes of a cost proxy model and then proceed systematically to obtain any information needed to support a reasoned decision fixing the critical assumptions and methodology in the model. Without minimizing the difficulty that remains, eventually, a final step must be taken if the cost proxy debate is to transcend the theoretical and become a cornerstone of universal service policy.

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2 CPUC Docket R.95-01-020/I.95-01-021, *Proposed Decision of ALJ Wong*, August 5, 1996 at 4.

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FURTHER COMMENTS OF
THE NATIONAL CABLE TELEVISION ASSOCIATION, INC.

The National Cable Television Association, Inc. ("NCTA"), by its attorneys, hereby files its Further Comments in response to the Public Notice seeking further comment on certain cost models submitted in the above-captioned proceeding.[3] NCTA is the principal trade association of the cable television industry in the United States and represents cable television operators serving over 80 percent of the nation's television households. NCTA has filed comments and reply comments in this proceeding.

With our initial comments, we submitted a report prepared by Economics and Technology, Inc. ("ETI") examining the Benchmark Cost Model ("BCM") advanced by the Joint Sponsors (MCI, NYNEX, Sprint and US West).[4] As ETI concluded, the BCM is useful for determining high-cost areas. The BCM relies upon publicly available data, generally

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[3] Public Notice, "Common Carrier Bureau Seeks Further Comment on Cost Models in Universal Service Notice of Proposed Rulemaking," CC Docket No. 96-45, DA 96-1094, released July 10, 1996.

[4] Baldwin, Susan M. and Selwyn, Lee L., Economics and Technology, Inc., The Cost of Universal Service: A Critical Assessment of the Benchmark Cost Model, April, 1996.

incorporates reasonable network engineering assumptions, and models forward-looking costs. However, ETI found that the BCM, as it then existed, had several shortcomings that had to be remedied. In its report, ETI suggested a number of adjustments to the BCM. When these corrections are made, the model yields a substantially smaller and more accurate universal service funding requirement. ETI also commented unfavorably on the then-existing Pacific Telesis Model.

With our reply comments we submitted another report prepared by ETI which addressed comments by other parties on the BCM and the Pacific Telesis Model, as well as the BCM enhancements discussed by US West and a USTA proposal.[5]

In the Public Notice, the Common Carrier Bureau seeks comment on two additional or revised models -- Benchmark Cost Model 2 ("BCM2") submitted on July 3, 1996 by Sprint and US West and Hatfield 2.2 submitted by MCI and AT&T on July 5, 1996. NCTA has asked ETI to review BCM2 and Hatfield 2.2. In response to the Bureau's request for comments on those models, NCTA is herewith submitting a copy of ETI's report addressing those models.

Respectfully submitted,

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Teresa A. Pitts
Directors, State Telecommunications Policy

National Cable Television Association, Inc.

August 9, 1996

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[5] Baldwin, Susan M., Selwyn, Lee L. and Golding, Helen E., Economics and Technology, Inc., The BCM Debate: A Further Discussion, May, 1996.

CERTIFICATE OF SERVICE

I, Staci M. Pittman, do hereby certify that on this 9th day of August, 1996, copies of the foregoing **"Further Comments of the National Cable Television Association, Inc."** were delivered by first-class, postage pre-paid mail upon the attached:

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ATTACHMENT A

CONVERGING ON A COST PROXY MODEL FOR PRIMARY LINE BASIC RESIDENTIAL SERVICE

A Blueprint for Designing a Competitively Neutral Universal Service Fund

Susan M. Baldwin
Lee L. Selwyn

August 1996

ECONOMICS AND TECHNOLOGY, INC.
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Preface | CONVERGING ON A COST PROXY MODEL

Significant progress has clearly been made toward the development of a cost proxy model that is capable of identifying those parts of the country that require high-cost support and of quantifying the level of funding needed to achieve universal service goals. However, several controversial issues concerning the *design* of an appropriate cost model and the *inputs* and *assumptions* that underlie such a model remain unresolved. In two previous reports completed in April and May of this year, Economics and Technology, Inc. provided a comprehensive assessment of the original Benchmark Cost Model and also discussed the public policy context that should inform the design of *any* cost proxy model that is to be used to assess the magnitude of a universal service funding requirement. In this report, we evaluate BCM2, the ways in which it has been improved relative to the original BCM, and the ways in which old flaws have been perpetuated and new ones introduced. In response to the interest that has been expressed in the Hatfield Model and the Pacific Telesis Cost Proxy Model, we have provided some comparative analyses of these two models as well. However, because the Hatfield Model is currently undergoing substantial revision and is apparently about to be re-released, we have deferred for the present any in-depth analysis of its various strengths and weaknesses.

This report was prepared by Economics and Technology, Inc. on behalf of the National Cable Television Association. The project was conducted under the overall direction of Susan M. Baldwin and Dr. Lee L. Selwyn. Contributing to this work were Michael J. DeWinter, Paul S. Keller, Scott C. Lundquist, and Helen E. Golding. The project also benefitted from the suggestions and ideas of Richard L. Cimerman, Director, State Telecommunications Policy, NCTA. The views in this report are those of ETI and do not necessarily reflect the views of the NCTA.

August 1996

Economics and Technology, Inc.
Boston, Massachusetts 02108 USA

Executive Summary | CONVERGING ON A COST PROXY MODEL

When the Federal Communications Commission began its proceeding to implement the universal service provisions of the *Telecommunications Act of 1996*, it specifically invited comment on the use of a cost proxy model to determine funding requirements for universal service. In the brief time since the FCC initiated this proceeding, the interest in developing a reliable, usable cost proxy model to inform universal service funding decisions has grown, and so has the sophistication of the several competing cost proxy models under consideration. Early on, the National Cable Television Association (NCTA) recognized the importance of developing a reliable cost proxy model that would help to put the cost of universal service in its proper perspective, by focusing on the forward-looking cost of providing basic local exchange service, based upon objective factors, rather than on the recovery of historical embedded costs.

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a full spectrum of desired changes.

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