

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

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of

Implementation of the Local Competition
Provisions in the Telecommunications Act
of 1996

CS Docket No. 96-98

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**COMMENTS OF NCTA ON STAFF MODEL OF
TELECOMMUNICATIONS INDUSTRY AND LOCAL COMPETITION**

The National Cable Television Association, Inc. ("NCTA"), by its attorneys, hereby submits these comments on the "FCC Staff Working Copy of an Industry Demand & Supply Simulation Model" ("Model"). NCTA is the principal trade association of the cable television industry. Its members provide cable television services to more than 80 percent of the nation's cable television subscribers. Its members currently offer competitive access provider (CAP) services and are actively pursuing plans to provide local telephone services.

Attached is a paper prepared for NCTA by Economists Inc. analyzing the inputs and outputs of the Model. The Model's focus on facilities-based competition, as the attached paper indicates, is an appropriate one because facilities-based competition is the most significant, and only long term, form of competition in the telecommunication industry's future.

However, the Model appears to still be in a state of development. Reliance upon it to direct policy decisions in the local competition proceeding is ill-advised. Given the large number of inputs and outputs, no valid basis in the record for deciding on a reasonable set of values for

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these inputs, and the fact that the Commission has not completely refined the Model, it would be an error to rely on forecasts that the Model produces

Further, NCTA urges that corresponding models for competitive local exchange carriers also be developed, if modeling is going to be a policy tool in deciding local competition questions. There is no modeling of entry by such true competitors. Variations on resale and transport and termination prices in a computer model, for instance, will be helpful to determine the pace of true competitive entry.

For the reasons articulated in the attached paper, NCTA urges the Commission to place no reliance on the Model at this time in this proceeding. As the Model is refined in the future, it should be made available to all interested parties for review and comment, including reasonable time for comments.

Respectfully submitted,



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ATTACHMENT A

The FCC Staff Model of the Telecommunications Industry and the Local Competition Proceeding

Paper prepared for the
National Cable Television Association
by Economists Incorporated
July 8, 1996

I. Introduction

The staff of the Federal Communications Commission (FCC) has released a model of telecommunications industry supply and demand. The model, which consists of a series of linked spreadsheets in a LOTUS 123 workbook, is extremely complex. The user supplies almost 200 lines of input. The inputs embody assumptions concerning the following types of variables: rates, price elasticities of demand, surcharges for universal service, costs, investments, and future industry structure. The model uses the inputs to forecast a number of variables annually to the year 2010. The output variables include toll minutes, telephone penetration, average total residential and business bills at various levels of toll usage, measures of the financial health of incumbent local exchange carriers (ILECs), and of competing local exchange carriers (CLECs) and interexchange carriers (IXCs), ILEC and CLEC shares of loops, and changes in consumer surplus relative to a user-identified base case.

The Commission has asked for comments concerning the possible use of this model in the local competition proceeding (CC Docket 96-98). This paper responds to that request. The model embodies a great deal of careful thought and hard work on the part of the FCC staff and may become a valuable tool for the Commission in the future. Nonetheless, the model cannot play a significant role in this proceeding. The model is still being developed, and interested parties have had very little opportunity to review and comment on it. Moreover, while the model could be useful in showing that opening up the telecommunications industry to competition can significantly benefit consumers, Congress has already recognized the benefits from competition in passing the Telecommunications Act of 1996.

II. The model's current stage of development

A. A description of the model's inputs

The model consists of a workbook with a linked series of spreadsheets. The user enters data on the first spreadsheet, A. The other spreadsheets perform the model's calculations and present its results. Spreadsheet A calls for 186 lines of user supplied inputs. On some of these lines, the user must

supply only a single number, such as an elasticity. Other lines require the user to enter predictions concerning variables, such as growth rates or shares, for the entire forecast period, up to the year 2010.

In the first sections of spreadsheet A, the user must specify parameters affecting four types of rates: traditional access charges, alternatives to traditional charges, local service rates, and toll rates. Traditional access charges are bounded by a price cap formula, but the user can vary the way the price cap rule calculates growth and a number of other variables that determine the actual level of these charges. Alternatives to traditional access charges are generally defined by mark-ups over incremental costs for unbundled loops, vertical services, and interconnection minutes. (The model allows the user to specify other types of alternative access charges, such as bulk billing.) Incremental costs are specified by the user in a later section of the spreadsheet. The user also later specifies the shares of traffic that are subject to alternative and traditional charges.

The user must then specify price elasticities of demand for toll, residential, and business service. These elasticities determine the extent to which falling prices will stimulate the demand for those services. There follows a short section where the user can select surcharges for universal service funding. The user may choose among eight different formulas for that funding. For example, surcharges may be by customer line, per access minute, or per minute of interstate toll service. All universal service funding is assumed to flow to ILECs. (The model refers to ILECs simply as LECs.)

The next section of spreadsheet A, "industry structure," requires the user to forecast the future development of the telecommunications industry. Among the variables the user must provide are the share of loops that will be provided by CLECs, and the share of long distance service that will be provided by ILECs. These variables must be specified for each year up to 2010.

Spreadsheet A next requires the user to specify parameters concerning LEC costs, rates of change in costs due to information and productivity growth, and ILEC investment. Incremental costs must be specified for loops,

switching, billing and customer service, adding or churning unbundled loops, residential toll minutes, and business toll minutes. Except for the incremental cost of adding or churning an unbundled loop, the model has no provision for entering different costs for CLECs and ILECs. Essentially, the model assumes that all LECs have the same costs. Thus, the model cannot take account of one of the great potential advantages of competition--the possibility of entry by a more efficient producer. (The model does allow the user to take the efficiency-enhancing effects of competition into account by specifying a higher rate of productivity growth for the industry in the future. That rate of productivity growth, however, must be the same for ILECs and CLECs.)

The model allows for the possibility that ILECs may develop excess capacity that will affect their costs. If the growth rate of ILEC loops falls below the growth rate of all loops by a user-specified amount, the model forecast will assume that the ILECs suffer from "stranded plant" or "shadow lines." The ILECs incur costs for each shadow line, but they realize no revenue from them. Thus, these lines represent ILEC excess capacity.

The final section of Spreadsheet A requires the user to forecast "Key Growth Rates and Ratios." For example, the user must supply the underlying industry-wide growth rate of residential lines, business lines and toll minutes. The model adds the underlying growth rate to an estimate of the effect of changes in prices to forecast the growth of lines and minutes.

Among the inputs that the final section asks for are cellular and PCS (Personal Communications Service) growth rates. These variables, however, affect only the model's forecasts of wireless and total communications revenue and do not affect its forecasts concerning ILECs or CLECs. The model does not consider the possibility either that these services will emerge as significant competitors for wireline service or that firms providing this service will become CLECs. More important, in forecasting ILEC financial results, the model ignores the fact that the ILECs themselves own a large share of the rapidly-growing cellular industry. If one is concerned about the financial future of the ILECs, one should consider that the earnings from

their cellular holdings will dilute whatever negative effect changes in their wireline telephone business have on their earnings.

Although the model is set up as if 186 independent data specifications produce its results, many of those specifications are not independent. For consistency, variables provided in the various sections of the model must be related to variables in other sections. For example, what one believes will happen to market share certainly will depend in part on what one believes will happen to costs and rates. The model, however, allows the user to enter both sets of numbers with no regard for their consistency. The great flexibility the model allows the user is an advantage, but it also allows the user to go seriously astray. Inappropriate or inconsistent inputs may cause the model to give very misleading results. This concern is particularly serious because reply comments are not allowed.

A particular concern is that a user might choose inputs that ignore the benefits of competition, such as faster productivity growth and the stimulating effects of lower prices on traffic. Thus, the industry would appear to be a zero-sum game, where any gains realized by the CLECs would come at the expense of the ILECs. Such a specification would seriously overstate the effect of competition on the ILECs. More seriously, such a specification would obscure the great value of competition.

B. A description of the model's outputs

After the user has specified the necessary data, the model performs a complex series of calculations to forecast a large number of variables up to the year 2010. The model includes standard errors for some of the numbers to be input, such as rate changes, CLEC market penetration, and demand growth. These standard errors allow the model to do a Monte Carlo simulation and to calculate probability distributions around some of its results. (The standard errors are specified by the user.) This feature provides a way to determine the sensitivity of the results to some of the underlying assumptions. Spreadsheets B and C present the model's results, the former in summary form.

The model forecasts variables indicating the welfare of consumers, ILECs, and IXC and CLECs. Consumer-related outputs include toll minutes, telephone penetration, and various measures of price. ILEC financial results are represented primarily by revenues, earnings before interest, taxes, depreciation, and amortization (EBITDA), and the rate of return on the rate base. The forecast financial results of the CLECs and interexchange carriers (IXCs) are only estimated on a combined basis and are not as detailed as the forecast results provided for the LECs. Perhaps the ILECs receive more detailed treatment because the Commission staff has more data on and experience with them. The model calculates the combined IXC and CLEC revenues and operating profits. The fact that a model cannot show financial results for a CLEC that is independent of an IXC is a serious shortcoming because non-IXC CLECs, such as cable companies or cellular carriers, may be the most likely to introduce facilities-based competition to customers, especially residential customers.

The model allows the user to specify one set of input variables as a base case, and then to calculate the differences in consumer surplus for residential and business customers, ILEC profits, and combined CLEC and IXC profits between the base case and an alternative set of inputs. For example, one could input a scenario with high rates and little competitive entry, and then compare those results to a scenario with low rates and vigorous competitive entry.

C. The questions addressed by the model are of limited usefulness in the current proceeding.

While the model largely focuses on questions that may be of significant concern to the Commission in the future, the model's focus will not be helpful in the local competition proceeding. It is appropriate that the model concentrates on competition for customers between facilities-based CLECs and ILECs, which is the form of competition that will be most important in the industry's future. Moreover, it is natural that the model examines the effect of changes in the industry on consumers, as such effects are of great policy concern. Nonetheless, this focus seems to be of little value to the Commission in this specific proceeding, as the benefits that

competition will bring consumers have already been recognized by Congress. Moreover, the model does not allow the Commission to determine the effects of changing transport and termination fees and reseller discounts.

The model focuses on facilities-based competition, rather than reselling. It makes no specific provision for entry by and competition from resellers. Admittedly facilities-based competition is the form of competition that will be significant in the industry's future. ILEC market power is based on monopoly of facilities, and it cannot be undone through resale. While there is a certain very limited sense in which resellers may compete with the ILEC, they do not compete in supplying the underlying services over which the ILEC has a monopoly. Nonetheless, the statute mandates that an avoided cost discount be available to resellers, and the model does not enable the Commission to determine the effects of altering that discount.

The model also focuses on the rates customers are charged; it ignores transport and termination fees for local calls, which are rates charged one LEC by another. By ignoring transport and termination fees, the model implicitly assumes that such payments between ILECs and CLECs cancel each other out or alternatively that these calls are handled under the bill and keep procedure. As a policy matter, this treatment is appropriate because there is no reason to believe that traffic flows between competing LECs will be unbalanced. Still transport and termination pricing remains an important competitive issue. For instance, ILECs could manipulate the transport and termination fee to use it as a barrier to entry. Despite the importance of transport and termination pricing, the Commission cannot use the model to address this issue.

The Commission may find the model's focus on consumer welfare to be useful in future proceedings, but the local competition proceeding is past that point. Congress has already recognized the benefits from competition in local telephone service in passing the Telecommunications Act of 1996. The decision to open the industry to competition has been made. Thus, a further demonstration of the value of competition from this model is not necessary.

Nor are the model's results concerning the financial futures of the ILECs, the CLECs, and the IXCs likely to be useful in this proceeding. In passing the Telecommunications Act, Congress decided that the ILECs' financial future is to be determined by how well they perform in the market, not by decisions of regulatory agencies. The model shows that the ILECs' financial results will depend in large part on their future shares of local service and of long distance, as is natural for firms in a competitive industry. These shares depend on how well the ILECs do in satisfying consumers. The effectiveness with which the ILECs compete is unforecastable and is not a regulatory concern. The financial future of these companies is now up to the market, not the Commission.

Moreover, the model's sketchy treatment of the CLECs precludes its use to address the most significant questions in the local competition proceeding. As noted, by assuming that CLECs and ILECs have the same costs, the model ignores the possible benefits from the entry of new more efficient facilities-based competitors in this industry. Moreover, the Commission's vital task in the local competition proceeding is to ensure that ILECs and regulators cannot set prices that are charged the CLECs at levels that will prevent the development of competition. The model cannot be used to address this question because it cannot be used to determine the effect of different regulatory decisions on the CLECs.

D. The model is still under development and interested parties have had limited opportunity to review and comment on it.

The model's current state of development makes it inadvisable for the Commission to rely on it in the local competition proceeding. As noted, the model is extremely complex, with a large number of inputs and outputs and a set of spreadsheets that carry out a large number of complicated calculations. Testing and debugging such a complicated model is a long and involved process. The Commission staff is still working on refining the model.

Moreover, interested parties have not had sufficient time to review and comment on the model. The model was not officially released until June

17, 1996, three weeks before the deadline in the supplemental comment period. Three weeks is not long enough to allow analysts outside the Commission to explore fully the workings and ramifications of such a complex and sophisticated model.

In particular, the model's results depend crucially on 186 lines of user supplied inputs. Participants in the proceeding have not had time to consider what would be a reasonable set of values for these inputs. Moreover, the great flexibility the user has in specifying inputs makes it easy to derive seriously biased results from the model by selecting inappropriate inputs. Given the large number of inputs and their complex interaction in determining the results, such biases may be very hard to detect.

The task of specifying inputs for this model is complicated by the rapid changes in the telecommunications industry. Although the user may be tempted to base inputs on historical data, that temptation must be avoided. As noted above, because of the great changes in the industry's technology and regulatory climate, historical data are of severely limited predictive value.

Furthermore, the task of reviewing and commenting on this model has been made more difficult by the lack of adequate documentation. While staff has been generous with its time in explaining the model, the only documentation available has been a one-page press release and the limited amount of text available in the model itself. Before the Commission uses the model to inform its decisions, it should release full documentation to the public. That documentation should explain all the inputs, outputs, and algorithms used in the model.

Finally, the model currently is written in version 3.1 of LOTUS 123, a version which is out of date by several years. The model can be loaded in Excel, but it cannot be run in Excel. (The model can be run in version 4.1 of LOTUS with only minor apparent difficulties.) The Commission should ask the staff to upgrade the model to the most recent release of LOTUS and to prepare versions that can be run using other spreadsheet platforms.

III. Conclusion

Although the Commission may find the model of the telecommunications industry developed by its staff to be a useful research tool in the future, the local competition proceeding is the wrong place and time to use this model. The model is still under development and needs significant additional work. The model is vulnerable to misspecification of its inputs, which could lead to results that seriously understate the benefits of competition and overstate competition's financial effects on ILECs. Moreover, the model focuses on questions of limited value to competition but fails to address critical competitive questions, such as the transport and termination fee and the reseller discount.