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Testimony of Mark N. Cooper

NON-PUBLIC VERSION

BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO

In The Matter of the Application of the Ohio Bell Telephone Company For Approval of an Alternative Form of Regulation	)	Case No. 93-487-TP-ALT
In the Matter of the Complaint of the Office of the Consumers' Counsel, Complainant v. Ohio Bell Telephone Company, Respondent, Relative to the Alleged Unjust and Unreasonable Rates and Charges	)	Case No. 93-576-TP-CSS

TESTIMONY OF DR. MARK N. COOPER
ON BEHALF OF
THE AMERICAN ASSOCIATION OF RETIRED PERSONS

May 5, 1994

in the foreseeable future.

Not only will there be more than enough time to recover the ISDN investment, but when broadband gets to a subscriber served by ISDN, little of the investment made will be rendered obsolete. Truly broadband applications will lag behind the deployment of the transmission medium, and the ISDN investments will continue to be used and useful either by serving the existing customer or by being salvaged and moved to serve another customer (who is scheduled for much later deployment of broadband).

Q. HAS THE COMPANY RECOGNIZED THE ATTRACTIVENESS OF ISDN?

A. Yes. The "Testimony of Linda S. Klais," pp. 25-27, identifies the many specific areas and types of applications that are possible with ISDN. However, an even more important point was made in a 1990 Ameritech report (Ameritech ISDN Investment Case, April 2, 1990) which noted that ISDN is an economic undertaking in its own right that fills an important evolutionary place in the unfolding of the information age.

This report spoke of ISDN along these lines in glowing terms. The economic analysis was highly favorable.

> ** ISDN is projected to operate at a revenue to expense ratio of 3.9 to 1. It will provide a total Net Income of $1509.7M over the ten year study period. Cash flow evaluation of ISDN is also favorable. The project will reach a discounted Payback Status at the end of six years with an Internal Rate of Return of 45.1% and a Project Rate of Return of 35.7%. ISDN will provide a cumulative discounted Cash Flow/Net Present Value of $470.6M over the study period (p. 3). **

Even four years ago the company also rejected the notion that a lack of applications would make ISDN unattractive.

** ARE THERE ANY ISDN APPLICATIONS?

The ISDN technology definitely developed ahead of the ISDN applications. Until very recently there was a problem of very few applications. The same thing happened with PCs.

Over the last several years the industry and the leading edge users have turned their attention to ISDN applications. The AT&T TriVista program has documented approximately fifteen ISDN applications that show how users can benefit from ISDN. AT&T has also entered into agreements with third-party hardware and software companies to develop products compatible with the AT&T version of ISDN. As a footnote, it is believed that large numbers of hardware and software vendors will develop ISDN products compatible with the new standard multi-vendor interface now that AT&T, NTI, and Siemens have agreed to support his common interface (p. 8). **

The crucial role of ISDN as a transitional step in network evolution was also identified.

** ISDN - TOO LITTLE TOO LATE?

Motorola, American Express, McDonalds, and hundreds of other companies don't think so. Their competitors may feel that it is too late to regain that competitive edge. Yet today these companies could still achieve improvements in response time, productivity and profitability that ISDN has delivered. In addition to its ability to meet the customer's communications requirements, ISDN also has the capability to act as transport for standard applications (p. 9)

In the longer term, as broadband also becomes available at economical price, applications will also be developed to utilize these ever-higher bandwitdths. Some people have proposed we "leapfrog" narrowband ISDN or go directly to broadband. The following is rationale for why such a "leapfrog" strategy is not practical

There are differing opinions on when broadband might be available but many experts are projecting that it might be

available for larger businesses in the mid 1990s and for small businesses and consumer by the year 2000. There are numerous issues to resolve including cost and willingness to pay especially for small businesses and consumers. Assuming that these issues are resolved favorably, a "leapfrog" strategy would keep us out of the data market for almost five years for large businesses and perhaps ten years for small businesses and consumers. If Ameritech does not provide a public network data solution, then the market is likely to migrate to private network solutions and it will be extremely difficult to migrate it back to Ameritech and broadband. Likewise, ISDN can position Ameritech in the near future as a major data network providers and facilitate future migration to broadband.

We would expect customer applications to evolve over time to utilize higher bandwidth rather than to take a quantum step from the lower spread of modems (9.6 KBPS) to the higher speeds of broadband (45 MBPS). Thus, not providing ISDN at 64 KBPS and 1.5 MBPS may actually retard the availability of broadband applications.

From a testimonial perspective narrowband ISDN is establishing many of the control and signaling protocols that will carry over and still be used for broadband. Waiting for broadband would make the transition from today's technology so much harder to accomplish in one step.

Likewise, Ameritech has a large training and skills transition from voice and analog of today to data and ISDN. Attempting to move directly to broadband would be an even more radical transition. the transition would be deferred and would be difficult to accomplish in a short period of time (p. 10). **

The network externality quality of ISDN was also identified.

** CAN AMERITECH MAKE ISDN A SUCCESS BY OURSELVES?

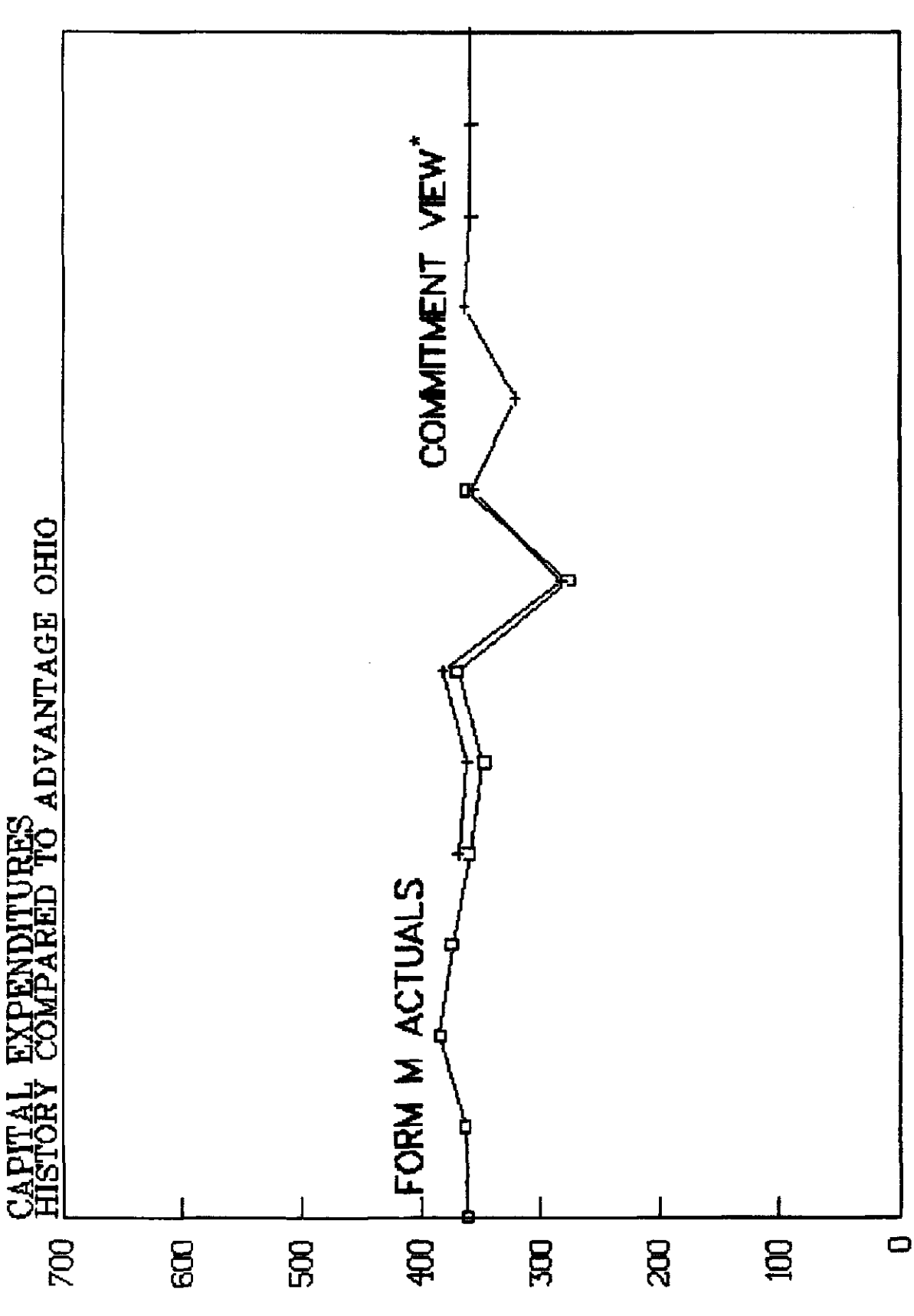
We have demonstrated above that ISDN does meet a variety of customer needs in a cost effective manner. Implicit in this is the assumption that customers with the need for these higher performance capabilities will be able to obtain ISDN

from their LEC. The value of ISDN to the customer is definitely a function of the number of other people in the same community of interest that also have the ISDN capability (p. 13). **

Thus, the case for ISDN as a near term technology to meet information age needs is strong and the case for deployment of broadband technology is weak. The need for the broadband investment to achieve information age services has not been demonstrated and alternatives have not been considered.

First, the decision to deploy network technologies like broadband fiber or ISDN must be subject to careful analysis. The economic analysis I have reviewed shows ISDN is an attractive alternative. Much more extensive consumer needs assessments than the company has presented to the Commission should be conducted before large sums of money are spent on infrastructure that lacks proven demand.

Second, Ohio Bell's proposal to leapfrog to broadband and skip digital over copper technology misses an important opportunity to develop the next step in the telecommunications network and learn a great deal about which direction demand will go. An approach to the information age that emphasizes ubiquity combined with compression will meet the vast majority of information age needs in the decade ahead including distance learning and telemedicine applications.



* From Commitment View, 1992, Preliminary 1994