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December 10, 1991

In the Matter of	)	
Radio Broadcast Services;	)	MM Docket No. 87-268
Advanced Television Systems	)	

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Donna R. Searcy
Secretary
Federal Communications Commission
Washington DC 20554

Dear Secretary Searcy,

With this letter I file with you original and nine copies of my Comments in connection with the proposed rule in the above case as invited in the notice dated November 18, 1991.

Sincerely yours,

Francis Dummer Fisher

0+9

Original

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
Federal Communications Commission
Washington DC 20554

In the Matter of Radio Broadcast Services; Advanced Television Systems	)))	MM Docket No. 87-268

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COMMENTS
of
FRANCIS DUMMER FISHER[1]
to
Proposed Rule, FCC 91-337

These comments are directed to the importance of the "advanced television" terminal being suitable for use as the general home terminal for interactive connection with information in visual form. (¶47)

In a different, but contemporaneous proceeding[2] concerned with the "video dialtone" the Commission has expressed its objective of "making available nationwide, publicly accessible, advanced telecommunications networks" that "might some day include switched, broadband capability and integrated voice, data, and video services" as well as the concern of the Commission for "cost-effective technology" that could help achieve this purpose.[3]

In the present proceeding the Commission is considering the characteristics that shall be required of the advanced television system including the terminal. Fortunately, the Commission has recently observed that these standards may usefully have applications to other media. Although for administrative convenience the FCC has divided mass media from telecommunications, these responsibilities are now coming together at the level of the Commission itself, a reflection of the merger of technologies.

One terminal for both broadcast and interactive networked video. It is now clear that the large box with a screen for displaying images could be valuable to

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[1] Francis Dummer Fisher, Visiting Scholar, LBJ School of Public Affairs, The University of Texas at Austin, Austin Texas 78713-7450, 512 476-8326

[2] In the Matter of Telephone Company-Cable Television Cross-Ownership Rules, Section 63.54 - 64.58, CC Docket 87-266

[3] Same proceeding, FCC 91-334 "Further Notice of Proposed Rulemaking, First Report and Order and Second Further Notice of Inquiry, released November 22, 1991.

its owner, not only for video sent by one-way broadcasters, but also for imaged messages that are selected by the individual user in recursive interaction. Many Americans are not sufficiently affluent to be able to afford both a color television set and a computer. And unless the new TV terminal is capable of permitting interaction through switched connection to the specific visual information that an individual needs, the chances are that many Americans will have to do without that information. The alternative hypothesis, that all those American homes receiving television can be expected to purchase a second similar but critically different terminal with which to interact with visual information is unrealistic; that those homes should do without such information would be inequitable.

Given the likelihood that the new advanced television terminal will be digital and already contain substantial computing power, a requirement that it also be made to serve as a terminal to interactive visual information over a wired network will add little in cost. The Commission's historical concern that large consumer investments not be made obsolete unnecessarily by new technologies strongly argues that the standards set now should require the advanced television terminal either to be capable of serving also as the terminal of the wired interactive information infrastructure, or be subject to an easy evolution to that capability. This is especially so, as the length of life of the new advanced TV standards will surpass the time by which interactive imaged information will be available to the home.

The social value of interactive imaged information in the home. A recent study, supported by the National Science Foundation, has just been completed which seeks to gain some rough sense of how valuable for society would be the accessibility of broad band information from the home.[4] The analysis considered possible applications in health, governance and citizenship, and informal education and training.

In health, the focus was placed on the potential value of the individual's improved information in disease prevention, in choosing less expensive alternative therapies, and in self-care in the home. In government and citizenship, the focus was on the potential value to the individual of improved access to government information; of improved communication in working out individual problems with government agencies at the federal, state and local levels; and of improved communication and information in the conduct of the political processes of a democratic society. In informal education and training, emphasis was placed on the value of improved public access to job training, literacy and numeracy, English as a second language, and libraries. Also considered was the potential value of improved access to a network that would facilitate parental backstopping of the education their children receive in school.

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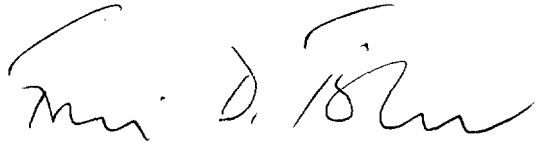
[4] A.S. Melmed and F.D. Fisher, *Towards a National Information Infrastructure; Implications for Selected Social Sectors and Education*, Center for Educational Technology and Economic Productivity, New York University, December 1991.

The value of the activities that could be directly affected by access to such information was found to be large, in the range of several hundreds of billions of dollars annually. And there would be further indirect value of a healthier and better informed work force for the competitive position of the United States and of a more informed citizenry for the quality of government. Many of these values have not been examined in previous studies of "demand" for broad band services which focused on entertainment video and did not consider the value for which others than customers might be prepared to pay, such as the value to government of reduced health expenditures which would result from a public better informed on how to remain healthy and administer to its own health needs.

Characteristics of the infrastructure. The study considered the following to be characteristics of a public electronic information network that were important if these values were to be achieved:

- **ubiquity**
  accessible from all homes, providing both a national market and equity of access.
- **interactivity**
  assuring individualized information by permitting users repeatedly to refine a request for needed information and to gain the feed-back that promotes learning.
- **moving images**
  to provide information only transferable in image form and to ease information transfer for persons who experience difficulty with words and numbers.
- **switched access to multiple sources**
  to accommodate the range of individual needs for information and to provide information when needed.

The new advanced television terminal for displaying moving images is assured of eventual ubiquity. If it also has the potential for interactivity over a switched network, it will help realize the information objectives which the FCC has recognized and which hold great value for our society.

December 12, 1991