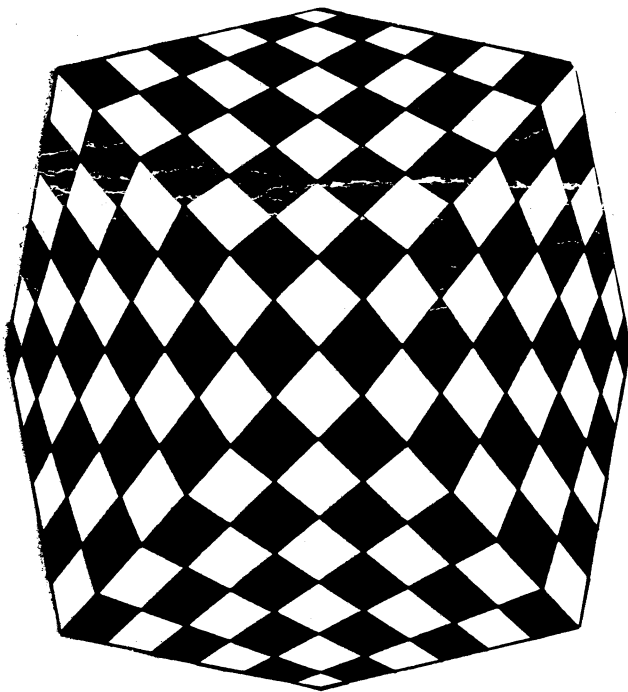


A Cable Television Report For the City of Cambridge, Massachusetts

**By
The City Manager's Cable TV Advisory Committee**



October 1982

**FINDINGS AND RECOMMENDATIONS FOR
CABLE TELEVISION DEVELOPMENT
IN THE CITY OF CAMBRIDGE, MASSACHUSETTS**

October 1982

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TO: Robert W. Healy
City Manager
City of Cambridge
Cambridge, MA 02139

Enclosed herewith is a report by the Cable Television Advisory Committee of Recommendations and Conclusions on the Development of a Cable Television System in Cambridge.

The Committee has worked hard in analyzing the studies of cable construction and economic viability prepared for the City by acknowledged experts, and concludes that a municipally owned cable system would be feasible and economically successful in Cambridge. We believe that municipal ownership would, in the term, ensure:

- Stable and lower prices for consumers;
- Enhanced community and municipal services;
- Greater opportunities for resident involvement
- More responsive cable programming and services;
- Guaranteed availability of access to the system for community, governmental and educational use;
- Substantial revenues and equity for the City; and
- Economic benefits for all Cambridge citizens.

But we would be remiss, as a Committee appointed to serve in the public interest, if despite our recommendations over the economic viability of a municipally owned cable system, we failed to point out the problems associated with public ownership.

We are compelled to note that the road towards the actual construction and operation of a municipal cable system would be long and difficult. Among the obstacles Cambridge would face is the possibility of legal challenges to the City's right to own and operate a cable system. Such challenges already plague other cities, including Paterson, New Jersey, where litigation has delayed progress for five years.

The financing of a municipal cable system is not without risks. Funding by means of bonds backed by the full faith and credit of the City could impair Cambridge's ability to issue debt obligations for other purposes. And it might be difficult to sell bonds for construction of a cable system, even if our financial institutions back the venture.

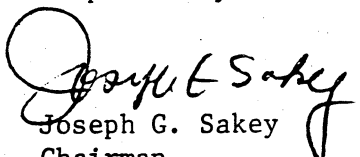
There are also procedural uncertainties associated with public ownership, including the possibility that a public referendum would be required. In St. Paul, perhaps the biggest city to consider public ownership, the City Council approved a plan for cable financing with system operation and ownership under a public authority, only to have the voters reject the notion of public ownership.

And finally, while the leadership of the cable industry states that it is "only monitoring" Cambridge's consideration of public ownership now, it is possible that companies will make every effort to discourage this course of action.

The Cable Television Advisory Committee is deeply grateful for the support and assistance given to it by the City Council and City Manager. Our recommendation that municipal ownership of Cambridge's cable system would be economically viable was arrived at after long, sincere and thoughtful consideration. But we recognize that the City Council, as the elected leaders of our community, are the only ones who can now decide what course Cambridge will take.

Please be assured that whatever decision you make, this Committee stands ready to support and work with the Council and City Manager towards creating the best possible cable system for the City of Cambridge.

Respectfully submitted,


Joseph G. Sakey
Chairman
City Manager's Cable Television Advisory Committee

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The City of Cambridge recently completed the two most detailed and comprehensive analyses of its long and careful examination of cable television development.

At the direction of the Cambridge City Council and the City Manager, leading consultants were commissioned to study the problems and costs of constructing a citywide cable television system, and to explore the financial viability of cable in Cambridge, particularly the economic and management implications associated with a municipally-owned cable system.

Cambridge hired Kalba-Bowen Associates, Inc. (a Cambridge-based research firm) and Stern Telecommunications Corporation (a New York headquartered communications engineering company) to conduct a cable construction feasibility study. The City subsequently contracted with Rice-Richter Associates of Washington, D.C. to prepare an economic analysis of cable development in Cambridge.

CONSTRUCTION FEASIBILITY STUDY

The specific objectives of the Kalba-Bowen/Stern Telecommunications study were:

- The determination of a preliminary cable system design capable of meeting the present and future

communications needs of the
Cambridge community;

- The identification of problems
that might obstruct or add to
the cost of constructing a cable
system in Cambridge; and
- The analysis of construction
choices and costs.

The Kalba-Bowen/Stern group proposed three cable system design options and analyzed the construction problems and cost factors related to each.

Option #1 is a relatively limited single cable system which would deliver 50 channels of cable service to subscribers ("downstream" channels) and would be capable of carrying return or "upstream" signals from the subscriber to the cable system control center over four channels. Under Option #1 the City's businesses and institutions would be served by a separate 10-mile cable "loop" passing those areas where most potential users are concentrated. The institutional loop would provide 20 downstream and 20 upstream channels.

Option #2 proposes a two-cable system providing up to 100 channels of subscriber service with 8 upstream channels. This option also provides a 10-mile loop dedicated to business and institutional services, but suggests that some of the citywide subscriber

channels be reserved for institutional uses.

Option 3 proposes a two-cable citywide subscriber system capable of carrying more than 100 downstream channels and 8 upstream channels, none of which would be reserved for institutional use. Instead a third citywide cable carrying 20 downstream and 20 upstream channels would be dedicated to business and institutional uses. This cable, parallel to the subscriber system, would be capable of serving businesses and institutions anywhere in Cambridge.

In conducting the construction feasibility study, the consultants carefully examined the capacity of existing utility poles and underground ducts to accommodate cable. They obtained the assistance of New England Telephone Company and Cambridge Electric Light Company in studying maps and records and in actual field inspections of utility facilities to determine engineering and reconstruction needs.

The feasibility study found that cable could be installed overhead (on utility poles) along 90 of Cambridge's 124 street miles. However, the consultants note that the remaining 34 miles of underground construction would have to be supplemented with another 10 miles of underground installation necessary in negotiating a labyrinth of lateral and service ducts. The study also revealed that many of the existing telephone company ducts lack space for more than

a single additional cable. Since design Options #2 and #3 require more than one cable, new conduits would have to be installed.

Kalba-Bowen and Stern report that Cambridge, unlike geographically larger communities, could easily be served by a single "headend" (or cable system signal processing center) and that multiple "sub headends" would not be required. Thus, trunk cables would radiate from the headend to various sections of the City as spokes radiate from the hub of a wheel.

The consultants applied the most current standards for system design and technical performance, along with conservative, up-to-date equipment and construction cost information to each of the three design options. They also took into account such relevant demographic factors as Cambridge's high population density (the City is one of the ten most densely populated cities in the United States) and U.S. Census data indicating that the number of households in Cambridge is increasing despite a decline in overall population. The consultants conclude that *"all of the three system design options are feasible, both in terms of construction and cost."*

Kalba-Bowen and Stern Telecommunications advise that Option #1 would be inadequate for Cambridge's needs. They state that *"...A priority has been to ensure the*

'flexibility' of the Cambridge cable system to adapt to future developments in cable technology and service demand....In order to accommodate the future demand for the additional capacity of new cable services, public and leased access services, a channel capacity of 72 downstream video channels would be recommended....We, therefore, recommend a dual-cable residential subscriber network design, with two drops providing a minimum capacity of 72 downstream and four upstream channels to each subscriber home."

These recommendations are compatible with the goals articulated by the City Manager's Cable TV Advisory Committee in its September 1980 *Cable Television Report and Program for the City of Cambridge*; that report recommended a capacity of 60 to 100 subscriber channels plus an institutional loop.

In summary, Stern and Kalba-Bowen recommend:

- Design Option #2, a dual cable subscriber network with two drop cables to each subscriber home providing a minimum of 72 downstream channels and 4 upstream channels, as well as a ten-mile dedicated institutional trunk cable with 20 upstream and 20 downstream channels;
- The use of "addressable converters" in subscriber homes as a means of directing specific channels or programs exclusively

to selected subscribers;

- The allocation of a portion of the channels on the subscriber network for use by institutions and businesses not served by the 10-mile institutional loop;
- The installation of new ducts with the capacity to serve cable and other communications needs; and
- The installation of spare cables during underground construction.

The construction feasibility study estimates that the capital cost of building each of the three suggested design options, including expenses for subscriber "drops" and home converters, would be as follows (the cost of replacing lateral and service ducts is included in the Option #2 and #3 figures):

SYSTEM DESIGN	OPTION #1 Single cable subscriber network; 10 mile single cable institutional network	OPTION #2 Dual cable subscriber network; 10 mile single cable institutional network.	OPTION #3 Dual cable subscriber network; Fully parallel single cable institutional network.
ADEQUATE?	No	Yes	Yes
TOTAL SYSTEM COST	\$9.7 Million	\$13.8 Million	\$14.6 Million
COST PER SUBSCRIBER	\$362.	\$513.	\$543.

The Construction Feasibility Study, thus, provided the City with two design options capable of fulfilling its communications goals and judged to be practical in terms of construction and cost. But Cambridge still wanted an unbiased evaluation of the financial feasibility of its cable goals, and therefore, the City commissioned Rice-Richter Associates to undertake further studies.

FINANCIAL VIABILITY STUDY

Specifically, Rice-Richter Associates was charged with analyzing the financial viability of cable in Cambridge, particularly if the system were municipally owned; with recommending management options, and with studying the legal implications of public ownership. Rice-Richter took a purposefully conservative look at the likelihood of cable success. It designed six separate 15-year projections of the financial performance of the two acceptable cable designs (Options #2 and #3) provided in the Construction Feasibility Study, testing the success of each option under varying economic circumstances.

The Rice-Richter study used estimates provided in the Construction Feasibility Study to project capital expenditures for cable plant (i.e., the cable and all the equipment necessary to distribute signals from the control center to each of the subscribers). Rice-Richter developed their own estimates of costs for local programming and figured operating expenses on

the basis of known costs in the Cambridge area and standard industry experience.

The financial consultants sought scientifically derived estimates of subscriber penetration (i.e., the percentage of homes passed by the cable system which actually subscribe to cable service) since this is such an important element in determining a cable system's financial success. Rice-Richter subcontracted with the professional market research firm of H & P Associates to design and implement a statistically valid survey of the level of interest in cable television among Cambridge residents. The survey firm concluded that *"more than 50 percent of those sampled (353 statistically representative Cambridge households) were willing to pay at least \$20 per month, or more than 70 percent were willing to pay at least \$15 per month for a total cable service."*

The H & P Associates survey found that the weighted average amount that those surveyed would be willing to pay for a total cable package (including first-run movies, etc.) was \$20.07 per month.

On the basis of the survey's findings and cable industry experience, Rice-Richter state that *"it is reasonable to expect that basic penetration (the percentage of homes taking at least the lowest priced service) of 65 percent can be maintained."* But taking a cautious approach, the con-

consultants project financial performance both at the 65 percent penetration level and at 50 percent. (*"The financial projections with 50 percent penetration were provided to illustrate downside risk,"* the report notes.)

In addition to these subscriber penetration estimates and the estimates of capital expenditures, operating expenses and local programming costs described above, all six financial projections assume;

- A conservative 150 percent "pay ratio" (i.e., the average cable subscriber is expected to buy 1.5 pay services in addition to basic cable);
- A constant total number of Cambridge households (41,300) throughout the 15 year period;
- The following cable rates throughout the 15 year period [except where projections figure the effect of providing a tier of free (universal) cable service to all Cambridge households] —

Tier I - \$4.00 per month
Tier II - \$7.00 per month
Tier III - \$10.00 per month

Add'l Sets- \$3.50 per month

- A cable service installation charge of \$15 (Rice-Richter estimate that 20 percent of all subscribers will disconnect and re-connect each year ---which may be conservative

given the transient character
of the City's student population);

- Deposits for home subscriber
converters of \$30;
- Conservative estimates of revenues
from pay-per-view programming
(revenues from this source are only
shown after the second year of sys-
tem operation and even in the 15th
year it is projected that only 10
percent of the subscribers would
purchase four pay-per-view offerings
a year at \$10 per offering);
- Very modest income from such
ancillary cable services as home
security and FM radio service;
- Modest revenue from cable adver-
tising despite industry projections
that cable ads will be a major source
of revenue;
- One hundred percent debt financing
is assumed at an average interest
rate of 12 percent a year (all pro-
jections assume that debt will be paid

at the fastest possible rate
and interest will be calculated on the beginning debt balance.

The Rice-Richter financial analysis also projects limited revenues from business uses of the cable system, despite predictions such as those voiced before the City of Chicago Cable Television Study Commission by Carl Pilnick (a leading cable consultant) and Richard Anthony (president of Management & Research Consultants, Inc.) that *"business use of cable among businesses and between businesses and home subscribers may be the largest source of cable revenues in the future, exceeding even those generated from entertainment services."*

Revenues, like expenses, are projected in constant 1982 dollars in the Rice-Richter study, and the consultants' projections assume that maximum penetration will be achieved eighteen months after the commencement of system operation.

Other assumptions vary with each of Rice-Richter's six financial projections:

Variable Assumptions of Financial Projections:

<u>Projection I</u>	Assumes cable design Option #2 with 50 percent basic subscriber penetration
<u>Projection II</u>	Assumes cable design Option #2 with 65 percent basic subscriber penetration
<u>Projection III</u>	Assumes cable design Option #3 with 50 percent basic subscriber penetration
<u>Projection IV</u>	Assumes cable design Option #3 with 65 percent basic subscriber penetration
<u>Projection V</u>	Assumes cable design Option #2 with the effect of universal (free) cable Service on 65% penetration
<u>Projection VI</u>	Assumes cable design Option #3 with effect of universal (free) cable service on 65% penetration

FINANCIAL ANALYSIS CONCLUSIONS

The financial viability study concludes that:

- Either of the two system designs (Option #2 or #3) are viable using reasonable rates and an estimate that 65 percent of the households will purchase basic cable service;
- The less expensive system design (Option #2) will be economically viable even if only 50 percent of the households subscribe [the report states that "at 50% penetration the system (paid off) all debt with come excess capital and a system worth over \$25 million. At 65 percent penetration (Option #2) retired all

debt and provided in excess of \$12 million to the City over the fifteen year period. This system should have a worth of over \$32 million.];

- Providing all Cambridge households with a "universal" level of cable service (free of any monthly charge) would be feasible with the less expensive cable design (Option #2) at 65 percent penetration;
- *"The less expensive cable plant design --- Option #2 --- should provide an acceptable financial risk with or without a universal (free) tier....";* and
- *"To pursue the less expensive plant design, which features a fiscally conservative approach while providing adequate system capacity, loans of \$15.5 million would be needed to cover capital expenditures and initial operating costs."*

The Rice-Richter report notes that whichever of the six financial projections is used, a Cambridge cable system would have considerable market value at the end of 15 years. The market value estimated by the consultants ranged from \$25.7-million under Projections I and III to more than \$32-million under Projections II and IV.

FINANCING METHODS

Rice-Richter explored (and, indeed, applied to their financial projections) six different methods by which Cambridge's cable system could be financed if it were municipally owned:

- Bonds
- Lease-Purchase
- Safe Harbor Lease
- Cooperative
- Limited Partnership
- Joint Venture

Although the consultants note that such options as the safe harbor lease, lease-purchase and limited partnership methods of financing are all workable and provide excellent dollar returns, each (along with the joint venture model) would present problems for the City if employed as a means of funding public ownership. For example, the safe harbor lease, which allows a private company to invest in new capital equipment and at the same time "sell" the investment tax credits and depreciation to a third party, has been under attack in the United States Senate. Rice-Richter state that *"most financial institutions are very hesitant to finance ventures based on safe harbor funds."*

The lease-purchase arrangement would require the City to attract private investors and arrange for a cable management firm to operate the system.

While each of these and other options have attractive characteristics, they also have such drawbacks as

complicated entanglements with private entrepreneurs or loss of a public voice in the way the system is operated --- one of the important attractions of municipal ownership.

The cooperative model avoids these problems. A consumer cooperative is a business structure owned by the customers using the products or services of the business. Cooperative members usually are required to make some financial investment in the entity which becomes the ownership equity in the business. Rice-Richter note that *"although many cooperatives do not require all customers to become members, membership is often a prerequisite to obtaining the services of most utility-type businesses such as rural electric cooperatives or telephone cooperatives."*

The consultants enumerate the following advantages to a cooperative form of financing:

- A built-in procedure for developing equity;
- Eligibility for funding through industrial revenue bonds;
- The ability to take advantage of any tax benefits derived from investment tax credits or depreciation; and
- The ability to borrow funds through commercial lending institutions or the National Consumer Cooperative Bank.

The disadvantages of a cooperative form of management and funding identified by Rice-Richter are:

- The considerable start-up time needed to organize and develop a consumer cooperative;
- The costs associated with developing a cooperative;
- The coop's initial "no equity" status; and
- The probable reluctance of lenders to fund construction unless an established professional management group were retained to run the system.

An April 1982 report for the City of Palo Alto, California (based on consultant and staff analyses) found that in a cable cooperative, although *"cash flow and profits remain largely within the community Users (subscribers) benefit from profit generated by the system, not the [city or] general public."*

There are two possible types of bonds that could be used as a means of financing a municipal cable system: general obligation bonds and revenue bonds. The Rice-Richter report points out that general obligation bonds *"are issued based on the ability of the community to repay the debt from local taxes. This type of bond issue generally requires a referendum of the voters and places an obligation on all the residents of the community (even those who have no interest in cable service)." Revenue bonds generally do not require a referendum and are "based on the income of the project to be financed by the issue. The revenue bond mode, therefore, seems most appropriate...."*

In projecting the viability of a bond issue as a means of cable financing, the financial consultants assumed a 12 percent interest rate and estimated the cost of underwriting and marketing the bonds at 7 percent. Rice-Richter note that *"the actual interest rate will, of course, be determined by the bond ratings and a locally placed issue could reduce the bond marketing costs slightly."* (It should be noted, too, that the consultants wrote their report prior to the recent dramatic decline in interest rates.)

Rice-Richter project a 15-year payback period for a bond issue, but a twenty year bond term would give the

City's cable system more income flexibility each year in the same way that a family with a 30-year mortgage is under less monthly financial pressure than it would be with a 20- or 25-year home mortgage.

The financial viability study concludes that the bond method of financing is *"viable even though a negative cumulative cash flow is generated at the lower (50%) penetration levels in both models....In the projection, the system is retiring \$500,000 in debt per year while still generating \$300,000 to \$1 million per year in cash flow. Our projections are based on bond interest of 12% with no inflation projected. In actual market, this would cause interest rates to be lower. In an inflationary economic market, municipal bonds become more attractive. The City would also have the option of issuing term bonds for longer maturity periods."*

Rice-Richter do not recommend any particular financing plan; instead they assess the viability of each and leave it to the City to determine which method is, on balance, most appropriate for this community. However, in a similarly structured report for Palo Alto, California (*"Financing Plan for Municipal Ownership" - January 1982*), the municipal finance firm of Bartle Wells Associates studied six alternative methods of financing a municipally owned cable television system and arrived at the recommendation that the use of revenue bonds was the most feasible.

MANAGEMENT OPTIONS

As part of their financial viability study for the City of Cambridge, Rice-Richter Associates was asked to recommend management options for a publicly owned cable system. The consultants reviewed five organizational alternatives including system ownership and operation by a:

- City Department
- Independent Authority
- Nonprofit Corporation
- Consumer Cooperative
- Joint Venture

Noting serious drawbacks with a number of these options (*"the option with the greatest structural disadvantage is the city department because of possible conflict of interest"*), the consultants conclude that ownership by an independent authority is the most preferable *"because of its flexible capabilities with the complete financial backing and rating of the City. The nonprofit corporation model follows in its advantages for the City."*

The following chart from the Rice-Richter report compares the strengths and weaknesses of the five organizational options:

COMPARITIVE FEATURES OF 5 CABLE OWNERSHIP OPTIONS (R-R p.101)

MODELS	ADVANTAGES	DISADVANTAGES
City Department	Lower mgt. team cost Tax-exempt bond financing at lowest possible rates Flexible in utilizing operating income	Limited equity capital Not isolated from daily local govt operations Accountable to city mgr, causing possible conflict of interest
Independent Authority	Same financial benefits as above Greater independence than city dept (e.g. salaries, city ordinances, personnel) Independent fiscal control	Limited equity capital
Nonprofit Corporation	Enjoys tax advantages of for profit corps. Greater number of financing options than other models Autonomous from city government	Unlikely to be financed by genl obligation bonds Higher interest rates than other models
Consumer Cooperative	Owner equity developed in business Enjoys variety of tax benefits able to be "sold" or distributed to members	No initial equity position Management team required to operate system
Joint Venture	Initial capital investment provided Expertise provided by private operator	Less control by city and more in hands of private operator Financial disadvantages to city

SUMMARY OF RICE-RICHTER CONCLUSIONS

Among the important conclusions reached by Rice-Richter Associates in their financial viability study were the following:

"By most industry criteria, Cambridge should be an excellent community for the development of a cable communications system. The City has an unusually high housing density per street mile...."

"The January 1982 market study of Cambridge residents indicated a high level of interest in receiving and purchasing cable television services and in local programming."

"(Either) of the cable system options (Options #2 and #3 from the Kalba-Bowen/Stern Telecommunications study) used in this analysis would meet or exceed industry standards for system design. However, Option #2 features a fiscally conservative approach while providing system capacity that should meet community needs in the foreseeable future."

"Either of the two system designs (is) viable using reasonable service rates and a 65 percent estimate of subscriber penetration. The less expensive plant design was economically viable at both the 50 and 65 percent subscriber penetration levels."

Estimates of the system worth at the end of the first 15 years of operation varied with each of six financial projections. System worth ranged from \$25.7 million to \$32.4 million.

"At 50 percent subscriber penetration [i.e., if 50 percent of the households purchased basic cable service at \$4 per month] the system [Option #2] paid off all debt and [at the end of 15 years Cambridge would have a] system worth over \$25 million."

"At 65 percent penetration this projection [for Option #2] retired all debt and provided in excess of \$12 million to the City over the fifteen year period. The system should have a worth of over \$32 million."

"To pursue the less expensive plant design [Option #2], which features a fiscally conservative approach while providing adequate system capacity, loans of \$15.5 million would be needed to cover capital expenditures and initial operating costs."

"There are still critical decisions to be made and then a great deal of work to be done --- some legal, some in financial packaging, and much in the development of programming and services. But it is our considered judgment that public ownership of cable television in Cambridge is financially viable. Additionally, we feel that public ownership of a cable communications system will be in the best interest of Cambridge citizens...."

"The financing methods of bonds, lease purchase, safe harbor lease, limited partnership and joint venture were examined. Each of the six financial pro formas were analyzed utilizing the six financing methods and it was found that the City has several economically viable options to pursue."

"It is recommended that the City proceed with the implementation of a publicly-owned cable communications system."

"It is recommended that the City pursue the establishment of an Independent Authority to construct and operate the cable system and that planning funds be provided to formalize the structure, financing and cable communications system plans."

CONCLUSIONS OF THE COMMITTEE

The City Manager's Cable Television Advisory Committee has carefully reviewed the conclusions and recommendations of both the construction feasibility study and the report on the economic viability of cable in Cambridge.

Based on the information provided by the consultants and on our own examination of recent cable television experience, the Committee concludes that a municipally owned cable system would be economically viable in Cambridge.

We have noted above the major conclusions of Rice-Richter Associates, including their recommendation "*that the City proceed with the implementation of a publicly owned cable communications system.*" And we have traced the consultants' reasoning in arriving at this conclusion. Again, the consultants found that:

- Cambridge residents have great interest in buying cable services;
- Exhaustive financial projections based on conservative assumptions determined that a municipally owned cable system would be financially viable in Cambridge;
- A municipal cable system could pro-

vide Cambridge with significant revenues and a cable system with a market value of \$25-30 million.

We feel that Rice-Richter have been very cautious in most of their financial assumptions. Indeed, the public statements of other experts, along with national trends in the cable industry, indicate that a cable system in Cambridge could very well surpass the performance benchmarks cited in the viability study. For example:

- Rice-Richter project no revenues from pay-per-view programming for the first two years of system operation, and estimate that even in the fifteenth year subscribers will spend only \$40 per year on such programming. Yet at a recent industry seminar sponsored by H.F. Hutton and cable finance expert Paul Kagen, industry officials predicted that national pay-per-view revenues could pass \$2 billion by the end of the decade.
- Rice-Richter project no advertising revenues during the first year of system operation and anticipate the

sale of only 5 percent of the available advertising slots for years 5 - 15. Yet in recent weeks advertisers meeting in Atlanta predicted dramatic increases in the use of cable for local advertising. The vice president of Bristol-Meyers Company noted that his firm alone already spends \$5 million on cable ads and anticipates increasing that amount.

Multi-Channel News, a respected trade journal, reported in July that Merrill Lynch recently became the 17th national advertiser on Peabody's (Mass.) cable system. And the New York Times reported that cable advertising revenues jumped from \$100 million in 1981 to \$225 million in 1982 and are expected to grow to the \$3-\$4 billion range by 1991.

- The consultants' estimated revenues from business use of cable are particularly modest. The Chicago Cable Television Commission, after interviewing 30 national cable experts, reported that "the potential from all these other services could make for the same kind of 'bonanza' that pay-cable was to earlier systems. These conclusions were unani-

mously shared by operators, consultants and lenders."

Yankee Group, a prestigious Boston based marketing and research firm, has estimated that *"data transmission, data processing, and data access could be a \$2.8 billion gold mine for the cable industry by 1990."*

Thus, we believe that Rice-Richter's estimate that Cambridge's cable system will generate revenues averaging approximately \$23 per subscriber per month is low.

The Cable Television Advisory Committee believes that Rice-Richter's conservative assumptions and expert projections of future cable revenues support our recommendation that a publicly owned cable system would be financially successful.

MANAGEMENT FORM

The Cable Committee has examined each of the organizational options for municipal ownership outlined by Rice-Richter (city department, non-profit corporation, independent authority, consumer cooperative and joint venture). We conclude that there are serious problems associated with the city department, non-profit corporation and joint venture models. These problems range from potential Constitutional and conflict-of-interest questions (in the case of management by a city department) to awkward entanglements between the City and private firms. Although the consumer cooperative option

is "cleaner" in many respects than each of the previously noted alternatives, the establishment of a cooperative would take a great deal of time and financial rewards would accrue only to co-op members. Therefore:

The Committee recommends the Independent Authority (which could well be a "Cambridge Municipal Light Plant") model of system ownership as the most appropriate for Cambridge.

The Independent Authority/Municipal Light Plant configuration of ownership and system operation provides virtually all of the advantages of the other ownership models with none of the drawbacks.

- It would allow the City to develop a tailor-made operations plan and staff to run the municipally owned system;
- It would ensure that the benefits of cable would be shared by all citizens, neighborhoods and institutions in the City;
- It would have the ability to recycle funds and/or profits into the development of cable uses for the schools, human services departments, and other public purposes;

- It would be in a position to maximize citizen participation in cable development; and
- It could ensure stability of rates for consumer services;

An Independent Authority or Municipal Light Plant would enjoy the ability to issue tax exempt bonds to finance the construction of the cable system, yet would be insulated from potential conflict-of-interest problems that might be encountered if a city department owned and managed the system. It would also insulate the City from possible conflicts with the provisions of the First Amendment to the U.S. Constitution. Moreover, the Independent Telecommunication Authority/Municipal Light Plant option appears to be most compatible with Massachusetts laws governing municipal ownership of cable systems.

The Attorney General has been asked by the Massachusetts CATV Commission to render an advisory opinion regarding the authority of cities and towns to own, construct and operate a cable system under state laws pertaining to municipal light plants and cable television. The advisory opinion of the Attorney General is expected very shortly.

FINANCING

The Committee concludes that the issuance of general obligation bonds, revenue bonds or a combination of these bonding methods would be the best means of financing the development of a municipal cable system in Cambridge.

Rice-Richter Associates offered no specific recommendations as to how a municipally owned cable system should be funded; rather they reviewed six financing alternatives and noted that several options were viable. Again, we found that most of the alternatives reviewed in the viability study were inappropriate for Cambridge, either because they required the City to give up some of its control of the publicly owned system, because they drew the City into a complex and potentially compromising relationship with a private entity, or because they reduced the overall benefits of public ownership for the City.

After reviewing the consultants' analysis of funding choices, and after exploring alternative options, the Committee concludes that the issuance of general obligation bonds, revenue bonds or a combination of these bonding methods would be the best means of financing the development of a municipal cable system in Cambridge. Issuance of bonds would provide the easiest, least expensive and least compromising form of financing

and could be achieved in a relatively short time period. But the expert advice of bond counsel and bankers should be secured before moving ahead with an actual bond offering plan.

OTHER FACTORS

The Committee concludes that municipal ownership would provide the City with a level of revenue and equity that is totally unavailable under private ownership.

The financial consultants have indicated that the municipally owned cable system should be able to pay off all debt in fifteen or twenty years, yield substantial revenues to the City, and provide the City with a cable plant worth between \$25 million and \$32 million after fifteen years. Under current state law, the City's "return" from a privately owned system would be limited to fifty cents per subscriber per year. This means that if every household in Cambridge subscribed to private cable service, the City's franchise fee would be approximately \$20,500 per year. Naturally, the City would have no interest in the market value of the system under a private ownership configuration.

It is the Committee's view that municipal ownership will guarantee the community a say in what services the system provides, despite possible cable "de-regulation."

The United States Senate is currently considering the Goldwater cable de-regulation bill (S.2172), which would substantially reduce the ability of cities to require channels for access, municipal uses, and other purposes. Although the Goldwater measure is unlikely to be enacted this year, most observers anticipate that a similar bill will be introduced in the next Congress and enjoy an excellent chance of passage. The only systems which will be exempt from the restrictions of the Goldwater bill or its successor will be municipally owned systems.



CITY OF CAMBRIDGE

CAMBRIDGE, MASSACHUSETTS 02139

Tel. 498-9011

EXECUTIVE DEPARTMENT

ROBERT W. HEALY

City Manager

November 8, 1982

To the Honorable, the City Council:

Enclosed for your information is a copy of the Findings and Recommendations for Cable Television Development in the City of Cambridge as submitted by the City Manager's Cable TV Advisory Committee.

The conclusion is that a municipally owned cable system would be feasible and economically successful.

The cover letter on pages 1 and 2 accurately summarizes the position of the Committee. It is my recommendation that this report be referred to the City Council's Cable Television Committee.

Very truly yours,

Robert W. Healy
City Manager

RWH/mbf

Enc.

S-67D

Re: copy of findings & recommendations for Cable Television development in the City of Cambridge as submitted by the City Manager's Cable TV Advisory Committee entitled "A Cable Television Report for the City of Cambridge, MA".

copy sent to the Chairman of the Cable TV Committee 11/9/82 mlr

In City Council,

November 8, 1982

*Referred to the Cable TV Committee
on Motion of
Councilor DeLoay*