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**REPORT ON  
COMCAST'S CAPABILITIES AND PLAN TO MEET  
PUBLIC, EDUCATIONAL AND GOVERNMENTAL  
(PEG) ACCESS NEEDS AND INTERESTS  
WITHIN THE MEMBER JURISDICTIONS OF THE  
MARIN TELECOMMUNICATIONS AGENCY  
(MTA)**

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## **EXECUTIVE SUMMARY**

CBG Communications, Inc. (CBG), in association with Carson Hamlin, video engineer, at the behest of the Marin Telecommunications Agency (MTA)<sup>1</sup> has conducted a comprehensive review of Comcast's May 2003 Plan<sup>2</sup> to enhance current Community Access Center (Center) facilities and equipment, as well as ascertained public, educational and governmental (PEG) needs and interests related to such facilities and equipment and compared the current and planned facilities, equipment and operations to the needs ascertainment. This Review and Ascertainment was conducted as part of cable franchise renewal proceedings with the local cable television provider, Comcast Cable Communications (Comcast).

Thomas G. Robinson, Executive Vice President, managed the project. Mr. Hamlin provided video engineering expertise related to PEG Access review and analysis tasks.

The results of the Access Center facilities, equipment and operations Review and the Needs and Interests Ascertainment are presented in the following Report. They provide a wealth of information for the MTA regarding issues of significance to current and potential PEG programmers, producers and users, and correspondingly, the ability of the cable system and Center operator, Comcast, to meet the demonstrated needs and interests.

The key recommendations and observations discussed herein are based on an extensive data collection and analysis including, but not limited to, the following:

- A review of a significant amount of existing data related to PEG Access history, experience, needs and interests provided by current and potential PEG Access User Organizations and individuals, as well as advisory bodies such as the MAAC (Media Access Advisory Committee)

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<sup>1</sup> The MTA is comprised of representatives from the jurisdictions of Belvedere, Corte Madera, Fairfax, Larkspur, Mill Valley, Ross, San Anselmo, San Rafael, Sausalito, Tiburon and Marin County.

<sup>2</sup> Comcast's proposal is embodied in a document entitled "Public Access and I-Net Plan for Marin Telecommunications Agency," May 30, 2003 ("Comcast Plan").

- Interviews with the staff of, and on-site visits to, the Marin Community Television Channel 26 Access Center at Comcast’s local office.
- Interviews and focused discussions with current Access users.
- Interviews and focused discussions with representatives from Marin County and other local governments.
- Long interviews with and a survey from local educators.
- A detailed review of the Comcast Plan to compare and contrast it with the analysis, evaluations, needs and interests determined through all the other tasks.

The analysis of all of the above enabled CBG to determine the facilities, equipment, and operational elements that would be of significant benefit in meeting the needs of all the various current and potential PEG Access content providers. These elements are summarized in the table below under the “CBG Recommendations” heading (most are also referenced to corresponding sections in the main body of the report). Comparison of CBG’s recommendations with the elements proposed under the Comcast Plan indicates that enhancements are needed to Comcast’s current and projected Access facilities, equipment and operations in order to meet our recommendations. While we believe that the best benefits would be achieved by crafting franchise language that implements all of our recommendations, we have further noted the priority nature (Primary or Secondary) of the recommended enhancements based on our analysis and have detailed ideal scenarios and desired goals and objectives in the body of the report, in order to provide the MTA with maximum flexibility in decision-making related to both Comcast’s Plan and our recommended enhancements.

**Analysis of Comcast Plan to Enhance PEG Access Facilities and Equipment –  
Overall Comparison with CBG Recommendations**

CBG Recommendations	Priority	Included in Comcast Proposal			
	Primary or Secondary	Yes	No	At Lower Level Than CBG Recommends	Unclear
3.1 Upgrade Technology	Primary			✓	
3.1.1 Separation of Channels	Primary			✓	
3.1.2 Use of Open Systems	Primary				✓
3.1.3 Tape Formats	Primary			✓	
3.1.4 Routing System	Primary		✓		
4. Functional Areas/Equipment Upgrades	Primary			✓	
4.1 Studio/Cameras	Primary	✓			
4.1a Studio/Lighting	Primary			✓	
4.2 Control Room	Primary			✓	
4.3 Playback	Primary			✓	
4.4 Editing	Primary	✓			
4.5 Production Truck	Primary		✓		
4.6 Field Check-out	Primary	✓			
4.7 Suitcase Studio	Primary		✓		
4.8 Video on Demand/HDTV/ITV	Secondary		✓		
4.9 Access Origination Expansion	Primary		✓		
Government Access Production Facilities	Secondary		✓		
5. Facility Evaluation	Primary			✓	
5.1 Space Requirements	Primary			✓	
5.1.1 Studio Expansion	Primary		✓		
5.1.2 Set Storage	Secondary		✓		
5.1.3 Edit Room Expansion	Primary			✓	
5.1.4 Master Control/Studio Control Expansion	Secondary		✓		
5.2 Playback/Duplication Expansion	Primary		✓		
5.3 Field Equipment Check-out	Primary			Included in Equipment Storage	
5.4 Garage for Production Truck	Secondary		✓		
5.5 Equipment Storage Expansion	Primary	✓			

CBG Recommendations	Priority	Included in Comcast Proposal			
	Primary or Secondary	Yes	No	At Lower Level Than CBG Recommends	Unclear
5.6 Lounge/Lunch Room	Secondary		✓		
5.7 Green Room	Primary			✓	
5.8 Conference Room	Primary			✓	
5.9 Technical Shop	Secondary		✓		
5.10 Office Space	Primary			✓	
5.11 Lobby/Reception	Primary	✓			
5.12 Hallways, Restrooms, Closets	Primary	✓			
7. Access Staffing Level Expansion	Primary		✓		
8. Operational Changes (Hours, Policies and Procedures, etc.)	Primary			✓	

**Estimated Cost to Implement Facility, Equipment and Operational Recommendations**

Cost Category		CBG Recommendation	Comcast Plan
One-time Facility Upgrade Cost and Initial Equipment Upgrade Costs	Total	\$2,013,100	\$675,000
	High (Primary) Priority Only	\$1,279,300	
Annual Operating Costs	Total	* \$492,366	** \$149,868
	High (Primary) Priority Only	* \$446,610	
Ongoing Equipment Replacement Costs	Total	\$1,645,600	\$225,000
	High (Primary) Priority Only	\$1,189,300	

\* These initial annual figures could potentially approach an average of \$619,293 and \$561,741 respectively, per year, over 10 years, based on a 5% annual escalation in cost.

\*\* Comcast did not provide specific operational figures in writing. This figure is an approximation based on discussions with Comcast staff. This figure also needs to be escalated at 5% per year.

Based on the fact that recommended enhancements will serve all three forms of Access, and are designed to serve a population of several hundred thousand people, including 62,000 Comcast subscribers, we believe the costs delineated above are reasonable and

consistent with the needs and interests assessed. Further detail on cost allocation is provided below. It is also important to note that the costs shown would be reduced somewhat by the dollar value of current expenditures, which may already be included in the rate base.

Our detailed findings are incorporated in the following Report, as well as the following overall Conclusions and Recommendations.

### **Channel Capacity/Separation**

1. There should initially be a channel each for Public, Educational and Governmental Access, as well as a separate Local Origination channel.

While the Comcast Plan does not specifically reference channel separation, we understand that there is tentative agreement for three PEG channels plus a separate LO channel to be provided any time after the effective date of a renewed franchise.

2. There should be reserved capacity for expansion of additional analog PEG services in the future, especially if a lengthy franchise is granted and as demand warrants. Based on our analysis, up to two additional channels could be needed in the future.

Although the Comcast Plan does not specifically address reserve capacity, we understand that there is general agreement for two additional channels to be provided, based on triggers to be determined.

3. There should be a conversion plan for the provision of digital PEG services. This includes allocation of capacity for the migration of existing services from analog to digital as such may occur for the real time basic tier services in the future, additional narrowcast targeted PEG services, and HDTV, video on demand and interactive television services. Our analysis indicates that both the

initial and the reserve capacity will need to be maintained so that many more digital channels can be provided utilizing the capacity that would be allocated initially for analog services, based on the range of potential additional PEG services that could be provided through various advanced technologies.

It is important to note that since all of these services may require technological upgrades at the headend, as well as at the point of Access production and origination, the attendant operational, capital, technical and technology support for the headend and the distribution system must be available from Comcast to support all digital PEG service provision initiatives in the future.

We understand that, while the Comcast Plan does not specifically speak to digital conversion, there have been discussions regarding this need with Comcast and Comcast remains open to the use of these advanced technologies.

### **Access Origination**

4. Our review indicates that there are a number of initial sites that show the need or potential need to be or continue to be Access origination sites. They are:
  - a. Channel 26 Community Access Center
  - b. Marin County Government Center - Board of Supervisors Chambers
  - c. Larkspur Council Chambers
  - d. Corte Madera Council Chambers
  - e. Sausalito Council Chambers
  - f. College of Marin Multimedia Studio Facility
  - g. Marin County Board of Education Headquarters

The Comcast Plan does not forecast any additional origination sites beyond the Channel 26 Community Access Center.

5. Wireless communications connections are needed to provide Access origination from sites that are not connected by fiber or other types of useable land lines.

The cost for a production truck-based microwave feed is forecast in the capital equipment projections shown in Attachment 1.

The Comcast Plan does not forecast wireless communications connections for the production truck.

## **Operational and Programming Considerations**

6. Comcast currently provides only 1.25 FTE in support of Public and other Access operations. Based on the amount and type of programming that we believe could potentially be produced across all forms of PEG, it is evident that between 4 and 5 FTE are an ideal complement. As indicated herein, this would enable an expansion of hours for Public Access operations, as well as the facilitation of now nearly nonexistent local Government and Educational Access operations. Comcast did not provide us with written, detailed current operational budget and expense amounts, but we have projected, based on averages, an initial annual cost of \$358,000 per year, including benefits and overhead for the operational costs (exclusive of facility lease cost) that are needed to fulfill the programming objectives we have noted. We believe that this is reasonable in light of the forms of PEG and the overall Marin County communities that will be served, and equates to approximately \$0.48 per subscriber per month when allocated across the subscriber base. This does not yet, though, take into account the 1.25 FTE already provided by Comcast. Although we do not know the exact dollar value of such support, based on averages and discussions with Comcast it would result in a difference between Comcast's current support level and our expanded support level of \$263,351, which equates to a reduced figure of approximately \$0.35 per subscriber per month.

The Comcast Plan does not forecast any increase in staffing allocations to Public, Educational or Governmental Access.

7. Currently the Access Center is open from 9:00 a.m. to 9:00 p.m., Monday through Friday, with some additional operational hours on Saturdays for training and editing work. The Comcast Plan would expand the Saturday hours but would reduce the Tuesday through Friday hours and delete the Monday hours. We believe, alternatively, that the Center should remain open on Monday; the 12 hour week day can be shifted from 11:00 a.m. to 11:00 p.m.; the Comcast Plan hours for Saturday are acceptable; and that some hours are needed on Sunday as well (approximately a four hour block in either the morning or the afternoon). Such expansion in hours provides significantly greater flexibility for PEG Access producers and will also provide increased capabilities to cover events occurring in the community in either a live or live to tape fashion.
  
8. The Web presence of Channel 26 should be significantly expanded for a variety of purposes, including: facility scheduling; expanded program promotion and channel awareness; producer coordination; links to allied organizations; detailed program schedule provision; video streaming; etc.

The Comcast Plan does not appear to forecast an expansion in Web-based capabilities.

9. There should be a significant expansion in community and other PEG Access outreach and promotion, including a variety of mechanisms such as the use of unsold ad avails; cross promotion on other channels and promotion in other media (such as expanded program schedules in newspapers, use of fliers, bus cards, etc.). Outreach activities could also include speaking engagements; video presentations; feature articles; newspaper advertisements; and expanded coordination with diverse, minority, cultural and ethnic communities.

While the Comcast Plan calls for development of separate Local Origination and Public Access bulletin boards so that a greater amount of information can

be provided about Public Access, it does not mention any activities in the other areas described above.

10. Comcast should increase Channel 26's appeal to diverse populations by developing more multilingual programming; the inclusion of multilingual speaking staff and materials; institution of second audio programming (SAP) capabilities; multilingual captioning; etc.

As far as we are aware, the Comcast Plan does not anticipate implementation of such functions and activities.

11. As noted herein, for Comcast to successfully meet the needs and interests of the community in the provision of Public, Educational and Government Access services, performance requirements would need to be placed in the franchise that cover a variety of issues:
  - a. Hours of PEG Access programming produced.
  - b. Staffing levels.
  - c. Hours of operation.
  - d. Functional areas required.
  - e. Use of functional areas.
  - f. Equipment provision and level of technology provision and replacement.
  - g. Advanced delivery mechanisms.
  - h. Facilitation services.
  - i. Access origination.
  - j. Channel awareness and program promotion.
  - k. Outreach/use by diverse populations.
  - l. Funding and development activities.
  - m. Reporting requirements.

We also recommend that MTA or a designated advisory group actively monitor and enforce these requirements, and that Comcast be required to report initially

at least quarterly and then potentially annually, its performance under these parameters. If Comcast fails to perform after notice and opportunity to correct, we recommend that the MTA, under the provisions of the franchise, be able to seek another Designated Access Provider (DAP) which would be funded by Comcast.

The Comcast Plan does not appear to envision performance parameters that it would be required to meet.

### **Facility Considerations**

12. The existing Channel 26 facility needs significant expansion. It would benefit by adding approximately 3,546 square feet of space for expansions in nearly all functional areas.

The Comcast Plan forecasts some expansion in space, but the resulting space allocation is only approximately 41% of what we have recommended.

13. The additional space could be added/renovated/remodeled at the existing location at a cost of approximately \$531,900 in renovation and facility improvement cost. The Comcast Plan calls for provision of \$200,000 for physical space improvements, which would be \$331,900 less than we have forecast. The difference in cost for the additional recommended space, allocated over the subscriber base over the 10 year life of the franchise equates to approximately \$0.04 per month per subscriber.

Alternatively, Comcast could provide a new facility sized at a total of 6,020 square feet (encompassing the space envisioned under the Comcast Plan as well as the additional space we recommend) at another convenient location (the cost would potentially range from \$903,000 to \$1,204,000, depending upon whether the space needs renovation or new construction).

Regardless, whether it is additional or entirely new space, from the beginning Comcast will need to resolve issues related to ADA access and soundproofing which have inhibited production activities in the past.

14. Our proposed expansion in facility space would increase the annual operating cost, if the facility continues to be leased, either at Comcast or another location. At the Comcast-provided rate of \$1.86 per square foot per month, this would increase lease cost at an annual rate of \$79,147.

Taken together, the annual lease cost for our recommended facility expansion, plus the one-time renovation cost, allocated over the subscriber base, would result in approximately \$0.18 per month per subscriber over a 10 year period, assuming that the lease rate remains the same for the entire period.

## **Equipment Considerations**

15. As Comcast itself has noted in its Plan, much of the existing Channel 26 equipment is outdated and in need of upgrade and replacement. We have also forecast additional equipment to provide expanded capabilities which will help better support Public Access, as well as institute support for Government and Educational Access. Recommendations cover nearly every facet of the Channel 26 operation, including: digital upgrades needed for most current analog equipment; additional cameras so that the production truck can be used independently of the studio; expansion of studio capabilities; expansion of remote capabilities, including implementation of a multi-camera suitcase studio for remote, live to tape and potentially even live productions; expansion of edit and post-production capabilities; a significant upgrade of playback capabilities; upgrade of character generation equipment; and expansion of lighting capabilities.

The Comcast Plan has forecast some of these equipment upgrades, but not at the level that we believe is required, especially to support Public, Educational and Governmental Access.

16. We have developed a piece by piece equipment upgrade, enhancement and replacement Matrix to facilitate the PEG Access operations we have forecast. From our projections, immediate equipment upgrades needed upon inception of any renewed franchise total \$1,481,200. Then for upgrades which would occur after Year 1 and replacement costs thereafter, an additional \$1,645,600 would be needed, which would result in approximately \$3,126,800 in capital equipment cost over the life of ten year renewed franchise. This results in a capital equipment cost, when allocated across the subscriber base, of approximately \$0.42 cents per subscriber. If only high (primary) priority equipment upgrades, modifications and replacements are calculated, it results in an initial Year 1 figure of \$1,054,900 and a total ten year figure of \$2,244,200, which lowers the per subscriber cost to approximately \$0.30.

These Conclusions and Recommendations provide a strong and sound basis for the MTA to go forward in franchise renewal proceedings and help ensure that PEG Access enhancements are achieved in any renewed franchise with Comcast.

**REVIEW OF COMCAST'S CAPABILITIES AND  
PLAN CONCERNING PUBLIC, EDUCATIONAL  
AND GOVERNMENTAL (PEG) ACCESS  
WITHIN THE MARIN TELECOMMUNICATIONS  
AGENCY AREA**

## **PEG ACCESS NEEDS ASSESSMENT**

### **PUBLIC ACCESS PRODUCERS' NEEDS**

#### **INTRODUCTION**

In an effort to determine the needs and interests related to Public and Community Access television in Marin County (County) and the other jurisdictions represented by the MTA, CBG, in conjunction with the MTA, performed a variety of needs ascertainment tasks, including:

- Presentations and discussions at two meetings of the MAAC and review of several MAAC documents, including the April 1, 2001 "First Report of the Public Access Steering Committee," the October 2, 2002 "Committee Recommendations on New Cable TV Franchise Agreement" and the November 25, 2003 "Summary of MAAC Input Re: Comcast Anderson Drive's Access Improvements."
- A focused discussion with Access producers and follow-up discussions with individual producers.
- A written survey of Access producers, both in hard copy distributed form and on-line.
- A telephone conference call with representatives from Media Action Marin (MAM).

The key findings from these activities are discussed below.

#### **FINDINGS**

##### Access Producers Focused Discussion

On May 13, 2004, CBG facilitated a focused discussion with Access producers that were citizens of MTA member jurisdictions, concerning both their past and current experiences with Comcast's Channel 26 Community Access operation, the programming content that they provide and their needs and interests, both currently and for the future. CBG began the discussion by explaining that it was asked to look at a variety of elements concerning

the operation of the Channel 26 facility, including: staffing; training; promotion/outreach; funding/support; the ability of the Center to meet community needs; and necessary performance requirements, both now and recommended for the future. This information would be analyzed and incorporated into CBG's findings and analysis, and conclusions and recommendations would be developed and issued in a report form. It was further discussed with the group that information would be obtained for our analysis through a review of existing background information; focused discussions such as the one being held that evening with Access producers; written surveys; and on-site and comparative facility and equipment analysis by CBG's video engineering team member, Carson Hamlin.

A variety of current producers were present at the meeting, including a number of independent producers and several volunteers, as well as a few that represented organizations such as the Marin County Commission on Aging. The comments and observations made during the focused discussion by Access producers were many and varied and indicated a wide variety of issues that will need to be resolved for those producers to believe that they were receiving an appropriate level of service from Comcast. These issues included:

***Concerns About the Facility:***

- Adjacency of the studio to other Comcast operations was described as a problem because not enough sound isolation is built into the structure. Consequently, suitability of the studio for enabling a wide range of productions is limited, and certain types of productions are inhibited or restricted (the use of amplified music during a production, for example, is not allowed by Comcast).

***Concerns About the Equipment:***

- The microphones are antiquated and need updating.
- Cameras and lighting are at a technology level that is lower than what is needed to provide necessary capabilities for production (producers specifically indicated that "our own stuff is better," noting that some producers ordinarily use their own

equipment because they feel it provides a better video product for ultimate viewing by subscribers).

- Since 3/4" and VHS is the format for playback, and the producers use their own digital equipment, producers stated that they actually have to dub the final product down to a lower quality format in order to play their programs back over the channel.
- Producers indicated that they often feel like they are "fighting" the equipment, indicating that either it's not user friendly, is in disrepair, or does not easily facilitate high-quality video content production.
- The graphics capability of the bulletin board system's older technology needs to be updated to provide better visual quality and thus heighten viewer interest.
- Producers feel like they are competing between Local Origination (LO) and Public Access when it comes to procuring and utilizing the better quality equipment at the Center.

***Regarding Staffing:***

- Producers indicated that the staff is technically competent and can be helpful facilitators; however, they believe that overall there needs to be a better focus on customer service. Some producers believe that because the staff has primary Local Origination responsibilities, facilitation of Public Access was actually a distraction to them. Consequently, this results in a lower level of helpfulness related to Public Access program production. Producers noted that, in contrast, when volunteers and producers were working on a Company-sponsored show, the staff was very helpful.
- Discussion participants noted that Comcast sometimes hires freelancers to do training and that this was beneficial.
- It would be further helpful to have interns on a regular basis to work with Public Access producers.

***Concerns about Outreach Activities and Channel Awareness:***

- Producers believe that while the Southeast Asian population in Marin County is growing, it is not well facilitated by Comcast related to involvement in Public Access. This is true for other diverse population segments including Hispanics.
- To improve the situation, marketing activities and materials need to be multilingual.
- Producers believe that there is significant confusion among the viewership concerning what is Public Access programming, versus Local Origination programming and other programming on the channel. Consequently, Channel 26 Public Access needs better branding.
- Concerning outreach to Public Access users, discussion participants noted that there used to be a Producer's Club and a newsletter, neither of which are now facilitated or produced by Comcast. Producers noted that there are PSAs run on various channels concerning Channel 26 awareness and outreach; however, significantly more needs to be done. Producers also noted that community involvement and awareness of Channel 26's programming was much higher during the time period that Viacom ran the system.
- Participants believe that additional staff is needed by Comcast specifically devoted to outreach and awareness-building functions.

***Regarding Channel Operations:***

- There is no promotion of the community bulletin board and the information that it provides. Also, there is a two-day wait to place an announcement on the bulletin board, and this inhibits the promotion of community events that develop quickly and need immediate awareness.
- Discussion participants indicated that it is very difficult to use the production truck because of the long lead time required and the fact that the same cameras are used in the studio and the truck. Another obstacle is that dedicated staff may not be available for coverage of a specific event at a specific time because of local origination duties.

- Because of the above, minimal staffing levels and other issues related to remote production and post production, producers felt that the current Access operation is not able to fulfill one of the primary missions of community television which is to bring Public Access out into the community and cover a wide variety of events occurring in the community. Discussion participants felt, consequently, that there is a much more heavy focus on studio shows than there should be.
- Producers indicated that 5:00 p.m. to 9:00 p.m. is the current time when the studio is available for the majority of Access productions, and indicated that a time period after 9:00 p.m. would significantly enhance the ability of the Center to facilitate Public Access productions.
- Similarly, there are occasional Saturday hours, but participants felt that there should be a greater number of weekend hours and that this would also serve to significantly enhance Access program production.
- Regarding the above, an overall comment was that many current and potential Access producers are available during a wide range of hours when the studio is not open for their use.
- Producers commented that during the break between every show, Comcast has a long disclaimer about the content not being the responsibility of the company. While producers indicated that such may be necessary from a legal "no exercise of editorial control" perspective, the tone of the message tends to further enforce the notion that Comcast has no real enthusiasm for Public Access.

### Access Producers Written Surveys

A number of Access producers completed written surveys that profiled their involvement, interest in and needs related to Public Access concerning a number of characteristics, including:

- Types of programming and content produced or anticipated.
- Training and facilitation services.
- Facility and equipment use, quality, condition, capabilities and scheduling.
- Program playback.
- Access promotion.

- Overall satisfaction with current Access operations.

Respondents were primarily independent producers or volunteers and a few organization representatives. About half of the survey respondents were also present at the Access producers focused discussion.

Respondents expressed a wide range of interest and involvement in using and providing various types of programming on Access television. The two most popular categories were programs focused on public outreach and public empowerment, followed closely by coverage of community events and provision of community news and public affairs, followed by the provision of religious programming, educational programming, sports coverage and coverage of public meetings.

Regarding training and facilitation services, about three-eighths of the respondents indicated that such services had been effective for them. One person additionally responded that such services were effective but believed that the type of training needed is no longer offered. An additional three-eighths indicated that they had no opinion concerning such services or that such services were not applicable to them.

Approximately one-quarter of respondents indicated that such services had not been effective for a variety of reasons. The most common theme in their comments related to lack of effectiveness had to do with either a lack of available staff for the necessary amount of training, a lack of training opportunities or a lack of facilitation services throughout the production process. In this vein, several respondents indicated the need for "mentorship", an "ombudsman/guide" and technology initiatives such as "web collaboration" that would all serve to better train and facilitate Access producers.

Use of facilities and equipment at the Channel 26 Access Center varied across respondents, with most having occasional use of the studio, field equipment and/or editing, and some having a weekly or monthly use, but very few indicating use of the production truck (two respondents indicated occasional use of the truck, and one indicated that they had done crew work on a truck-based production). Regarding the quality, condition and/or capabilities of various functional areas within the Access

Center, as well as operational characteristics, respondents' rankings varied widely from overall very poor to overall good to excellent. When combining the various responses, functional areas that received the lowest marks included editing and field equipment, while playback and the studio received the highest marks. Concerning operational characteristics, areas that received overall the lowest marks included access promotion and various facility area (studio, truck, and field) availability, while production assistance and the staff received higher marks. Three respondents indicated that they had no opinion, did not know or did not use the various functional areas. One of these respondents utilizes home-based and professional studio environments to produce his program, while another was representing the League of Women Voters of Marin County and the Commission on Aging from a content and program topic provision rather than a hands-on production perspective.

About three-eighths of respondents indicated difficulties with scheduling necessary equipment and facilities for their productions. The reasons varied but generally fell along the lines of difficulty scheduling the studio for the times required, especially for multi-show series; complications involving paper work; a lack of facilitation assistance when needed; and previously scheduled times not being available as promised.

Three-quarters of respondents expressed the need for additional capabilities or services to be provided at the facility. Many of their comments echoed what was heard at the Producers focused discussion. Specifically, some of the major concerns expressed included:

- The need for a larger studio.
- The need for greater facilitation and encouragement in learning and applying proper production techniques and technology.
- Assignment of a staff member to mentor a first-time producer.
- More convenient times available for productions.
- Better access for the disabled.
- Greater ability for teens to participate.

- A number of comments on facility upgrades, including a larger studio; updated and upgraded digital production equipment, including editing, field cameras, character generation equipment and playback and record equipment.
- Upgraded lights, sets, lighting controls and gels for the lights.
- Better communication systems for obtaining contact information for other producers, crew members, etc.
- A significantly upgraded facility, including more space for the studio and space for a separate eating/kitchen area and green room.

Over three-eighths of the respondents also indicated problems in getting programs aired on the channel during acceptable time slots. Specifically mentioned were long delays between the completion of production and the time that a show was able to be aired, as well as the airing of important programming well after midnight.

Over half of respondents indicated that Access programming promotion is inadequate. When asked to describe additional promotional methods and activities that would be beneficial, a number of ideas were offered including: advertising Channel 26 programming to a greater degree on the channel; advertising specific listings in the newspapers and on the TV Guide Channel; broadly distributed fliers; display ads in print media; development of an electronic newsletter; greater promotion on the bulletin board; a Channel 26 listing in the phone book; developing a significant web presence; and developing an overall awareness campaign of both programming on the Channel as well as the Public Access production services provided at Channel 26.

When asked to describe overall satisfaction with Access services, the predominant answer was “somewhat satisfied”. One respondent indicated that they were satisfied, while a little less than one-eighth of respondents each indicated that they were very satisfied or not at all satisfied.

## Discussions with the MAAC

CBG met with the MAAC on one occasion in May 2004 and a month later in June 2004. We also reviewed several documents prepared in 2001, 2002 and 2003 by the MAAC concerning its assessment of needed facility, equipment and operational modifications, additions and enhancements to provide an Access Center and multi-media production facility that would meet the needs of MTA citizens and organizations.

At the initial discussion in May 2004, CBG made a presentation on issues related to its needs ascertainment process, an overview of PEG Access from our perspective and the key components of PEG Access that we planned to focus on. In response, members of the MAAC provided significant feedback that they wanted us to consider in our review, including:

- The Access facility used to have significantly greater use, especially by organizational users, including environmental and other organizations. In fact, it was noted that there are 7,000 different organizations in Marin County that could be potential Access facility users with the right outreach and facilitation activities performed by Comcast.
- The mostly "talking head" format that is encouraged for studio production (based on the available set, lighting scheme, staff facilitation, etc.) does not enable the provision of the wide range of content that should be provided, and this orientation needs to change.
- There is a significant lack of current graphic capabilities for production.
- There is a significant need for upgrades to a state-of-the-art digital facility.
- There is a need for much greater outreach, including development of sponsors for productions.
- Based on population changes in Marin County, media literacy programs need to be presented, but are not being provided currently.
- Some organizations, such as the Court System and Social Services, are represented indirectly by either current Public Access or Local Origination programming.

These issues were further explored in our second meeting with the MAAC, and many of the comments made during both meetings echoed the comments made by producers. This was also true of the written information offered by the MAAC over the last three years, which indicates that the problems, issues and concerns that we have discerned during our review and ascertainment process have been existing for some time.

We find that we concur with the general thrust of MAAC's recommendations as made over the last three years and summarized in the November 25, 2003 document referenced above. Possibly the one area we haven't necessarily seen an immediate need for is a one person-type studio (alternately called a "hotline studio," "studio light" or "crash studio"). Generally, we believe at this time that there is a more significant need to take programming production out into the community. With the additional cameras we have recommended specifically for the remote truck and greater access to the truck by Public Access producers, as well as the "suitcase studio" that we have recommended for easy to set up, remote, multi-camera production, it would open up the main studio for a minimum two-person production (one to provide technical direction utilizing preset studio control mechanisms, and one to work as talent). This does not, however, mean that a small "hotline studio" couldn't be developed in the future, and potentially could take a portion of the upgraded space we have recommended for a new, expanded multi-set studio configuration.

### Discussion with Media Access Marin

In late June 2004, a telephone conference was held with representatives from Media Action Marin (MAM) on a variety of issues related to involvement in, awareness of and production of community programming in Marin County. Although a number of specific issues and concerns were expressed and discussed, similar to the ones profiled earlier in this Section for producers and the MAAC, a number of more global issues were discussed concerning past history, present operations and the future directions of community programming in Marin County. Key discussion points included:

- **Decline in community programming production services under the current cable operator** - It was discussed that in the late 1990s, a database of over 3,000

community program producers was present, there was a waiting list for training classes and there was a quarterly newsletter provided to the producers and others interested in community programming in Marin. Since that time, none of these characteristics of a vibrant community programming operation appear to be evident. The members of MAM indicated that they believed that this decline in services provided by the community programming operation and associated decline in use of the channel were largely due to: a lack of necessary investment in facility and equipment upgrades; a lack of community outreach, either to promote production services or awareness of the programming on the channel; changes in programming policies that inhibited or discouraged production; changes in the availability of facilities and staff; and an increased focus on staff-produced Local Origination programming and commercial programming on the channel.

- **Advantages of truly local programming** - It was discussed that truly local programming was a distinct advantage for the cable operator in its competitive battle for subscribers with direct satellite service. As an example, it is likely that Comcast will continue to increase its focus on the provision of well-produced local origination programming and the development of full channel broadcast-like services to compete with local network affiliates, such as it has with its CN8 operation on the East Coast. However, the provision of resources by the cable company for such efforts tends to reduce the willingness to support truly local programming produced by the citizens themselves. For the citizens to be well trained in video production and provide content that gets their viewpoint across to subscribers in a visually acceptable way to such subscribers, requires an appropriate amount of training, operational support and capital investment. Well produced truly local programming, especially when it reflects and promotes viewership by a diversity of voices and viewers in the community can clearly provide a competitive advantage for the cable company. A notable example is the Somali TV portion of the programming of the Community Access provider in Minneapolis, Minnesota (MTN). There is a growing Somali community in Minneapolis, and its leaders clearly indicate that Somalis favor cable television

- over direct satellite service because of the presence of Somali TV on MTN. This same concept can apply across the board to diverse cultural and minority interests as well as to subsets of majority interests. Active subsets of majority interests, such as sports enthusiasts, "news junkies," etc., are what drive popular viewership of any niche channels on cable television.
- **The splitting of Public Access and Local Origination** - MAM's and CBG's perspectives on this subject were discussed during the conference call. CBG's view is that there should be separate channels for Local Origination, Public Access, Educational Access and Governmental Access. It is our understanding that MAM desires to see Public Access be completely independent at the inception of a new franchise or within a reasonably short transitional timeframe.
  - **State-of-the-art local Community Access content delivery mechanisms** - It was discussed that local Community Access should provide delivery of its services through a variety of advanced methods, such as Interactive Television (ITV), Video on Demand (VOD), High Definition Television (HDTV), Internet video streaming, etc. While these types of services were not focused on directly in the written producers survey that was a part of this Project, they were discussed significantly at the Producers focused discussion, as well as with the MAAC, and reviewed as part of CBG's and Mr. Hamlin's analysis of current Marin Community Access operations versus state-of-the-art Access operations and comparative analysis with other access centers. It was discussed on the conference call that these were all advanced delivery methods that we believe will be necessary to provide the widest possible dissemination of Community Access services to Marin County viewers in the future, and the need for their incorporation would be reflected in the Report.

The status and projected reporting timeframe of CBG's findings and recommendations were discussed at the end of the call.

## **CONCLUSION**

Overall, it is evident from the information we have received from a variety of individual and organizational sources that significant modifications and enhancements are needed to current community programming operations in order to meet the needs of citizens, organizations and government and educational entities within Marin County and the other MTA jurisdictions related to the production of content for cablecast on the PEG Access portion of Comcast's system. Generally, the needed modifications and enhancements fall into four major categories:

- Enhancements to the size and allocation of space at the Community Access facility.
- State-of-the-art equipment upgrades and a continuing equipment upgrade/replacement program.
- Beneficial changes in operations, especially related to better facilitation services; implementation of producer-friendly policies and procedures; and a vast increase in promotion, outreach and Access user coordination activities.
- Development of a separate, solid identity for the Public, Educational and Governmental Access portions of Marin community programming.

Comcast's Plan addresses some of the areas of concern related to facility and equipment needs and one area related to operational hours on the weekend, but does not address a number of the issues brought forth by the Public Access producer community. In subsequent Sections of this Report, CBG addresses these areas of need and interest expressed by Public Access producers, as well as those expressed by potential Government and Educational Access programmers, and compares and contrasts these needs and interests with the changes proposed under the Comcast Plan and our recommendations based on the characteristics of access centers that have already demonstrated the ability to meet the various needs and interests expressed.

# **COMMUNITY (PUBLIC, GOVERNMENT AND EDUCATIONAL) ACCESS**

## **INTRODUCTION**

### **1 OVERVIEW**

#### **1.1 DESCRIPTION**

The framework for community access television within much of Marin County is in the pre-existing cable franchise agreements between the jurisdictions represented by the Marin Telecommunications Agency and Comcast. Under the pre-existing agreement, Comcast has provided facilities, equipment, and channel space for community access television within the County. The current Community Access Channel, Channel 26, also is the outlet for government and educational access for pertinent entities within the MTA jurisdictions. As part of the current cable franchise negotiations, the MTA has requested that CBG perform an evaluation of the current community access equipment and facilities and Comcast's May 2003 plan to enhance the current equipment and facilities. This analysis was performed in order to determine the ability of the current and planned facility and equipment to meet the needs of the MTA jurisdiction PEG programmers and providers throughout the life of any new franchise agreement.

#### **1.2 COMMUNITY ACCESS GOALS**

The goal of community access programming is to provide the citizens, organizations and educational and governmental entities in Marin County with the means to create and cablecast programs of their own making, within the guidelines set forth by the franchises. This includes providing facilities such as studio space and edit space, and equipment such as cameras and remote production vehicles to the general public, as well as the means to cablecast the citizen's programming on the Comcast cable system. As detailed in other Sections of this Report, these facilities, equipment and channel capacity have been

utilized to facilitate a modest amount of government and educational access programming.

### **1.3 REPORT GOALS**

The goal of CBG is to analyze the current and future needs of the community and other access users, and then evaluate current, projected and potential facilities and equipment with respect to those needs. Specifically, CBG was charged with analyzing and recommending the needed staffing, equipment, operating budget and operating procedures for a Comcast-run media facility. As part of CBG's overall review, site visits were made to the Comcast Access Center and a variety of locations within MTA jurisdictions in May and June, 2004. At that time, interviews were conducted with the Comcast Access Center staff, officials, and community access producers. All of the functional areas in the facility were toured and documented. The production equipment inventory was verified and evaluated for condition and usefulness. Additionally, the overall state of the facility was analyzed for efficiency, ability to meet its purpose, and technical capabilities. Further, many items of documentation, discussions concerning such documentation, follow-up information and discussions, and information from community access producers and organizations were reviewed and taken into account.

This report provides a review, discussion points and recommendations for each functional area concerning MTA jurisdiction community access, and the accompanying spreadsheet embodies a detailed equipment matrix with recommendations for specific equipment upgrades and replacement.

## 2 HISTORY

### 2.1 CHANNEL SUMMARY

There is one channel shared between local origination non-commercial programming, local origination commercial programming, leased access programming, educational programming from UCTV (University of California Television), and community access programming<sup>3</sup>. It was established in 1986. The hours allotted strictly to cablecast community access productions are from 5:00 p.m. to 10:00 p.m., Monday through Friday. Additional hours of programming mixed between the above types are available after 10:00 p.m. and on weekends. However, exact usage for community access programming during those times was not given.

### 2.2 COMMUNITY ACCESS EXECUTIVE SUMMARY

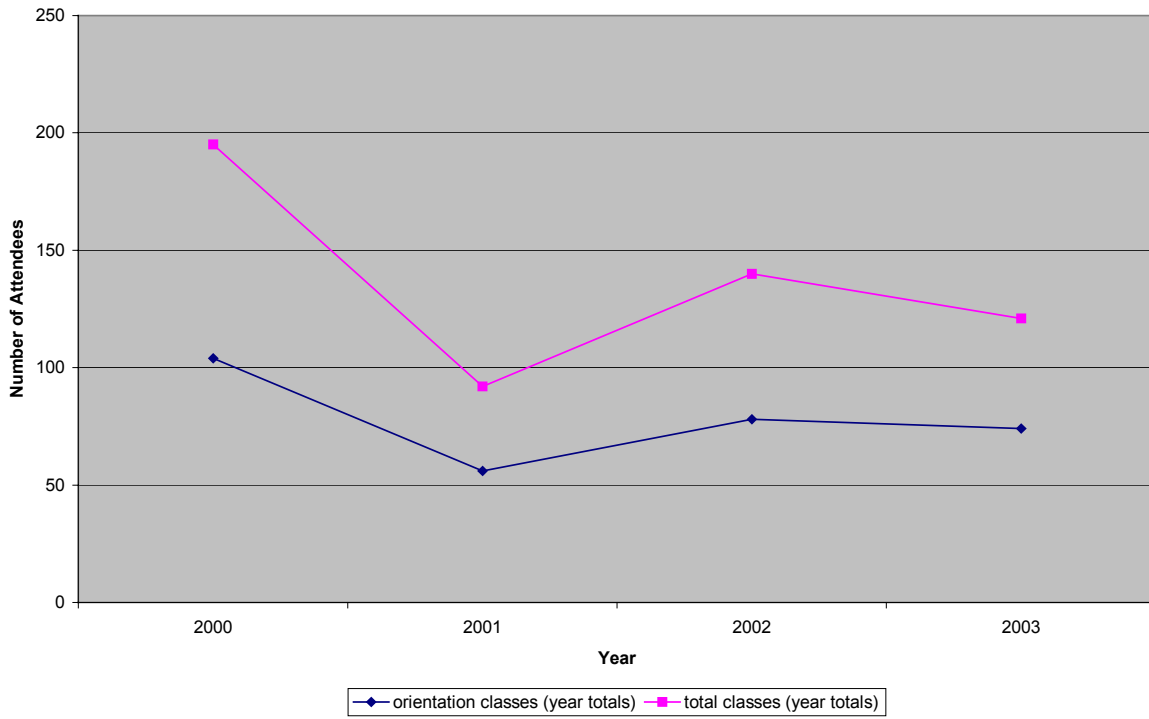
According to the annual Comcast report for the MTA, Marin County residents who are interested in participating in community access are required to attend a 2-hour orientation and have the option of attending additional certification classes in studio usage, S-VHS field camera usage, and S-VHS editing usage. After certification, public access producers can book studio time, checkout field production equipment, edit, and schedule programs. For each of these categories, we researched information provided in the last four Comcast annual reports for the MTA<sup>4</sup>. The most disturbing trend we found was an overall marked decline in most areas of public access usage. Additionally, the only area not on the surface showing a decline, amount of programming cablecast, actually does include a decline in original (first-run) programming, based on a review of this category in detail.

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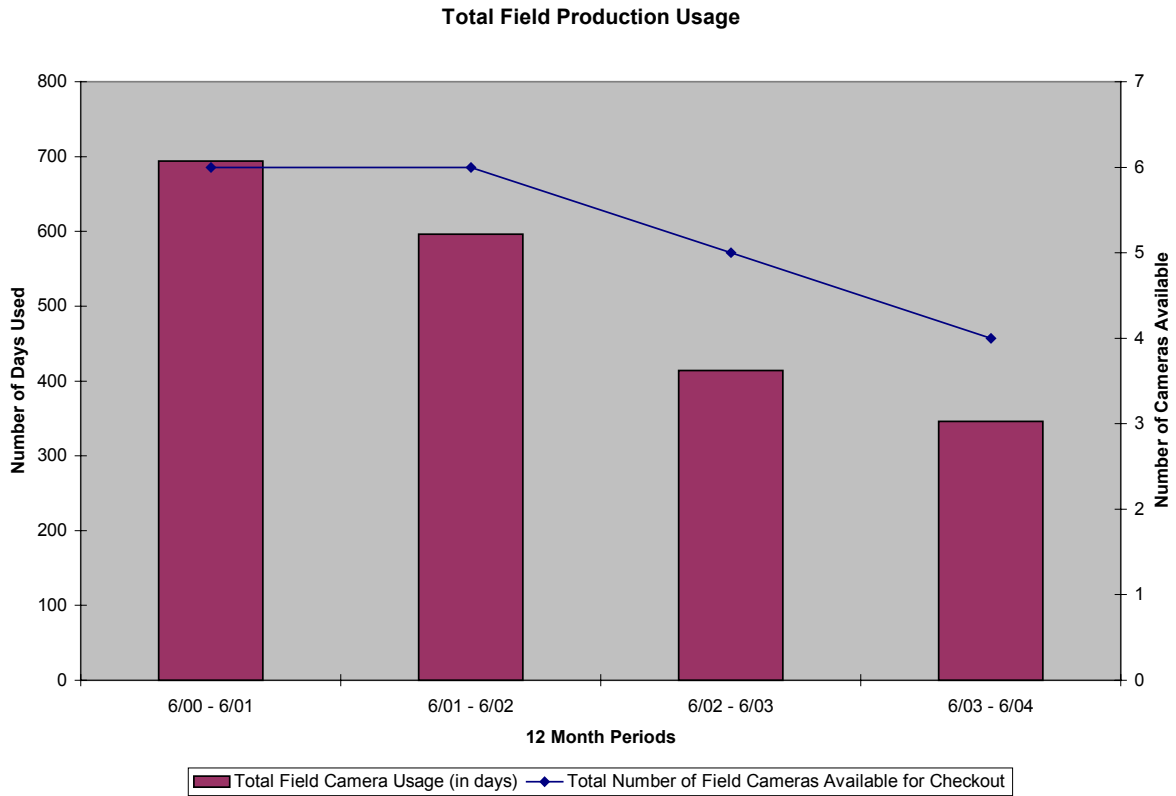
<sup>3</sup> Comcast Marin Community Programming Channel Report for the Marin Telecommunications Agency, June 1, 2003 to June 1, 2004.

<sup>4</sup> Comcast Marin County Programming Channel Reports for the Marin Telecommunications Agency, June 1, 2000 to June 1, 2001; June 1, 2001 to June 1, 2002; June 1, 2002 to June 1, 2003; and June 1, 2003 to June 1, 2004.

### Training Attendance

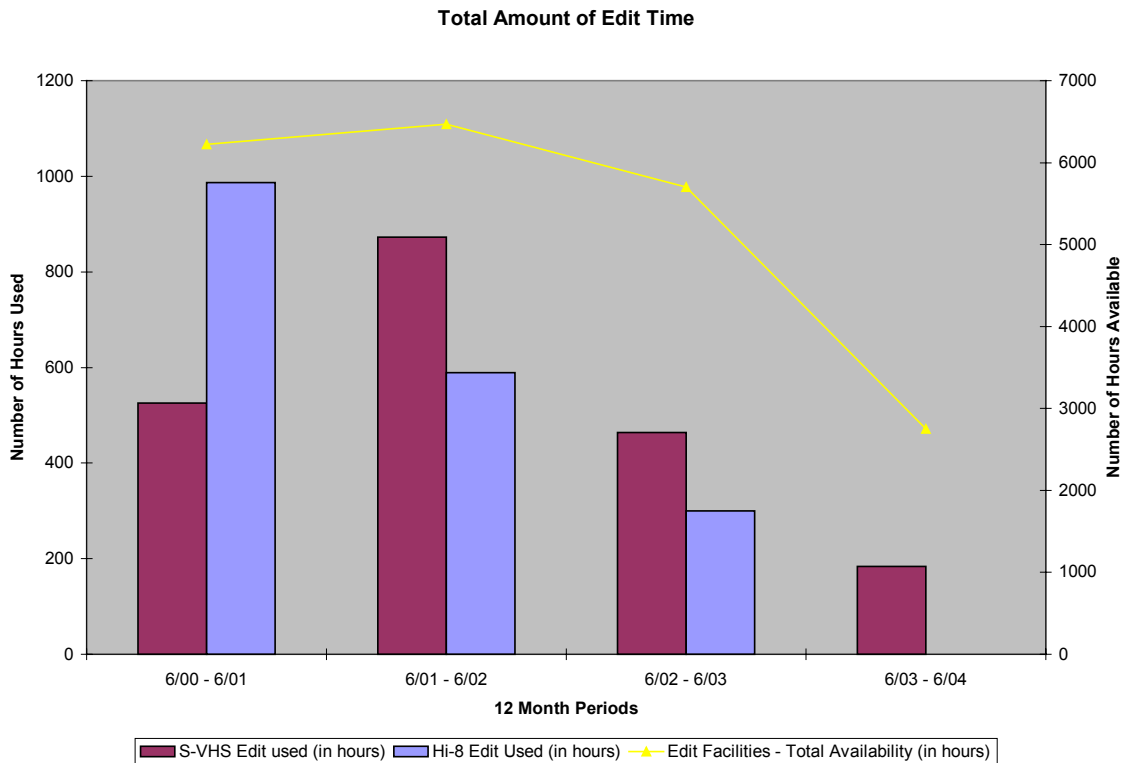


For field equipment usage, the total number of cameras available for checkout declined from a total of six to a total of four. This is reflected in the overall tally of field equipment usage:

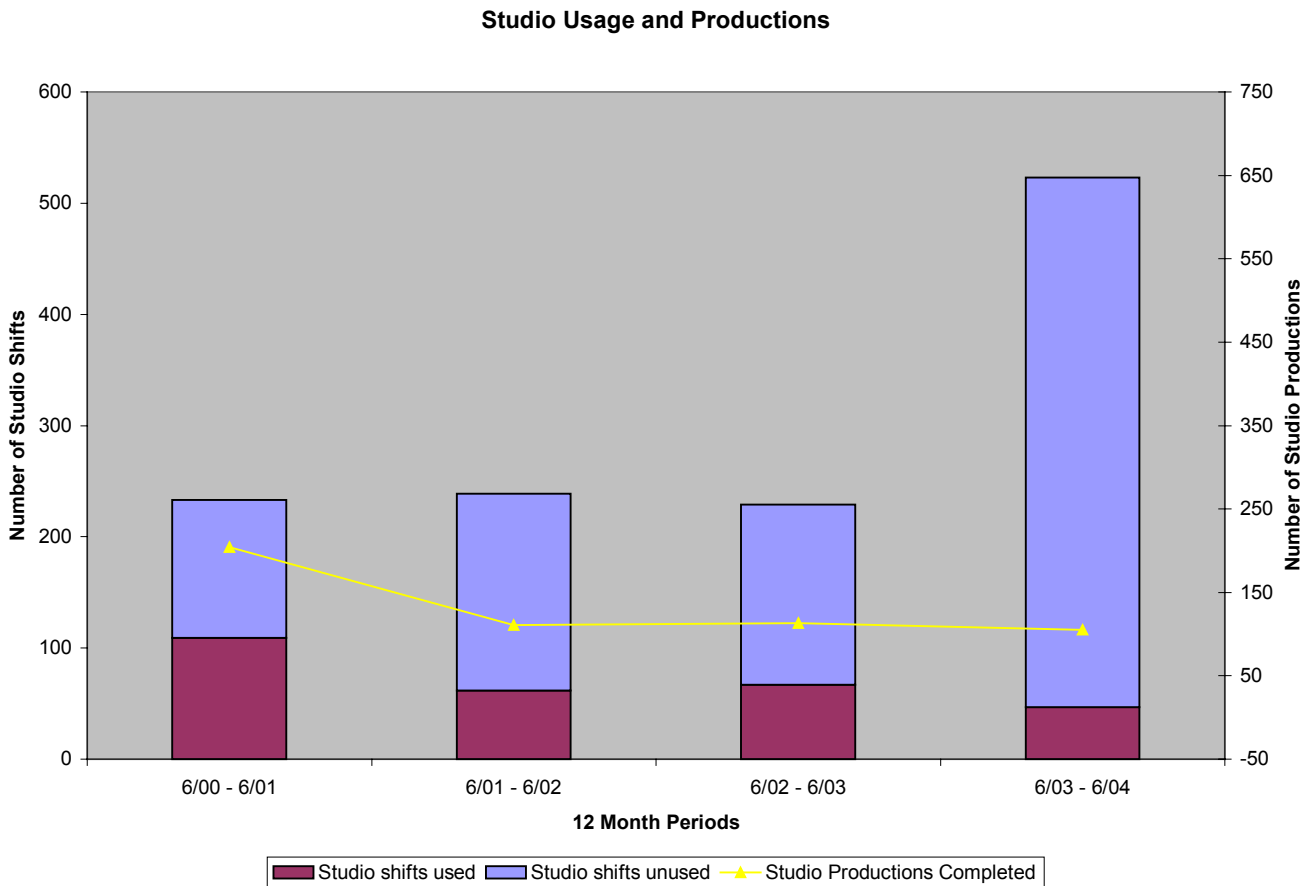


It is interesting to note that as the number of Hi-8 cameras went from three to one, the usage of the three remaining S-VHS cameras did not increase significantly. This could be an indication that the public access producers have not been satisfied with the S-VHS format. In fact, we found that one person was responsible for most of the Hi-8 checkout time, while some other producers reported preferring to use their own equipment instead of the S-VHS field equipment because their personal equipment was of better quality.

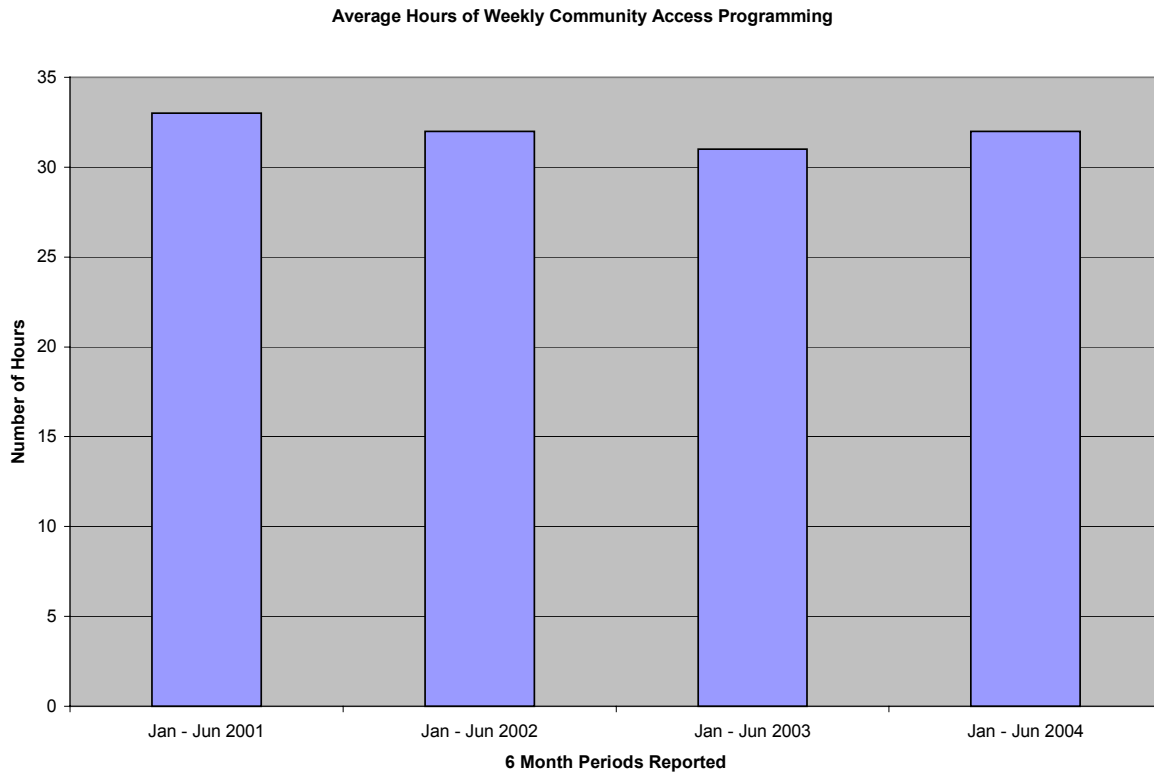
Similarly, community access producers lost one of the two edit suites available to them. Consequently, the amount of time spent in edit went down. Once again, the amount of time spent in S-VHS editing did not increase as the amount of time in Hi-8 editing decreased:



One area of interest was in studio usage. After an initial decline in the first year analyzed, studio usage appears to have evened out. We adjusted some of the tallies slightly for studio productions completed to correct for arithmetic errors in the Comcast reports, as detailed elsewhere in this report. Also, we believe the amount of unused studio shifts appears to spike at the end because of a drastic change in the way shift tallies were calculated by Comcast, although the actual amount of available studio hours was not changed in their report:



However, interestingly the overall amount of community access programming shown has held at a stable rate throughout the provided reporting periods. Upon our site visit, it was noted, though, that many programs currently cablecast on the channel are older re-runs as opposed to new or recently produced programming, and this distinction is not made in the overall community access programming totals given in the Comcast reports:



### **2.3 ISSUES REGARDING COMCAST REPORTS**

In analyzing the Comcast reports mentioned in the previous section, we found a number of inconsistencies and gaps in our attempt to analyze the data collected. Here is a summary of our findings in this regard:

- The reports do not state how often user classes are held or at what times.
- Some miscalculations were evident. For example, in the June 2003 to June 2004 report, the total number of programs was given incorrectly as 102. The correct number of programs was 115.
- Training attendance numbers were given for calendar years (such as 2003), which was out of the scope of the report and thus confusing. The training attendance numbers should have been for the June-to-June reporting period for consistency.
- It is not clearly stated how the statistics for field production usage were created. For example, the total number of field production days available appears to be derived from a gathered number of available days multiplied by the number of cameras, but this is not shown. Furthermore, the measure is given in number of days, not number of checkouts over days, so it is not clear exactly how many field production reservations were made in the time period measured.
- There were no statistics for community access training in the use of the production truck.
- There are no statistics for community access use of the production truck.
- There are no statistics on the number of volunteers, their monthly hours, or their assigned duties.
- There are no reports on equipment repairs, maintenance, or upgrades.
- It is not clear from the edit usage statistics exactly how many community access producers reserved edit time each month, and what the high and low usage was over the established periods of time.
- Later reports state that there are fifteen studio production shifts per week. However, when calculating on our own using the time constraints given, we

found it is more correct to state that there are from twelve to fifteen production shifts per week, given that each one consists of a four *to five* hour block of time. This reduces the approximate minimum number of production shifts available to 600 per year.

- It is not clear when during production hours the remote truck is typically used. If it is used during the day, then it appears in later reports that the number of studio production shifts available was not adjusted for the amount of time lost when the cameras were being used in the production truck. This could have resulted in a significant miscalculation of available studio time for community access producers.
- Studio camera usage totals were not broken down by studio and production truck use, or by monthly use, so further analysis was not possible.
- No statistics on live studio productions were given.
- Reports do not state reasons for the removal of the Hi-8 field packages or the Hi-8 edit suite.
- The programming statistics were given in averages, not in monthly figures, so further detailed analysis could not be performed. Furthermore, the average programming statistics given were for six-month periods, starting in January of the current year. Therefore, statistics from June to December of every previous year were absent in all reports.
- No reports on user satisfaction findings were given.
- Listings on exact capital purchases made were sometimes not given or were not complete. For example, the 2003 listing for studio monitors and other equipment did not include their exact cost. Previous years listed expected purchases to be made, sometimes repeatedly over more than one year.
- After reviewing the capital equipment expenditures over the past several years, it is evident that the amount of dollars provided for public access has been far below the typical amounts we've seen in other communities. Using capital equipment expenditure figures reported for 1987 to 2003, we calculated the average amount spent per year to be \$34,186, which includes the replacement of three stolen studio cameras in 2003. It is unclear whether

Comcast was reimbursed by insurance for these stolen cameras, which would serve to significantly lower the overall average. It is also evident that much of the expenditures were for dual use (local origination and public access) equipment, which, when allocated down to just public access, would also reduce the overall average by a significant amount.

- No capital purchases were listed at all for 2001.
- It appears that the number of studio hours reported as available for community access is inaccurate, according to our research. For example, the studio is not readily available from 9:00 a.m. until 9:00 p.m. because of Local Origination productions happening during that time, even though such time appears to be included in the available shifts calculations.

In a later Section where we discuss recommended performance measures and indicators, we also provide recommended an associated reporting mechanism that, if implemented, should serve to resolve the above issues, at least from a reporting standpoint.

## **FINDINGS**

### **3 TECHNOLOGY PATHS**

#### **3.1 UPGRADING TECHNOLOGY**

It is necessary to assess the overall quality of the community access equipment not only terms of functionality, but also in terms of how well it meets the needs of the community access producers over the life of the franchise agreement. The overall technology paths have not been overhauled since the inception of the channel in 1986. Much of the technology has not changed since the inception of the channel, but the needs of the producers have. In order to meet these needs, it is necessary to address some general structural and technology improvements.

##### **3.1.1 Separation of Channels/Channel Capacity**

In addition to community access programming, Comcast currently combines educational, local origination, leased access, and government programming on the same channel. Ideally, community access programming, educational access programming, and government access programming should be placed on three separate but grouped channels for thriving communities like Marin County and the incorporated municipalities. This has been tentatively agreed to already by Comcast and its predecessor, AT&T Broadband along with two additional growth channels<sup>5</sup>. By having separate channels, organizations can over time program those channels with more readily identifiable programming - they are not competing for space or identity on one channel only. Specifically, with separation of channels, citizens could look for different channels to provide different kinds of information. For example, government affairs programs, City Council and Board of Supervisors meetings, and other governmental meetings should be on a government access channel. Educational programs such as coverage of school

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<sup>5</sup> See AT&T Franchise Report to the MAAC (Media Access Advisory Committee), dated July 2, 2002 as well as updated correspondence from Comcast..

activities, college courses, school issue-related discussions, and school district board meetings should be on an educational access channel. Independent productions, coverage of public forums, community activities, and public interest programming should be on the community access channel. By having separate channels conflicts do not arise from trying to fit different types of programming on one channel. The community is not confused on what type of programming they are watching. We believe that commercial local origination should also be split off from public access programming at this time (local origination means programming content controlled by Comcast and produced by Comcast or other corporate entities). Further, if the channel is in high demand for public access programming in the future, then non-commercial local origination should be split off as well to provide enough space to facilitate both needs.

Regarding reserve capacity, it is our opinion that up to two additional analog channels plus additional capacity for digital services may be necessary over the life of the franchise and that these should be reserved for PEG use. Regarding triggers, we think that most useful trigger would be based on an assessment of community need as ultimately decided by the MTA. In its decision-making process the MTA could consider a number of factors including: the ability and resources of the Access programmers that will be utilizing the additional channel to produce additional Access programming; the interest of the community in the additional Access programming; consideration of new programming that may be displaced by use of the reserved channel; the amount of programming on the existing access channels, and how much of that is repeated; how much programming on the existing access channels is character generated vs. video content; whether it is feasible for the access programmers' wishing to utilize an additional channel, to cluster access programming in blocks of time such that channel space can be compatibly shared by like entities.

As indicated later in this Section, it will be very important for there to be a conversion strategy that will allow analog services to migrate to a variety of

digital services in the future (including real-time services, video-on-demand services, high-definition television services, interactive television services, and other advanced services that may evolve). It is our opinion, based on the types of services that could evolve and would be interesting to viewers, and based on trends in both the commercial and the Access market place, that it will be important for all existing and reserved analog capacity to be available to convert into digital capacity, thus allowing up to five analog PEG Access channels to become a host of digital services because such services will utilize less bandwidth per channel than the analog services.

### **3.1.2 Use of Open Systems**

The use of open systems, meaning to have the ability to import and export graphics and files seamlessly from a variety of computer systems via a network, would be highly beneficial. Specifically, in every functional area of the community access facility where computers are used, such as the edit area, studio control room, and master control room, we recommend that the computers make use of open systems architecture. The Comcast Plan does not make specific reference to the use of an open systems architecture, though the digital equipment that it projects, if the right types are procured, would be compatible with an open system architecture.

As an example, community access producers could import a trademarked program logo (one that has to appear the same with every use), then use the graphics system computer to retrieve the logo file directly via the open systems network and place it onto the video program. This approach is efficient because, with good network file management, it assures that only the most current version of the logo file is provided. It also saves edit time by eliminating the need to acquire and store the logo on media such as a floppy disc and then convert it to a file format acceptable to the editing system. When considering that the community producer's manual requires items such as copyright clearances and messages

advising of adult material when appropriate<sup>6</sup> and a format for underwriting credits<sup>7</sup>, having the ability to provide standard templates across computer systems becomes highly beneficial. Open systems would help eliminate the duplication of work, and all users would benefit from the ability to share information.

There are other reasons open systems would be beneficial as well. When well-coordinated and managed, the open system architecture can be designed and used to enhance the flow of communication between producers, administrators, and other facilitators, such as staff and volunteers. Weekly reports, equipment and studio reservations, memos, and training materials could be made available. Real-time production statistics, measurements against performance parameters and web content could be created. This would help increase efficiency, consistency, and compatibility between systems (so that items such as jpeg or bitmap images, for example, are reliably available).

### **3.1.3 Tape Formats**

A primary consideration in any cablecasting system is the choice of tape format used. Thought needs to be given to cost of equipment, compatibility between equipment, such as cameras and edit equipment, ease of use, accessibility, overall quality, and availability of equipment and repair options for the tape format(s) chosen.

The tape formats currently in use are S-VHS and 3/4 inch U-Matic. Some Hi-8 cameras and editing equipment were removed within the last four years. The Comcast Plan calls for upgrading all the 3/4 inch to S-VHS playback equipment.

After reviewing these format choices against our experience, the operations of other access centers, industry trends and industry literature, we believe that the

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<sup>6</sup> Comcast Marin Community Programming Members' Manual, Revised 1/20/04. Page 5.

<sup>7</sup> Ibid, Page 4.

use of digital video (DV) tape formats in conjunction with digital video servers and storage would be the best mode of operation for the future. For example, as far back as 1999, we found that tests done by video engineers<sup>8</sup> concluded that the quality of DV formats in critical criteria such as signal to noise ratio, luminance and chrominance outputs are from 50% to 82% better than the S-VHS tape format. This study also indicated that the DV tape format was much more robust and held up much better over multi-generational use than S-VHS. The DV study conclusions stated that 3/4 inch and S-VHS formats “both produced video with significantly impaired image quality” compared with the DV formats. Further research<sup>9</sup> showed that the S-VHS tape format has 400 lines of resolution whereas the DV format has 500 lines of resolution, resulting in a DV image that has more definition. The DV format also has a greater bandwidth, 6.3 MHz as opposed to 5.0 MHz for S-VHS, resulting in greater richness in color, improved accuracy of the image, and a wider spectrum of available colors.

The 3/4 inch format was at one time an accepted industry standard. However, this format is no longer manufactured or supported by Sony Corporation. Parts are increasingly hard to find and soon will be completely unavailable. In contrast, the cost of digital video technologies has been greatly reduced in recent years and ease of use makes them more accessible to beginner users. Therefore, we have concluded that the DV tape format (Mini-DV, DVCam, DVCPRO, and DVD) is far superior to that of 3/4 inch U-Matic and S-VHS formats, and the accompanying equipment matrix proposes the replacement of S-VHS and 3/4 inch U-Matic equipment with DV, Mini-DV, and DVD technology. The only exception would be to keep some of the existing equipment where needed to support "legacy" tapes.

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<sup>8</sup> Digital Video Magazine, May 1999.

<sup>9</sup> <http://www.epanorama.net/links/videostorage.html>, April 27, 2004.

### **3.1.4 Routing System**

We believe there is a need for a comprehensive routing system throughout the facility for both video and audio. A routing system provides the ability to send a video/audio signal from one source in the facility to any other source in the facility. For example, there could be video footage or a graphic that is created in the edit area that is needed for a production in the control room. With a routing system, a community access producer could simply designate what source he or she wants the signal from and obtain it electronically from that source for use in the control room. Such a system was not included in the Comcast Plan, but is projected in the attached matrix.

## **4 FUNCTIONAL AREAS/EQUIPMENT**

Each specific area within the Comcast Community Access Center and the proposed improvements were analyzed for appropriate equipment, usefulness over life of the franchise, and ability to meet the community access producers' needs.

### **4.1 STUDIO**

Community access producers have access to the studio in 4 to 5 hour production shifts. Comcast indicates that these shifts are available from 9:00 a.m. to 9:00 p.m., Monday through Friday, with two evenings each week set aside exclusively for series productions<sup>10</sup>. We recommend that substantial weekend hours also be provided for community access producers who are unable to come to the studio during the weekday times. This is consistent with the Comcast Plan (which proposed extension of the Center's operational hours to include a period between 9:00 a.m. and 5:00 p.m. on Saturday), except we believe that some Sunday morning and early afternoon hours would also be useful (other access centers have such hours, because it may be the only time that some members of the public are available).

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<sup>10</sup> Comcast Marin Community Programming Channel, Report for the Marin Telecommunications Agency, June 1, 2003 to June 1, 2004.

It should be noted that the Comcast Plan also proposes adjusting the weekday operational hours to eliminate potential use on Monday and bumping the weekday start time up to 11:00 a.m. While we believe a later start time on weekdays will not significantly hamper access production, we do not believe that elimination of Monday hours would be beneficial. Consequently, we believe that Monday hours should be maintained. Additionally, we believe it would be useful, as many other access centers have found, to expand the evening hours to a period up to 11:00 p.m. Many access centers are open until at least 10:00 p.m. or 11:00 p.m. and find that these additional hours are significantly useful to those who work full time during the day and desire to travel home, eat dinner and change before coming to the studio, which will, even with a subsequent 7:00 p.m. start time, allow a four hour studio shift to occur.

The cameras in the studio were replaced in 2004 after the existing cameras were stolen. They are of studio quality and in excellent condition. However, these cameras are routinely pulled out of the studio and used by local origination producers for remote productions in the production truck. This makes scheduling studio time more difficult and subjects the studio cameras to unusual wear and tear. In the accompanying equipment matrix, we have recommended the purchase of separate digital cameras for the production truck. While the Comcast Plan forecasts four digital cameras for the studio, it does not project four separate cameras for the mobile production truck, which we believe are necessary.

The dimensions of the studio provide the capability to hold only one set; however, even with just one set, trying to get a true 3-camera shoot is difficult because there is not enough space to get good angles and camera positions. This also limits functionality because there is little flexibility for multiple uses, which would necessarily be required for the variety of formats PEG Access producers would require. For instance, access producers may wish to create discussion programs, which would require lighting, sets, and props in a roundtable format. Or they might wish to create training or informational programs, which would require fewer speakers but increased use of graphics and other materials. Other formats that require versatility in the studio configuration could include

debate programs, call-in programs, music programs, and interview programs. The Comcast Plan does not forecast an increase in studio size. As noted in this Section, we believe it would be highly beneficial to significantly expand the size of the studio.

We also noted that the current set lighting is fixed in a panel format and users are not allowed to move the lighting configuration. This, though, is necessary in order for community access producers to have versatility in key, back, and fill lighting (proper three-point lighting). To avoid resetting individual lights repeatedly as individual scenes change, automation of lighting schemes is important. This is called transitioning from one scene to another. For example, it could be necessary to transition from a lighting scheme appropriate for a lecture program to a lighting scheme appropriate for a discussion panel. A proper dimming board and lights are required in order to automatically transition the lighting without having to reset the lights manually every time. This saves valuable time and effort. By having the lighting fixtures connected to a dimmer board, the community access producers would have the ability to have complex lighting schemes and control over the brightness of individual lighting fixtures.

Dimming also gives the ability to create programmed lighting scenes. This allows studio users to have lighting scheme configurations automatically set up, such as a scheme for a regularly used set. If additional lighting schemes are set up, such as for a panel discussion, programmable lighting would allow studio users, with the touch of one button, to transition from one scheme to the other with all the lighting levels already set. This is very valuable in live productions. It is time-saving because it can take hours to set up a specific lighting scheme, and this system will save hours by being able to store that scheme and then recall it from a dimmer board.

Another limitation in the studio is the shortage of adequate sets and props. This limits the PEG Access producers' ability to create variety in their formats. In conjunction with the lack of sets is the lack of set storage. It was noted that the studio did indeed look to have reduced usable space during our visit because of items stacked along the walls. This could potentially inhibit the best use of the studio during productions and may lead to potential problems such as premature deterioration in the quality of the sets, possible theft

or vandalism, fire hazards or OSHA-related concerns. For these reasons, we recommend adding a separate set storage area and removing any items not specifically intended for studio use. The set storage area should have proper space to store sets and props, including high ceiling space and large bay doors accessible to the studio area to accommodate large props such as set curtains. For security reasons, the bay doors should be lockable or there should be lockable cages. The sets and props themselves should be evaluated for portability and versatility and upgraded if needed. Design considerations should be given to the types of uses the sets will see, such as discussion shows, roundtable formats shows, or lecture programs. The Comcast Plan indicates that the company will establish secure storage for equipment, but does not project any additional storage for on-air sets. The Comcast Plan does indicate it will provide one furnished on-air set, but does not indicate where it will be stored when other sets are utilized.

The final concern we noted was the lack of live productions. In theory, community access producers should have the ability to create live productions from the studio. However, we could find little or no evidence of any live productions occurring. One specific item noted often in our interviews was that community access producers cannot conduct amplified music performances (live or taped) because the studio is not completely soundproof, which causes the sound to spread to Comcast employees in close proximity. Also, specific times are not set aside for live productions and there are no call-in capabilities. Our research indicates that live productions could be an important contributor to Marin PEG Access programming, and the barriers to such productions should be removed.

## **4.2 CONTROL ROOM**

Much of the equipment in the control room was in poor condition or obsolete due to the ongoing shift to digital technology. For example, the main intercom system that allows producers in the control room to communicate with camera operators is nearly 30 years

old and in poor condition<sup>11</sup>. The 3/4 inch, Hi-8, and VHS decks currently in use have already been identified as obsolete with a recommended switch to digital tape formats. Additionally, the current switcher is not capable of mixing various analog and digital inputs and does not provide digital video effects. The character generator used is not on a standard operating system. It does not meet the open systems criteria already established above, and is unable to import simple things such as logos, graphics, and titles from other standard graphics systems. A complete listing of upgrades for the control room area has been provided in the equipment matrix.

The Comcast Plan does recommend some enhancements to the current studio control room configuration, including three 14” color monitors; four digital recorders; one digital character generator; and one digital switch setup for the character generator. While we believe that the Comcast Plan is on the right track, we have forecasted a higher level of technology (Serial Digital Interface [SDI] capable) and a different mix of digital technologies that are most consistent with the experience of other access centers.

We have also designed the updated control room to function as a linear edit suite when not used for studio productions. Some older public access users may find computer-based edit systems intimidating, and the equipment already provided in the control room would meet their editing needs. For example, the switcher, character generator, tape decks, edit controller, and audio mixer we have recommended could all be used for linear editing purposes. It is further desirable to have limited linear editing in the control room in certain instances, such as when putting introductory sequences and ending credits on productions. Keeping linear editing in the control room will also keep the edit suites discussed below available for more advanced non-linear editing activities.

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<sup>11</sup> Purchase year of 1976 cited in 2004 Community Access Equipment Status Report, submitted by Sam Hudson, Local Origination Manager, May 10, 2004.

### **4.3 PLAYBACK**

The playback area is of very high importance because the quality, type of equipment, and operating procedures within the playback area can directly affect the channel quality provided to subscribers. Below we first address the quality and type of equipment, and then address minimal quality standards.

The decks used for playback over the channel currently are mainly 3/4 inch U-Matic and obsolete. Our recommended migration path for community access playback technology is to provide a robust event controller capable of random access programming along with a DV video disc recorder/video server and industrial DV and DVD players. An encoded bit rate of 5-10 megabits/second is recommended to ensure the quality of community access programming. This solution should prove cost-effective with adequate playback capabilities, and will also permit many different formats of players, such as Mini DV and VHS, to be connected to the event controller to provide maximum flexibility so that it can support the different needs of the users. For example, some users may bring in DVDs or VHS tapes that were created from outside sources. In addition, we recommend some of the existing equipment be retained so that "legacy" tapes created in those formats can still be re-played while the equipment remains in workable condition.

As indicated before, the Comcast Plan would upgrade the 3/4" format to an S-VHS playback format. We believe that this would represent only a modest increase in technological capability (literally moving from an '80s technology to a '90s technology), and does not go far enough in providing the capabilities and signal quality that can be achieved cost-effectively for today's access programming playback operations.

Our recommended technology path not only takes the place of many video tape players, but also vastly reduces, over time, the need for the manual handling of videotapes in the playback area. Further, it reduces the service dollars needed to repair and replace conventional video tape players. The result is much longer life and less maintenance needs for the decks, greater playback reliability, and increased picture and audio quality.

It is also important to consider the quality of the channel as it relates to other channels on the cable system. With the increasing changes in technology, many channels will be moving to high definition over the next 7-10 years. With this in mind, high-definition technology should be implemented on PEG channels to enable the same visual quality as other channels. We have not specifically included high definition technology in the early years of the current equipment matrix because of its current cost, but we feel it is important to implement this technology later in the franchise term as it becomes cost effective.

Playback considerations should include ultimately providing the three forms of PEG Access programming continuously, 24 hours a day, seven days a week. The playback of public access programming should be separated from all the other programming it is currently combined with to make certain that the integrity of each type of programming is maintained.

The Comcast Plan does call for upgrading the bulletin board computer, such that separate local origination and public access bulletin boards can be created; but does not go further to cover all the playback elements that would need to be incorporated to separate public access, educational access, governmental access and local origination onto different channels.

#### **4.4 EDITING**

There is currently only one edit suite, consisting of a cuts-only S-VHS configuration and utilizing an Amiga Toaster system as the switcher. Many community access producers have express dissatisfaction with this edit equipment, and we have already established herein that the S-VHS decks are rapidly becoming obsolete. Although Video Toaster technology still exists in today's marketplace, the Amiga platform that this system is running on is no longer in existence and is not supported. It is no longer reliable, as

shown by the fact that it, "crashed for approximately 1 week"<sup>12</sup> at least two years ago. We are recommending replacing all Amiga Toaster systems throughout the facility with current graphics systems that support open system architecture requirement.

We recommend that two clearly-defined levels of edit suites be developed, one designed for simple, easy to master use, and the other designed for more proficient Access producers who wish to create more technically advanced and complex content. This two-tiered edit approach will fulfill both the introductory learning needs of Access producers who are just starting out as well as the needs of the more experienced producers who wish to advance into broader editing techniques. This will promote full use of the community access facilities in the future.

The design of both the beginning and advanced edit suites makes use of non-linear edit technology. Non-linear editing (essentially non-sequential, digital-based editing) accesses video and audio data directly from a computer's hard drive, in contrast to a tape deck used in a linear editing (essentially sequential, tape-based editing) system. This allows for random-access video/audio storage, so that community access producers will save time by not having to wait for tapes to shuttle to a desired scene. The editing process consists of assembling a piece by arranging clips along a timeline on the computer screen. Unlike the current linear edit system, all edit work is done at the computer, so that the tape decks and other resources are saved wear and tear. Such high quality video storage and manipulation on desktop computers is now possible at cost-effective prices.

Furthermore, industry trends have shown that the non-linear editing methods currently employed are becoming the norm. Students learning how to edit within the educational system today are primarily being taught in the non-linear format. Community access television provided by nearby Berkeley Community Media incorporates both linear and non-linear editing technology. The College of Marin offers three non-linear editing

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<sup>12</sup> AT&T Broadband Marin Community Programming Channel, Report for the Marin Telecommunications Agency. June 1, 2001 to June 1, 2002.

courses. In addition, non-linear editing is increasingly available to the everyday consumer as computer performance has increased and prices have dropped substantially.

Obsolete equipment included not only the S-VHS decks and the character generator, but also some critical pieces of equipment such as monitors and the edit control unit. These pieces of equipment no longer integrate well with the technology needs of community access users and need to be replaced with more recent technology. For example, most non-linear systems support the transfer of data from digital field cameras, such as Mini-DV, through the use of the IEEE-1394 protocol, more commonly known as "firewire". This allows for the lossless transfer of information similar to SDI technology, and consequently, ensures the quality of the video is not compromised. However, the older, analog editing equipment does not support "firewire" technology, and there is no way to transfer video and audio signals using this newer technology. Conversely, the newer equipment does not support the transfer of analog information anymore. As we move into the future, video equipment will be less likely to ever use analog technology for the transfer of video/audio information. There are already cameras on the market today that only support digital output, or IEEE-1394 "firewire", for example, and all Apple Macintosh computers have come with the IEEE-1394 port built-in since 2001.

The Comcast Plan calls for three non-linear editing suites using the Avid Xpress system with a technology level that is essentially between our recommended basic and more advanced systems, as detailed below and in the equipment matrix. We note that Comcast has proposed three non-linear suites as opposed to the two that we believe are currently necessary. In addition, we have proposed to establish the capability for both studio control and remote production truck control to serve as linear editing suites. Our belief is that this complement of capabilities would be sufficient at this time and throughout the foreseeable future to provide necessary editing capabilities, based on the institution of the expanded facility hours we also recommend (essentially providing a high level of convenient and efficient use of equipment simultaneously). If the facility hours are not expanded as we propose, then we believe that a third non-linear editing suite (resulting then in one basic and two advanced) would be necessary. This would also require the

addition of another 120 square feet to our recommended facility space plan, detailed later in this Section.

#### **4.4.1 Basic Nonlinear Editing**

Introductory Access users may feel overwhelmed by the equipment they are learning to use. While it is important to keep abreast of current technology for quality control reasons, it is also important to keep the editing abilities of all levels of users supported. Entry-level users need to learn editing theory as well as equipment techniques. For this reason, we recommend the addition of a basic nonlinear edit suite for use by entry-level community access producers that are just learning the concepts of video editing.

The design of the Basic Nonlinear Edit Suite focuses on introducing users to non-linear, computer based edit equipment with easy to use software and the Mini-DV and DVD formats. The Mini-DV tape format is simple to use, widely known to most consumers, cost effective, and yields broadcast-quality output. The DVD format is also proposed for the same reasons. The Basic Nonlinear Editing system design also includes the ability to edit using basic graphics and basic imaging compositing techniques because those are the core elements needed for a completely produced video program. In addition, the system has the ability to output to videotape and DVD, since these are common playback media.

We have already established that the basic computer-based editing system should be networked to give users the full advantage of open systems technology as described above.

#### **4.4.2 Advanced Nonlinear Editing**

The Advanced Nonlinear Edit Suite detailed in the accompanying equipment matrix was designed to build on the beginning capabilities of the Basic Nonlinear Edit Suite by adding more graphics, advanced color correction, advanced image

compositing and special effects, greater storage and faster processing speed. It incorporates the ability to output to both tape and DVD format to match playback formats and provide interconnectivity with consumer formats (although DVD purchases in the home now outnumber VHS purchases, VHS still has an entrenched user base).

Again, we recommend a nonlinear editing system that can be networked with other types of systems to share files, thus providing a more efficient and enhanced editing environment for the reasons already described. As in the Basic Nonlinear Edit area, the use of open systems would be necessary.

#### **4.5 PRODUCTION TRUCK**

It was difficult to ascertain whether public access producers actually have made much use of the production truck. There were no statistics provided by Comcast on public access producers actually using the truck. (There was some anecdotal evidence that it had not been used for public access for at least a year.) In contrast, Comcast seems to primarily use the truck for Local Origination productions.

One reason public access producers do not use the remote truck is because they feel it is inadequate for their needs. The truck itself is in poor condition. The outside body is rusting and it has limited equipment inside. It does not have permanent cameras, and it has very limited playback capability for live applications. The equipment that is in there is old and needs replaced. In our accompanying equipment replacement matrix, we have identified several specific pieces of equipment that are in poor condition and which need to be replaced immediately. One example is the van itself that Comcast stated to be in "Good" condition, but which is twelve years old and actually is in poor condition. Another example is the character generator, which is eleven years old and lacks many of the modern requirements we have already discussed. In fact, we found the average purchase year to be 1992 for all equipment in the truck, and that 72% of all equipment in the truck was actually obsolete or in poor condition.

We have also recommended several new items of equipment be provided for the production truck to fill the gaps in necessary equipment. These items include studio-quality cameras dedicated to remote truck productions only, tripods, a light kit, additional microphones, and digital player/recorders. The production truck should provide community access producers with adequate services once these technology and equipment upgrades are completed.

Another reason the truck is not currently used by public access producers is that they must give 90-day advance notice to reserve the truck<sup>13</sup>. This is an excessive amount of time. The reason given was that the truck shares equipment with the studio. Therefore, since we have proposed that the truck receive its own cameras, we also recommend that the amount of advance notice required to reserve the remote truck be reduced to a reasonable time span. Some access centers require as little as two weeks notice and will flex to even shorter lead times if staff is available. In addition, live remote broadcasts for all forms of PEG Access using the truck should be made available through increased access points for live feeds and the use of a portable wireless communications system (consistent with modern electronic news gathering [ENG] technology). The Comcast Plan does not, as far as we are aware, forecast a new vehicle or any new equipment for remote production truck operations.

#### **4.6 FIELD CHECKOUT**

With the exception of some microphones and related audio equipment, every piece of existing equipment in this category is in poor condition or obsolete, and at the end of its useful lifespan. The field cameras are of the S-VHS and Hi-8 tape formats, which we have already identified as obsolete in the shift to Mini-DV and DVCam technology. It will be necessary for the field cameras to make use of the IEEE-1394 "firewire" protocol in order to take full advantage of data transfer options. One advantage of having "firewire" technology is the ability to incorporate portable hard disk recorders, which give producers the ability to record content directly from the camera to a portable hard

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<sup>13</sup> Comcast Marin Community Programming Members' Manual, Revised 1/20/04.

drive, eliminating the need for videotape. The portable hard drives could then be used to transfer content directly into a non-linear edit system, keeping the content in a digital, "tapeless" format throughout the entire process.

We have recommended new technology that will offer a digital, high-quality format to both beginning and advanced PEG Access producers. The quality of public, educational and governmental produced videos will increase dramatically, and the Access producers will be able to gain experience with the use of the more technically advanced equipment that is becoming the standard in the video cablecast market today. As an illustration, producers will have the ability to combine multiple formats, such as Mini-DV and DVD, on one video package with multiple file types, such as JPEG and TIFF, all on one project timeline, giving them unprecedented freedom to create content that matches their video goals.

The Comcast Plan also calls for conversion of field equipment to digital camcorders. Again, the units that they have proposed are at a level between our basic (Mini-DV) and more advanced (DVCam) units. The Comcast Plan also proposes seven new cameras whereas we have proposed five. Similar to the rationale behind the lower number of non-linear editing suites proposed, due to the fact that a number of current community access users already have their own cameras, one of the more prolific users continues to use Hi-8 and that we are also proposing the addition of a multi-camera, suitcase studio for remote production, we believe that the five individual units we have proposed will be sufficient. However, should the above dynamics change, we would recommend purchasing two or more additional units to complement the ones we have proposed.

Another concern with the existing portable field equipment is the light kits, which we rated to be in "Poor" condition and recommended to be replaced immediately. Light kits are composed of many pieces of equipment, including stands, bulbs, clamps, pins, and other accessories. They are often subjected to harsh elements from being in very cold or very hot conditions while being transported, stored, or in use. This inherently causes

short equipment life spans and high maintenance. The current light kits have been well-used and are becoming difficult to maintain properly.

Light kits on the market today offer better technology to deal with harsh conditions, such as more durable lamps, hardware, cords, and other accessories that can better withstand the varied working conditions associated with community access field shoots and productions. Newer kits are also more flexible. For example, added capabilities that come with current light kits include the ability to handle very bright lighting when needed, or very soft and subtle lighting effects, which occur frequently during outside field shoots. These advances in capability are due to new features, such as dimmable lights for effects and additional hardware such as gels to create shadow effects and color effects. Current lighting kits also offer many different wattage capabilities to greatly enhance the quality of the shoot.

Not only do current lighting kits outperform older light kits, they also better facilitate the use of digital technology, where more emphasis has to be put on lighting to achieve professional-looking images. For example, digital cameras have a very difficult time shooting an image above 95 IRE (IRE is a unit of measure of video levels, where 7.5 IRE represents Picture Black and 100 IRE represents Picture White). As a result, images may look "washed out" and not of broadcast quality if improper lighting is used. Light kits currently on the market offer many more flexible lighting techniques so that a producer is not flooding the scene with light, but is able to control the light, only putting it where he or she needs it.

Therefore, it is our recommendation that new light kits be purchased immediately. Even though the older light kits could be repaired over time, they would still be inferior to many of the present day lighting kits and would not meet the needs of digital videotaping that will become imperative with the shift to Mini-DV and DV camcorders.

The Comcast Plan does not address directly the purchase of new light kits, although they may have been contemplated in the \$225,000 proposed for equipment replacement over the course of a 10 year period.

#### **4.7 SUITCASE STUDIO**

A suitcase-type studio would be a good addition to the portable field equipment inventory. It typically includes 2-3 cameras and the ability for live switching, audio mixing, and character generation so that the finished program is created as it is being shot. Newer technology exists that integrates several different production elements such as character generation, video switching, and 3-D effects into one "studio in a box" design, providing a cost-effective equipment solution. In many cases there will be no further need for editing.

This suitcase setup could be easily transported to remote locations and could be used for both live-to-tape and live programming over the cable system. Live discussion forum shows that would have limited access for the production truck to cover, but where the suitcase studio could be set up at the back of the room, are good examples of shows that could be best produced straight from a suitcase studio. If configured for proper portability, capability, and user-friendliness, a suitcase studio can successfully expand coverage of classroom, auditorium, theatrical, sporting and other events with as little as two-person crews by enabling a more flexible, fast, and convenient production approach. Additional benefits include reducing simultaneous demand for the use of the other field equipment, offering a less technically complicated setup for entry-level users than a full remote truck setup provides, and serving as an excellent backup resource for the studio in an emergency or during periods of high demand for studio use.

The Comcast Plan does not contemplate implementation of a suitcase studio, but does project two additional single user field cameras over what we have proposed. As we noted above, though, the suitcase studio does incorporate three DV cameras that could also be used in remote, single camera situations as required.

#### **4.8 VIDEO ON DEMAND AND OTHER ADVANCED DELIVERY METHODS**

With increases in video on demand technology, the opportunity exists for programming content to be delivered to cable subscribers in a video on demand capacity. There are several different scenarios in which video on demand programs can be delivered to cable subscribers. One scenario is for the cable operator to provide video server space and infrastructure to support full video on demand needs for content produced by the PEG Access producers. Another scenario would be for the Access provider to have their own video on demand server and interconnect that with the Comcast infrastructure to provide PEG Access video-on-demand to cable subscribers. Along with video on demand capacity that would be available on the cable system, the opportunity exists for PEG programming to also be streamed on the Internet. This will help provide an increased ability for the community to watch public and other forms of access programming. As shown in the attached matrix, we recommend that Comcast provide an enhanced video server for community access within the first few years of any renewed franchise that would incorporate video on demand capability to support this type of programming and provide the use of an equivalent bit rate to that of other Comcast programs available through video on demand.

As indicated in the previous subsection related to playback capabilities, it will also be important for PEG programming to be produced in a high-definition format in the future, as well as take advantage of interactive television technology, and other advanced content delivery methods. As indicated earlier, although we have not forecast an immediate move to the use of such technologies, it will be important to implement these delivery mechanisms later in the franchise term as it becomes cost effective within the parameters that we have noted in this report.

As far as we were able to determine, the Comcast Plan does not project a move to the provision of a portion of PEG Access programming utilizing cable-based video on demand, HDTV, ITV or other advanced content delivery methods.

#### **4.9 ACCESS ORIGINATION**

At this time it appears that there is only one known viable access origination point within the cable system for Channel 26 and that is at the Access Center location, providing an optical link to the headend for delivery of access programming from the master control playback location. We believe that many additional origination sites need to be added which will help facilitate a variety of live and live-to-tape programming produced on location. Based on our assessment to date, initially for community and government access, this includes the Marin County Government Center. Additionally, for Government Access, this initially includes the Corte Madera, Fairfax, Sausalito and Larkspur Council Chambers (the Larkspur Chambers will facilitate the provision of live coverage of MTA meetings). Finally, for Educational Access the two locations identified at this point include the College of Marin Television Studio Facility and the Board of Education Headquarters. In each case, the sites can either serve as venues for Government, Educational, and Public forums or the location of Government, Educational and Public activities and meetings that could be more easily covered with live-origination capabilities already installed at the site. In all cases, we have recommended uncompressed, digital optical transport for such origination links. The transmitter receiver pairs to implement such links are included in the equipment matrix in Attachment 1.

## 5 FACILITY EVALUATION

After review, we believe it is necessary to focus on a facility, as well as an equipment, upgrade path for community access, especially as the Access Center is forecast to facilitate all forms of PEG programming. The current facility is leased until 2008 at a cost of \$1.86 per square foot per month<sup>14</sup>. We noted significant deficiencies with the current facility including:

### Insufficient space

- No set storage
- Only one edit room
- No green room (talent dressing/makeup/ready room)
- No training room that is not shared
- No conference room
- No producer's work area for script development
- Small studio

### Design deficiencies

- The facility appears to lack a comprehensive wired network for audio/video routing.
- The facility is not entirely ADA accessible.

### Physical deficiencies

- The studio is not completely soundproof.
- There has been flooding in the building.

As compared and contrasted below, the Comcast Plan would seek to rectify some of these deficiencies, including: establishing three public access edit suites, a newly furnished dressing/makeup room (green room), a newly furnished meeting room and a dedicated

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<sup>14</sup> Data reported to CBG in meeting held on 6/10/04 with Comcast representatives. Since we are recommending a facility space allocation that would require significant additions, space reallocation, remodeling and renovation to occur at Comcast's existing site (if this site continues to be the Access Center), it is likely that Comcast would need to extend the lease well beyond 2008 to take sufficient advantage of the facility improvements that would be made.

entrance for public access users. However, as indicated below, some major issues are not resolved by the Plan (such as the small size of the studio), and some of the new areas are smaller than we would recommend for efficient operation.

## **5.1 SPACE REQUIREMENTS**

The following is a listing of reasonable space requirements for the Access facility based on the PEG needs we have assessed. It is compared and contrasted with either current space, or if new or additional space was projected, the space forecast in the Comcast Plan. It should be considered a practical estimate as to the amount and type of space needed. As detailed plans for necessary facility changes are made, we recommend this listing be modified and expanded as needed.

### **5.1.1 Studio**

The studio should be large enough to handle multiple sets and accommodate proper three-point lighting. It should be soundproof to allow for live music productions.

Recommended Size: 30 feet x 40 feet = 1,200 square feet.

Comcast: Approximately 25 feet x 20 feet = 500 square feet.

### **5.1.2 Set Storage**

There should be proper space to store sets and props, including high ceiling space and large bay doors accessible to the studio area to accommodate large props such as set curtains. For security reasons, the bay doors should be lockable or there should be lockable cages for set storage.

Recommended Size: 20 feet x 15 feet = 300 square feet.

Comcast: None.

### **5.1.3 Edit Rooms**

Two separate edit rooms are needed to house the Beginning and Advanced Nonlinear Edit functional areas. They should be designed to be comfortable and ergonomic for users as well as house equipment effectively.

Recommended Size: 10 feet x 12 feet = 120 square feet per room, or 240 total square feet.

Comcast: 5 feet x 10 feet = 50 square feet per room x 3 = 150 total square feet.

#### **5.1.4 Master Control/Studio Control**

The control room should be large enough to accommodate all equipment and users. It should also accommodate raised floors or communications raceways in the floor or ceiling.

Recommended Size: 15 feet x 25 feet = 375 square feet.

Comcast: Approximately 25 feet x 12 feet = 300 square feet.

#### **5.1.5 Playback/Duplication**

Playback and duplication areas should be separate functional areas (separate racks for each system, for instance) if they are not in physically separate rooms so that playback equipment is not at risk of being adversely used for tape duplication.

Recommended Size: 15 feet x 15 feet = 225 square feet.

Comcast: Combined with Master Control/Studio Control.

#### **5.1.6 Field Equipment Checkout**

Necessary to store field equipment in a safe and secure location, but accessible for checkout purposes.

Recommended Size: 10 feet x 12 feet = 120 square feet.

Comcast: Included in Equipment Storage.

#### **5.1.7 Garage for Production Truck**

With bay doors, to provide shelter and security for the vehicle and its equipment.

Recommended Size: 25 feet x 30 feet = 750 square feet.

Comcast: None.

### **5.1.8 Equipment Storage**

Intended to reduce clutter and provide a safe and secure storage space.

Recommended Size: 20 feet x 20 feet = 400 square feet.

Comcast: Approximately 360 square feet.

### **5.1.9 Lounge/Lunchroom Area**

To provide access users a place to meet and take breaks while working.

Recommended Size: 20 feet x 20 feet = 400 square feet.

Comcast: None.

### **5.1.10 Green Room**

To allow on-screen talent a private space in which to prepare themselves for production work.

Recommended Size: 12 feet x 15 feet = 180 square feet.

Comcast: Approximately 76 square feet.

### **5.1.11 Conference/Meeting Room**

Intended as a private area in which to concentrate on such things as training, production planning and private meetings.

Recommended Size: 15 feet x 15 feet = 225 square feet.

Comcast: Approximately 10 feet x 12 feet = 120 square feet.

### **5.1.12 Technical Shop**

A work area for system engineers to perform maintenance and repair of equipment. Includes office area for engineering/technical personnel.

Recommended Size: 15 feet x 15 feet = 225 square feet.

Comcast: None designated (part of other room functions).

### **5.1.13 Office Space**

For employees who support and coordinate PEG access.

Recommended Size: 10 feet x 12 feet = 120 square feet per room. Five rooms  
= 600 total square feet.

Comcast: Approximately 178 total square feet.

#### **5.1.14 Lobby/Reception**

To orient visitors to the building. Includes office area for

Recommended Size: 12 feet x 15 feet = 180 square feet.

Comcast: Approximately 10 feet x 20 feet = 200 square feet.

#### **5.1.15 Hallways, Restrooms, Closets**

Residual areas necessary to complete the functionality of the facility.

Recommended Size: 960 square feet.

Comcast: Approximately 590 total square feet.

#### **5.1.16 Total Square Footage Needed**

Taken all together, the square footage required to create a reasonably sized PEG access facility for citizen's organizations and jurisdictions represented by the MTA equals 6,020 square feet. The Comcast Plan taken all together provides approximately 2,474 square feet, or a little over 40% of the space we've recommended.

## **5.2 FACILITY IMPROVEMENT OPTIONS**

Three options are available for providing the amount of total square footage and functionality necessary for public access needs. One option is to expand the current facility beyond that proposed by Comcast to meet the needs described above. Another option is to renovate an existing building other than the current facility, and the final option is to build a new facility. Several factors must be taken into consideration when considering how to best accommodate the need for greater public/community access facility space. The following is a list of development considerations to use in reviewing

the nature, type, location, functions, and capabilities that are needed for a new facility in order to facilitate the level of programming needed in the future.

#### **5.2.1.1 Physical Location of the Production Facility**

- Is there a sufficient amount of available parking and loading/unloading space?
- Is it near any other facilities that might promote close proximity use by persons that will be involved in video production?
- Is the prospective location near an existing or easily provisioned point of interconnection to Comcast's fiber backbone that would provide a high quality signal upstream to the headend?
- Is the site in an acoustically acceptable area where the noise of the outside environment (such as a nearby highway, railroad tracks, airline traffic, truck loading area, construction site, etc.) would not provide a constant source of sound interference?
- Is the site in an area relatively free of strong RF signals such that these types of signals (from a radio station transmitter, public safety wireless dispatch site, etc.) would not pose an interference problem from signal ingress into the facility cabling?

#### **5.2.1.2 Building Characteristics**

- Where space would be leased, what is the cost of leasing the necessary space to establish a production facility at a particular location, compared to other locations being reviewed and available funds for the lease of space?
- What is the cost of designing, or modifying the space where needed, to facilitate studio, post production, remote equipment, storage, administrative and garage operations?

- Are current or planned ceilings high enough to place studio facilities within the structure (15 to 24 feet high)? Are large spaces (i.e., 30 feet by 40 feet) available?
- Is there space for a general administrative/reception area?
- Is there large bay door accessibility to the projected studio area?
- Is there additional high ceiling space behind lockable bay doors or a lockable cage to provide storage for studio sets?
- What is the availability of large freight elevators, if the garage or loading area is underground or if some facilities would be located on a second floor?
- Are there wider doorways and hallways where production and post production work would take place?
- In the area where master control may be located, are there raised floors or communications raceways in the floor or ceiling?
- Is the inside space for the studio and audio booth acoustically acceptable or would a significant amount of baffling and other modifications need to be implemented?
- Is the building ADA accessible such that appropriate ramps, elevators, bathroom modifications, etc. have been made?
- Is there wide, easy access, from the garage or loading area to the projected studio area?
- Is there a high quality communications infrastructure within the building (i.e., does the space incorporate telephone, data, coaxial, fiber and other necessary cabling)?
- Is the electrical system capable of handling the power load of the lighting/production/post production/transmission, etc. equipment planned?

- Is there availability of both generator and battery backup power within the building?
- Is there space available and the appropriate zoning for the installation of wireless communications, including satellite downlinks as well as potential microwave antenna placement?
- Is the HVAC system capable of handling the heat dissipation/cooling required for a large amount of video production equipment (Master control/post production/etc. must typically be cooled to 65° - 68° F)?
- Are there appropriate fire suppression systems (geared around extinguishing electrical fires without catastrophic damage to unaffected equipment)?
- Is the building attractive, such that it would make a good first impression on visitors to the facility?

### **5.2.1.3 Facility Development**

- Once real estate, basic building and/or lease costs are accounted for, then interior development/renovation/remodeling/ leasehold improvement/etc. cost (at potentially \$150 per square foot or more) need to be factored in.
- The costs noted above need to cover finalization of space for:
  - Reception
  - Office
  - Master control/playback/tape duplication
  - Editing/post production (2 editing suites)
  - Field/Remote equipment storage
  - Set and other storage
  - Studio

- Studio Control Room
- Network equipment room
- Garage for truck
- The Studio Control room should be adjacent to its respective studio. Master Control will incorporate the playback operations. If duplication is also done in this area, then the duplication area needs to be separated from the playback operations.
- The Studio needs to be large enough for multiple sets and configurations. It should include the following key considerations :
  - Room for operation of up to 4 cameras
  - Lighting grid with capability to light multiple sets
  - Sound isolation
  - Enough electrical capacity to support a lighting grid with dimmers
  - Adequate HVAC to support both the Studio and the Control Room

It should also be supported by adequate room for set storage and a "Green Room" for guests to prepare to be televised.

- Raised flooring and conduits (raceways) need to be installed in various places throughout the facility, including the Edit Suites and Master Control Room.
- Adequate space for archived tapes and new tape stock will be needed.

### **5.3 CONSTRUCTION/RENOVATION COSTS**

Some recent new facility construction we are aware of in the area ranged up to \$200 per square foot, not including land or operating costs. At this rate, the cost of building a

complete 6,020 square foot facility would be \$1,204,000<sup>15</sup>. If a new location is chosen, bidirectional upstream feeds will be necessary. It will also be necessary for Comcast to specify what additional equipment, if any, is needed to develop the upstream feed.

If a facility expansion or renovation option is chosen, either for the current building or another one (such as at the College of Marin), in lieu of building a completely new facility, an initial estimate of the cost could be determined by multiplying the amount of additional square footage needed by \$150 per square foot. For example, renovating the Comcast facility from approximately 2,474 square feet to the 6,020 square feet we've recommended would cost \$531,900 potentially for the addition of 3,546 square feet which is \$331,900 more than the \$200,000 in projected physical improvements contained in the Comcast Plan. It is important to note, however, that the actual cost per square foot will vary depending on the cost of labor and materials within the Marin County area at the time of construction.

## **CONCLUSION**

In summary, the recommendations given in this document for facility and equipment upgrades, replacements, and modifications, combined with the replacement schedule shown in the accompanying equipment matrix, should provide for a highly satisfactory PEG Access production facility that will meet the needs of the Marin County community now and through the term of any renewal cable television franchise. Although the Comcast Plan moves in the right direction from the current status of access operations in Marin County, there would need to be significant additional investment by Comcast in facility development, equipment provision, upgrade and replacement (for example, we have forecast \$1,481,200 in initial equipment upgrades as opposed to the \$475,000 forecast by Comcast; then over ten years we forecast an additional \$1,645,600 in equipment replacement, while Comcast has forecast only \$225,000), staffing levels (as

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<sup>15</sup> These numbers are in 2004 dollars.

described further in this Report) and operational procedures (also described further in this Report).

## **GOVERNMENT AND EDUCATIONAL ACCESS**

### **INTRODUCTION**

CBG has also performed an analysis of the Marin County Government and Educational Access equipment and facility needs. The purpose of our analysis was to determine what types of PEG equipment and facilities would be needed either at the Center or independently in order to satisfactorily produce necessary viable, high-quality Government and Educational Access programming throughout the life of any franchise agreement.

As part of CBG's overall review, site visits were made to the County and other MTA jurisdictions as well as the County Board of Education (BOE) and the College of Marin. At that time, interviews were conducted with the staff and other officials. Many local government council chambers were toured to examine the feasibility of adding television equipment to enable cablecasting of live meetings. A focused discussion was held with government representatives on potential access programming. Educational facilities were also toured to examine future production possibilities. The BOE disseminated a survey to various school districts throughout the County. Further, Novato Public Access Television (NPAT) was toured and discussions were held with its director to determine how it facilitated all forms of PEG Access from its central operation.

### **FINDINGS**

The following provides a review and recommendations for Government and Educational Access based on our findings.

#### Government Access Analysis

The MTA represents many governmental entities, from the Marin County government itself to ten of the eleven towns and cities within the County. We have found that these governmental entities have various levels of need when it comes to use of a potential

governmental channel. Some governmental entities like the Marin County government are on the path to videostream County proceedings over the Internet. Based on this, we have recommended that an optical link be developed to connect a baseband output from the County's videostreaming operation directly to the Access Center for routing to Channel 26 and ultimately to a separate government channel.

During a site visit conducted in June of 2004, many local government Council facilities were visited and interviews were conducted with City officials. During these interviews, we found varying levels of interest in televising governmental proceedings over the cable system. Some jurisdictions, such as Corte Madera, Fairfax, and Sausalito have expressed a greater level of interest in the possibility of cablecasting their Council meetings. Larkspur should also be considered as a cablecasting location for MTA Board meetings and other governmental proceedings. Other communities, to this point, have expressed lesser interest in televising their meetings.

Even though some cities expressed little current interest in the televising of meetings, because a franchise is such a long-term agreement and there would be interest in post-produced programming about government services, it should be taken into consideration that many of these jurisdictions will increase their interest level in governmental access during the franchise period. In the equipment matrix, we have developed a per-facility model for the provision of production capabilities for each jurisdiction. Initially we have forecast implementation of three such production setups.

One jurisdiction that needs particular mention is the City of Novato. Although Novato is not a member of the MTA, it was evaluated because of its ability to integrate governmental, educational, and public access fairly effectively using one facility. Although Novato's needs are much smaller compared to those of the entire MTA, elements of its successful integration could be utilized if an expanded joint-use facility moves forward. Novato currently cablecasts governmental proceedings, educational programming, and public access programming using the same basic equipment and technology, and using the same staff. This is a good example of an integrated approach

to satisfying the needs of all the PEG entities. By providing an appropriate complement of Comcast employees and PEG Access producers, along with interns and volunteers, the PEG needs for the MTA area could be met using an expanded Central Access Center facility. In the attached matrix, and as described earlier in this Report, there is equipment listed for remote field production, such as a suitcase studio and a remote production truck, that essentially enables multi-camera productions to be done from many remote locations using targeted staff. In the case of the production truck, microwave technology has been included to enable live cablecasting of events. This type of equipment and targeted PEG facilitation personnel could be used for videotaping large events that require multiple cameras, such as candidates debates, governmental proceedings, forums, election coverage, school musicals, plays, sporting events, graduations, and other large ceremonies.

### Educational Access Analysis

In May and June of 2004, a site visit and interviews were conducted with the College of Marin to evaluate the possibilities of using its television production site as both a future PEG Access facility and a location to generate educational access programming. The site itself has many advantages, including ample studio and studio control room space and multiple rooms for editing and other production needs. The site is centrally located in the Kentfield area with bus service and ample parking. The site has two separate studios that are quite large, has very high ceilings and has ample space for set storage. The studios were modified to comply with ADA requirements. Located upstairs and in between the two studios are many rooms currently used for non-linear editing and audio production. These could continue to be used for post-production needs. Although the facility is adequate for possible future PEG Access needs, it is extremely lacking in equipment. Specifically, the studio control room is nearly bare with empty racks. The equipment that is there is of a 1970's/1980's vintage and is obsolete. The edit suites, though, include current technology using Apple's Final Cut Pro non-linear editing software.

This site should be considered for use as a combined public, educational, and government access facility if necessary space cannot be added to the current Comcast facility.

Student volunteers and interns could be used to help with the production needs of the facility. The studios are large enough to support various sets which many entities could make use of. For example, training programs could be produced as part of educational access. Discussion programs could be produced as part of governmental access. There are also public access needs for a variety of program types to be produced within a large studio environment.

In May 2004, CBG also met with representatives from the Board of Education and discussed a variety of programming possibilities for the BOE itself, as well as the various school districts within the County. It was discussed that the BOE and likely the school districts could provide ideas for programs as well as talent and story development, but would need all necessary production assistance and facilitation in order to develop the access programming. A school district that responded to the written survey, the Ross School District, indicated that they would be very interested in providing opportunities for their middle school students, but again would need significant staff facilitation services. Finally, we understand that San Rafael Schools at one point had a video production program in the high school, but had to abandon it for lack of funding for both necessary staff and equipment.

This again points out how necessary Educational Access staff facilitation services, as well as remote production equipment, would go a long way to help spur development of educational access programming

## **CONCLUSION**

It has been expressed to us that educational and government entities have varying needs for video production services but by and large, outside of videostreaming operations by the County, potential programmers cannot facilitate these needs themselves.

Accordingly, by expanding the community access facilities, personnel, and equipment,

the needs of the governmental and educational entities could be met with the sharing of resources from the centralized Center.

For example, the production truck and suitcase studio equipment we have recommended herein could be used by all of the entities involved for live or live-to-tape multi-camera productions. Along with the shared use of remote field equipment, added equipment is recommended in the playback area to facilitate the cablecasting of all three forms of PEG. This equipment includes expanded multi-channel server space, increased electronic bulletin board capabilities and increased software control over playback systems.

Along with this expanded playback equipment, a template of “per-facility” equipment has been added to show the cost to enable communities to cablecast live meetings if they desire in the future. Three such implementations have been forecast initially.

Currently, Comcast is employing 3/4-inch decks to playback programming over the public access channel, which has already been identified as obsolete earlier in this Report. Comcast has proposed replacing this outdated 3/4-inch technology with S-VHS technology, which is also outdated. This is basically replacing 1980's technology with 1990's technology, and does not provide an appropriate path into the future like digital technology. This is why we are recommending digital video server technology as the replacement technology of choice. With digital server technology, programs will become tape-format independent and be able to be stored and transferred in a completely digital format. This will also be very useful in storing and playing back multiple programs on multiple channels for various forms of PEG.

Although most of the school districts have not expressed specific interest in cablecasting over an educational PEG channel, we feel that, by offering a multi-use PEG facility, staff facilitation and remote production, many districts may opt to take advantage of the equipment and facilities going forward. School board meetings may also become televised in the future, in which case similar equipment to that designated in the matrix

for Council Chambers can be procured for the school districts in the future, as funds allow.

## **OPERATIONAL ISSUES AND PERFORMANCE MEASURES/ INDICATORS**

### **INTRODUCTION**

In addition to the facilities and equipment review and analysis, another significant area of CBG's evaluation concerned operational issues and characteristics of Marin Community Television and an assessment of the needs and interests related to a number of operational areas. We review these below in the first part of this Section, and then in the second part recommend a number of performance measures and parameters that we believe Channel 26's operation would need to meet in order to resolve the operational concerns we describe, as well as the facility and equipment concerns described earlier in this Report.

### **FINDINGS**

#### Staffing Levels

Comcast currently devotes five full-time personnel to the operation of Channel 26, including the local origination manager, two producers/directors, a video engineering technician and a production coordinator.

Our review of the typical activities of the staff, though, indicated that the majority of the staff are primarily focused on Comcast-sponsored local origination operations and activities, with only a portion of each staff member's daily time expenditures being devoted to Public and the other forms of Access. Our analysis includes discussions with Comcast staff, in which the general consensus was that only about 1.25 FTE (Full-time Equivalents) are specifically devoted to PEG Access.

We believe that the existing staff demonstrates significant expertise. They have been helpful within the time bounds provided and the positions are generally consistent with the type of positions that would be needed (with the exception that there needs to be more of a community outreach, channel awareness development, and essentially marketing function in the requirements of the overall channel manager, or a subordinate that has that

responsibility). Accordingly, then, it is primarily the time that is devoted to Access operations versus other operations of the channel that creates the staffing problem.

This cannot be simply cured by a small reallocation of time between activities, unless local origination will have nearly no time devoted to it. We believe, based on the size of the population, the number of jurisdictions served, the need to have not only greater facilitation for Public Access, but also to facilitate Governmental and Educational Access, and the variety of duties that may be required which will be difficult to obtain in one position with multiple responsibilities versus several positions with more targeted responsibilities, that the ideal staffing just for PEG Access (as opposed to Local Origination or commercial production) would require an increase from 1.25 FTE to between 4 and 5 FTE.

Specifically, based on the above needs, and comparison with Access Centers of similar size with similar responsibilities, we believe that the following positions would be highly beneficial. Additionally, the time required will need to be allocated into shifts that can cover twelve hour production days Monday through Friday, an eight hour production day on Saturday and potentially a four hour editing and field equipment check-out day on Sunday (with the occasional suitcase studio or truck production):

- Access Manager (administration, outreach and promotion) - .75 FTE
- Engineering/Technical Operations Manager - .5 FTE
- Inside Facility Production and Post-Production Facilitator/Trainer - 1.0 FTE
- Field Operations Production Facilitator/Trainer - 1.0 FTE
- Government and Educational Access Facilitator/Producer - 1.0 FTE
- Production Coordinator/Office Manager - .5 FTE

This provides a staffing complement of 4.75 FTE. While specific competitive salary ranges would need to be developed for Marin County personnel, and since Comcast was not forthcoming with specific salaries for its current personnel, we have developed average ranges for such positions. Utilizing these ranges, the total staffing complement from a salary perspective would likely run approximately \$230,000. When added together with a 40% tax and benefit escalator and a 20% overhead escalator, this would

equate to a total operational cost (exclusive of facility lease cost) for a well functioning PEG Access operation of \$358,000. As far as we have been able to determine, the Comcast Plan does not forecast any increase in staffing levels.

### Operational Hours

As noted earlier in this Report, the current operational hours need to be expanded so that there are more nighttime hours as well as weekend hours. However, Comcast proposes eliminating hours on Monday, continues to propose no hours on Sunday and does not expand production hours beyond 9:00 p.m. on weekdays. In essence, it appears that Comcast is basically rearranging staff hours so that Saturday can be covered with existing staff.

Based on the needs we have assessed herein, plus the best practices of other access centers that work to serve diverse populations that includes shift workers, organizations that want to produce during the Monday through Friday workday and those who work lengthy weekdays so their greatest flexibility is later in the evening as well as on weekends, we concur with the Comcast Plan start time of 11:00 a.m., but believe the operation needs to be running seven days a week, which includes flexing later on week nights (especially Monday through Thursday nights), has daytime operational hours on Saturday (consistent with the Comcast Plan) and morning or early afternoon hours on the weekend (primarily focused on the live coverage or live to tape coverage of community events as well as expanded post-production time). We believe that the expanded staff complement that we propose could be oriented into shifts that would allow these timeframes to be covered.

### Policies and Procedures

By and large, Comcast's current policies and procedures for Public Access use of Channel 26 are consistent with those found in many other access centers. However, there are several that are significantly different and can be seen as less than user friendly when

looking at the recent and past experiences of the Access producer community. We have noted these below and have provided recommended changes to the policies.

- **Lead time for remote production truck use** - This was a significant concern expressed by a number of Public Access producers because they believe that the current 90 day lead time significantly inhibits the use of the truck, which runs counter to the number of events occurring within the County that could be covered live and live-to-tape. In Comcast's Marin Community Television Members Manual (Members Manual), it indicates that the long lead time is due to the truck sharing equipment with the studio. Earlier in this Report, we have proposed remedying that situation. This, plus our recommended increase in staff, should enable the lead time to come down to as little as two weeks, based on availability (i.e., if the truck is not otherwise scheduled during that time period).
- **Frequency of training classes** - The frequency of training classes appears to be monthly, based on the Members Manual. This will inhibit participation if a potential producer cannot attend on that particular date and will have to wait another month (or more if they are also precluded from attending on the subsequent monthly date) to become properly trained. We believe that the staffing level we have recommended above will be able to provide more frequent training. Initially we believe training classes should be offered at least twice a month and then can be given more often (perhaps as much as weekly) as the need arises.
- **Use of the facilities by teens under 18** - The Members Manual indicates that individuals under 18 years of age cannot operate equipment unless accompanied by an adult member. Our understanding is that this inhibits participation by potential teenage producers. Again, this runs counter to many access centers that encourage participation of teens and other youth who often have a significant enthusiasm for, and innovation and creativity related to, the production of multimedia content. While we believe that there needs to be adult oversight in these situations, as well as a parent or guardian who agrees to be responsible for any problems that may occur, it is quite possible that a number of these teens have operated production equipment that is more sophisticated than what is currently

- being provided at the facility and would be very adept at the operation of this and the upgraded equipment. Again, with increased staff, we believe that there may be sufficient supervision to modify the current policy related to equipment use by teenagers.
- **Use of amplified music in the studio** - Producers have indicated to us that this significantly inhibits the ability to produce video-based musical, theatrical and other performance arts productions. It is our experience, and again the best practices of a number of Public Access centers indicate, that such a prohibition will significantly inhibit the diversity of programming and the types of programming that are typically visually and aurally interesting that can be produced at the Center. We believe, if the facility could be expanded as we recommend, that additional soundproofing could be added, such that the amplified music would no longer interfere with other operations within the Comcast facility. Additionally, with expanded weekend hours, such performances could specifically be scheduled for Center hours beyond the Monday through Friday workday from 9:00 a.m. to 5:00 p.m.
  - **Web-based reservation, scheduling and coordination** - Producers indicate, and the best practices of other centers concur, that the operational-related Web presence of Channel 26 should be significantly enhanced to enable the producer community to perform many functions on-line, including reserving the studio, scheduling remote production facilities, as well as looking at available slots for program scheduling, and for coordination between producers and the Access Center staff.

## **PERFORMANCE MEASURES/INDICATORS/REQUIREMENTS**

Beyond our review of current Access Center operations, the Comcast Plan to enhance the facility and the PEG needs assessment tasks that we have performed, we have also reviewed the current and planned operation related to the operations of a wide range of other access centers, including those of a similar size and type as well as centers operated by Comcast and other cable providers. This includes such operations as the Comcast Community Access facility in Spokane, Washington; a wide range of Comcast and Cox-

run Access Centers in Connecticut, Rhode Island, New Hampshire and other Northeastern states; Comcast Public Access operations in Detroit, Michigan; operator run Access Centers in the West, and a number of others.

Some of these centers fall under state-run regulatory programs. For example, the Connecticut Department of Utility Control (DPUC) requires a detailed report for each public access facility in the state that covers facility use, hours of operation, programming provided, staffing levels, funding levels and sources, outreach activities and equipment provision. Other centers have similar local franchise-based requirements that they must meet. Utilizing the best practices among these centers in light of the needs assessed for citizens and organizations in the MTA jurisdictions related to PEG Access, we recommend the following categories of performance measures and levels of performance. These would be minimums that could typically be achieved at the end of a one year ramp up period and then escalated as demand warrants:

1. **Hours of locally produced PEG Access programming** - This category would be benchmarked on a monthly basis. We believe that 100 hours per month could be achieved by the end of a one year ramp up period. This level is also used as a baseline in a number of franchises.
2. **Staffing Levels** - As recommended earlier in this Report, 4 to 5 FTE are needed to properly facilitate and assist in the development of significant, high quality Public, Educational and Governmental Access programming. This staff will need a variety of expertise covering administration, scheduling and coordination, office management, technical operations, production, training, facilitation, marketing/outreach, fundraising/ development and coordination of Educational and Governmental, as well as Public, Access.
3. **Hours of operation** - As recommended earlier in the Report, we believe that 12 hours of operation Monday through Friday, flexing later in the evening for Public Access facilitation, eight hours of operation on Saturday and at least four hours on Sunday would be sufficient as a baseline to facilitate a wide variety of studio and remotely produced Access programming.

4. **Functional areas and their use** - As detailed earlier in this Report, we believe that the Center must have a variety of functional areas ranging from reception and office space to space allocated for studio, master control, post-production, training, green room and garage functions. We recommend a baseline of 6,020 square feet to provide these functional areas.

Regarding use of the functional areas, we believe that it will take some time to develop a consistently high use of these facilities. After a ramp up of one year, we believe that a target should be set for a minimum use of 50% per studio, post-production and field production functional area on average, on a quarterly basis, with an increase of 15% per year thereafter. Once maximum capacity is reached in any given functional area, additional capability should be added where necessary, so that demand for such functional areas can always be met.

5. **Level of technology** - As recommended earlier in the Report, the level of technology at the Center should be immediately updated in the first year of any renewed franchise, with an equipment upgrade and replacement schedule put in place thereafter so that the equipment stays current with technology over the life of the franchise. We believe, if the funding amounts recommended are achieved on an annual basis, there will be the ability for this to occur. Necessary funding amounts should be required to be allocated for equipment replacement and upgrade on an annual basis, as detailed in Attachment 1.
6. **Delivery Mechanisms** - There should be a requirement that state-of-the-art delivery mechanisms be available for provision of all forms of Access programming, consistent with the technologies being available through Comcast for commercial programming, or otherwise available in the marketplace. This means that early in any renewed franchise, Comcast should not only be able to provide real time analog PEG services, but also provide PEG services on the digital tier, including Video on Demand services. As Interactive Television (ITV) continues to evolve, it should become part of the Access content delivery mix. Through an enhanced Web presence for Access programming, there should be video streaming capability provided over the

Internet. Finally, as High Definition Television (HDTV) provision becomes more of a staple in the Comcast lineup, and the cost of the equipment is reduced so that it fits within the cost parameters we have proposed, Access programming should be delivered in an HDTV format as well.

7. **Facilitation services** - As recommended earlier in the Report, training in each category (orientation, studio use, post-production, field production, media literacy, etc.) should occur on a minimum twice-a-month basis after a one year ramp up period. This level of training should be increased as demand warrants in order to reduce any waiting lists for such training. Additionally, staff support should always be available for assistance with studio and remote productions as well as post-production activities during established operating hours.
8. **Access origination** - PEG Access programming should be able to be originated live from a variety of sites within Marin County. This includes the dedicated connections noted earlier in this Report, as well as implementation of a wireless communications system so that other events occurring throughout the County could be covered as needed. The dedicated connections should be provided over optical fiber utilizing an uncompressed digital format.
9. **Channel awareness and promotion** - After a one year ramp up period, a variety of mechanisms should be put in place to promote the availability of PEG Access programming on the various channels devoted to such programming, as well as to promote individual programs. Specific methods that should be employed include: newspaper programming guides; the Comcast electronic guide; bulletin boards on the channels; cross promotion of the access channels and specific access programs on other Comcast channels through the use of ad avails; program lineups and promotions on the Web site with hotlinks to and from other Web sites; fliers distributed at public locations such as libraries and other means that may be found to be beneficial during the course of the franchise.

Initially, on an annual basis, Comcast should conduct a survey of the community to determine the effectiveness of its channel awareness and

promotional campaign. Once the effectiveness of branding initiatives as well as promotional methods have been established, the community survey could move to a biannual activity.

- 10. Outreach/use by diverse populations** - After a one year ramp up period, a variety of mechanisms should be employed to significantly expand outreach activities to involve the citizens of MTA jurisdictions and the use of PEG Access. This would include: speaking engagements by Channel 26 staff; on-air and archived video promotions; a variety of print materials, including feature article coverage in newspapers as well as promotional ads; bill inserts; public service announcements on Channel 26 as well as other channels and on radio; open houses and tours offered at least quarterly; and outreach through organizations that represent non-profits; the community involvement of businesses (such as the Chamber of Commerce), and diverse communities (such as outreach to the Canal Community Alliance, the Asian Advocacy Project, the Latino Council of Marin and others). All of these mechanisms should be used throughout each year, with reporting on their use and feedback on their success rate done on a quarterly basis.
- 11. Development activities** - A portion of the staff's responsibility should be related to development activities to assist PEG programmers with determining sponsorship and grant possibilities, including matching grant possibilities. Also, based on the experience of other access centers in other communities, it may be beneficial to develop nominal charges for membership, which will help defray certain costs (such as the cost of training if such is outsourced from time to time or the cost of freelancers when they are needed to help bolster the production staff). Such fees vary widely across communities, but typically average \$25.00 to \$75.00 per individual member and \$150.00 to \$250.00 per organizational member. These fees also apply to members who submit programming that is not produced with access facility equipment. Training course fees typically vary from \$25.00 to \$50.00 per participant, on average.
- 12. Reporting** - Reporting on all of the above should occur in detail, initially on a quarterly basis and potentially moving to annually if the MTA determines that

performance measures are regularly being met. Reporting in the above categories, utilizing the performance measures indicated as benchmarks, should also work to resolve the variety of problems that we noted earlier in this Report related to current reporting by Comcast.

Even with the implementation of detailed performance parameters, our experience has been that the successful development of programming activities will not occur without active oversight of the Access Providers' activities related to meeting these performance parameters. In a number of cases, oversight is done by an intermediary body appointed by the franchising authority (for example, in Detroit it is the city's Telecommunications Commission; in Dubuque, Iowa, it is the city's Citizen Teleprogramming Commission; etc.). Accordingly, we recommend that if the MTA chooses not to directly oversee the performance requirements, that it empower a body such as the MAAC to perform this function for it and regularly report back to the MTA if any enforcement action is required.

It will also be important for performance parameters to be included as specific provisions in any renewed franchise. They can be developed under the Designated Access Provider (DAP) concept, whereby Comcast would initially be designated as the DAP. If Comcast, after the one year ramp up period that we have recommended, does not meet the parameters provided in the franchise after detailed evaluation by the MTA or its advisory body, and subsequently fails to perform when given in succeeding quarters, notice and opportunity to correct, then the MTA could elect under the franchise to seek an alternate DAP. In this event, Comcast would be required to provide necessary funding through the MTA to the DAP in order that it may meet all the performance parameters contained in the franchise. In this event also, Comcast would be required to continue to operate PEG Access during a transitional period (typically a one year period after the new DAP is selected). Because the MTA will incur costs in seeking and developing an alternate DAP (or DAP's if government or educational entities would decide to provide Access under their own auspices), there should also be penalty and liquidated damages provisions associated with failure to perform under the franchise performance parameters.

## **OVERALL PEG ACCESS CONCLUSIONS AND RECOMMENDATIONS**

Based on our review and analysis of all the information and materials gathered, the following conclusions and recommendations are made concerning PEG Access needs and interests in Marin County and the other jurisdictions represented by the MTA, as well as the ability of the current Community Access operation and the enhanced operation under the Comcast Plan to meet those needs and interests.

### **Channel Capacity/Separation**

1. There should initially be a channel each for Public, Educational and Governmental Access, as well as a separate Local Origination channel.

While the Comcast Plan does not specifically reference channel separation, we understand that there is tentative agreement for three PEG channels plus a separate LO channel to be provided any time after the effective date of a renewed franchise.

2. There should be reserved capacity for expansion of additional analog PEG services in the future, especially if a lengthy franchise is granted and as demand warrants. Based on our analysis, up to two additional channels could be needed in the future.

Although the Comcast Plan does not specifically address reserve capacity, we understand that there is general agreement for two additional channels to be provided, based on triggers to be determined.

3. There should be a conversion plan for the provision of digital PEG services. This includes allocation of capacity for the migration of existing services from analog to digital as such may occur for the real time basic tier services in the future, additional narrowcast targeted PEG services, and HDTV, video on

demand and interactive television services. Our analysis indicates that both the initial and the reserve capacity will need to be maintained so that many more digital channels can be provided utilizing the capacity that would be allocated initially for analog services, based on the range of potential additional PEG services that could be provided through various advanced technologies.

It is important to note that since all of these services may require technological upgrades at the headend, as well as at the point of Access production and origination, the attendant operational, capital, technical and technology support for the headend and the distribution system must be available from Comcast to support all digital PEG service provision initiatives in the future.

We understand that, while the Comcast Plan does not specifically speak to digital conversion, there have been discussions regarding this need with Comcast and Comcast remains open to the use of these advanced technologies.

### **Access Origination**

4. Our review indicates that there are a number of initial sites that show the need or potential need to be or continue to be Access origination sites. They are:
  - a. Channel 26 Community Access Center
  - b. Marin County Government Center - Board of Supervisors Chambers
  - c. Larkspur Council Chambers
  - d. Corte Madera Council Chambers
  - e. Sausalito Council Chambers
  - f. College of Marin Multimedia Studio Facility
  - g. Marin County Board of Education Headquarters

The Comcast Plan does not forecast any additional origination sites beyond the Channel 26 Community Access Center.

5. Wireless communications connections are needed to provide Access origination from sites that are not connected by fiber or other types of useable land lines. The cost for a production truck-based microwave feed is forecast in the capital equipment projections shown in Attachment 1.

The Comcast Plan does not forecast wireless communications connections for the production truck.

### **Operational and Programming Considerations**

6. Comcast currently provides only 1.25 FTE in support of Public and other Access operations. Based on the amount and type of programming that we believe could potentially be produced across all forms of PEG, it is evident that between 4 and 5 FTE are an ideal complement. As indicated herein, this would enable an expansion of hours for Public Access operations, as well as the facilitation of now nearly nonexistent local Government and Educational Access operations. Comcast did not provide us with written, detailed current operational budget and expense amounts, but we have projected, based on averages, an initial annual cost of \$358,000 per year, including benefits and overhead for the operational costs (exclusive of facility lease cost) that are needed to fulfill the programming objectives we have noted. We believe that this is reasonable in light of the forms of PEG and the overall Marin County communities that will be served, and equates to approximately \$0.48 per subscriber per month when allocated across the subscriber base. This does not yet, though, take into account the 1.25 FTE already provided by Comcast. Although we do not know the exact dollar value of such support, based on averages and discussions with Comcast it would result in a difference between Comcast's current support level and our expanded support level of \$263,351, which equates to a reduced figure of approximately \$0.35 per subscriber per month.

The Comcast Plan does not forecast any increase in staffing allocations to Public, Educational or Governmental Access.

7. Currently the Access Center is open from 9:00 a.m. to 9:00 p.m., Monday through Friday, with some additional operational hours on Saturdays for training and editing work. The Comcast Plan would expand the Saturday hours but would reduce the Tuesday through Friday hours and delete the Monday hours. We believe, alternatively, that the Center should remain open on Monday; the 12 hour week day can be shifted from 11:00 a.m. to 11:00 p.m.; the Comcast Plan hours for Saturday are acceptable; and that some hours are needed on Sunday as well (approximately a four hour block in either the morning or the afternoon). Such expansion in hours provides significantly greater flexibility for PEG Access producers and will also provide increased capabilities to cover events occurring in the community in either a live or live to tape fashion.
8. The Web presence of Channel 26 should be significantly expanded for a variety of purposes, including: facility scheduling; expanded program promotion and channel awareness; producer coordination; links to allied organizations; detailed program schedule provision; video streaming; etc.

The Comcast Plan does not appear to forecast an expansion in Web-based capabilities.

9. There should be a significant expansion in community and other PEG Access outreach and promotion, including a variety of mechanisms such as the use of unsold ad avails; cross promotion on other channels and promotion in other media (such as expanded program schedules in newspapers, use of fliers, bus cards, etc.). Outreach activities could also include speaking engagements; video presentations; feature articles; newspaper advertisements; and expanded coordination with diverse, minority, cultural and ethnic communities.

While the Comcast Plan calls for development of separate Local Origination and Public Access bulletin boards so that a greater amount of information can be provided about Public Access, it does not mention any activities in the other areas described above.

10. Comcast should increase Channel 26's appeal to diverse populations by developing more multilingual programming; the inclusion of multilingual speaking staff and materials; institution of second audio programming (SAP) capabilities; multilingual captioning; etc.

As far as we are aware, the Comcast Plan does not anticipate implementation of such functions and activities.

11. As noted herein, for Comcast to successfully meet the needs and interests of the community in the provision of Public, Educational and Government Access services, performance requirements would need to be placed in the franchise that cover a variety of issues:
  - a. Hours of PEG Access programming produced.
  - b. Staffing levels.
  - c. Hours of operation.
  - d. Functional areas required.
  - e. Use of functional areas.
  - f. Equipment provision and level of technology provision and replacement.
  - g. Advanced delivery mechanisms.
  - h. Facilitation services.
  - i. Access origination.
  - j. Channel awareness and program promotion.
  - k. Outreach/use by diverse populations.
  - l. Funding and development activities.
  - m. Reporting requirements.

We also recommend that MTA or a designated advisory group actively monitor and enforce these requirements, and that Comcast be required to report initially at least quarterly and then potentially annually, its performance under these parameters. If Comcast fails to perform after notice and opportunity to correct, we recommend that the MTA, under the provisions of the franchise, be able to seek another Designated Access Provider (DAP) which would be funded by Comcast.

The Comcast Plan does not appear to envision performance parameters that it would be required to meet.

### **Facility Considerations**

12. The existing Channel 26 facility needs significant expansion. It would benefit by adding approximately 3,546 square feet of space for expansions in nearly all functional areas.

The Comcast Plan forecasts some expansion in space, but the resulting space allocation is only approximately 41% of what we have recommended.

13. The additional space could be added/renovated/remodeled at the existing location at a cost of approximately \$531,900 in renovation and facility improvement cost. The Comcast Plan calls for provision of \$200,000 for physical space improvements, which would be \$331,900 less than we have forecast. The difference in cost for the additional recommended space, allocated over the subscriber base over the 10 year life of the franchise equates to approximately \$0.04 per month per subscriber.

Alternatively, Comcast could provide a new facility sized at a total of 6,020 square feet (encompassing the space envisioned under the Comcast Plan as well as the additional space we recommend) at another convenient location (the cost

would potentially range from \$903,000 to \$1,204,000, depending upon whether the space needs renovation or new construction).

Regardless, whether it is additional or entirely new space, from the beginning Comcast will need to resolve issues related to ADA access and soundproofing which have inhibited production activities in the past.

14. Our proposed expansion in facility space would increase the annual operating cost, if the facility continues to be leased, either at Comcast or another location. At the Comcast-provided rate of \$1.86 per square foot per month, this would increase lease cost at an annual rate of \$79,147.

Taken together, annual lease cost for our recommended facility expansion, plus the one-time renovation cost, allocated over the subscriber base, would result in approximately \$0.18 per month per subscriber over a 10 year period, assuming that the lease rate remains the same..

## **Equipment Considerations**

15. As Comcast itself has noted in its Plan, much of the existing Channel 26 equipment is outdated and in need of upgrade and replacement. We have also forecast additional equipment to provide expanded capabilities which will help better support Public Access, as well as institute support for Government and Educational Access. Recommendations cover nearly every facet of the Channel 26 operation, including: digital upgrades needed for most current analog equipment; additional cameras so that the production truck can be used independently of the studio; expansion of studio capabilities; expansion of remote capabilities, including implementation of a multi-camera suitcase studio for remote, live to tape and potentially even live productions; expansion of edit and post-production capabilities; a significant upgrade of playback capabilities; upgrade of character generation equipment; and expansion of lighting capabilities.

The Comcast Plan has forecast some of these equipment upgrades, but not at the level that we believe is required, especially to support Public, Educational and Governmental Access.

16. We have developed a piece by piece equipment upgrade, enhancement and replacement Matrix to facilitate the PEG Access operations we have forecast. From our projections, immediate equipment upgrades needed upon inception of any renewed franchise total \$1,481,200. Then for upgrades which would occur after Year 1 and replacement costs thereafter, an additional \$1,645,600 would be needed, which would result in approximately \$3,126,800 in capital equipment cost over the life of ten year renewed franchise. This results in a capital equipment cost, when allocated across the subscriber base, of approximately \$0.42 cents per subscriber. If only high (primary) priority equipment upgrades, modifications and replacements are calculated, it results in an initial Year 1 figure of \$1,054,900 and a total ten year figure of \$2,244,200, which lowers the per subscriber cost to approximately \$0.30.

# **ATTACHMENT 1**

## **PEG ACCESS EQUIPMENT UPGRADE/REPLACEMENT SCHEDULES**

## **Attachment 1**

### Equipment and Facility Upgrade/Replacement Matrix

The matrices in this Attachment provide detailed equipment replacement and upgrade paths for MTA PEG Access equipment over the span of a ten-year period. This list was created from facility inventories, as well as physical walkthroughs. Additional information was obtained through interviews with staff, community producers, and potential Access user organizations. The condition of equipment, which is listed as “Good”, “Fair”, or “Poor”, prioritizes the need for replacement. Additional items that are recommended to complete each facility’s upgrades are listed as “New”.

A replacement schedule was constructed based on the nature, condition and use of the equipment. Items listed as "Poor" are typically recommended to be replaced immediately. Items listed as "Fair" are typically to be replaced in one to three years. Similarly, items listed in "Good" condition are typically to be replaced in five years (sometimes immediately if new technology is needed). For “New” items, an appropriate purchase year was provided based on need. Moreover, all equipment was given a lifespan, usually seven years for most equipment. This caused some items to be replaced more than one time during a ten-year period. The exact number of times each piece is projected to be replaced is included in the matrix.

It should be noted that technology tends to change quickly and that actual usage and replacement costs may vary from year to year. The replacement schedule will need to be periodically updated so that each PEG facility will stay current with technology.

All prices included in this matrix are 2004 list prices. On average, at least a 10% reduction in cost can be expected if the items are put out for bid.