

Final Report

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# **BLUE LINE TELEVILLAGE**

Demonstration Project

*Prepared for LOS ANGELES METROPOLITAN  
TRANSPORTATION AUTHORITY*

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## Table of Contents

### Section 1

<b>CONCEPTS AND ORIGINS</b>	<b>1</b>
Introduction	1
Relationship of the Urban Televillage to Mobility	1
Urban TeleVillage – A Network Oriented Community	7
Origins Within The MTA	13
<b>DEVELOPMENT PLAN</b>	<b>17</b>
Budget Constraints	17
Key Assumptions	20
<b>DEVELOPMENT PROCESS</b>	<b>24</b>
Site Selection Analysis (8/94 - 12/94)	24
Community Participation (8/94 to 5/96)	25
Responsibility Clarification/Contract Amendment (2/95 to 10/95)	29
Facility Development (5/95 - 3/96)	30
Post-Demonstration (Beyond 3/97)	34
<b>SERVICE AREA CHARACTERISTICS</b>	<b>37</b>
Summary	37
Analysis	38
<b>APPLICATIONS PLAN</b>	<b>42</b>
Description Of Initial Elements	42
<b>INITIAL OPERATIONS</b>	<b>49</b>
Beta Test	49
Open House	50

---

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<b>SALES ACTIVITIES: MARKETING, RECRUITMENT AND SOLICITATION</b>	<b>57</b>
Recruitment	57
Marketing	64
Solicitation	68
<b>FULL SCALE OPERATIONS</b>	<b>71</b>
Membership Totals	71
Operating Hours And Staffing	71
Computer Center Activities	72
Video Conference Center Activities	75
Telework Center Activities	79
Kiosk Activity	80
Community Room Activity	81
Circuit Rider Activity	82
Operations Summary and Conclusions	82
<b>MEMBER CHARACTERISTICS</b>	<b>95</b>
Membership Totals	95
Location of Members	95
Travel Behavior of Members	96
Member Characteristics	97
Member Service Preferences	98
Frequent User Survey	100
Telework Center Survey	101
<b>PARTICIPATION ANALYSIS: SERVICE PARTNERS AND COMMUNITY PARTNERS</b>	<b>104</b>
Ladder of Participation	105
Education Institutions	116
Children’s Services	122
Federal Government	125
Other Governments	131
Religious	133
Health Care	134
Culture/Arts	137

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<b>Commercial</b>	<b>138</b>
<b>Social Service</b>	<b>139</b>
<b>Summary</b>	<b>139</b>
<b>Hot Steps</b>	<b>141</b>
<b>Business Support &amp; Training</b>	<b>146</b>
<b>Totals</b>	<b>158</b>
<b>Numbers Excluding Federal Government &amp; Religious Community</b>	<b>159</b>
<b>BUDGETS FOR THE PROTOTYPE AND LONG RANGE FUNDING OPTIONS</b>	<b>161</b>
<b>Budget For The Prototype</b>	<b>161</b>
<b>Combined Budget Summary</b>	<b>164</b>
<b>Long Range Funding Needs</b>	<b>165</b>
<b>Long Range Funding Options</b>	<b>170</b>
<b>Ownership Choices: Non-Profit and Municipal Corporation</b>	<b>176</b>
<b>Transition Priorities</b>	<b>177</b>
<b>LESSONS LEARNED</b>	<b>179</b>
<b>RECOMMENDATIONS</b>	<b>188</b>

## **CONCEPTS AND ORIGINS**

### **Introduction**

The purpose of this report is to describe and document the Blue Line TeleVillage Demonstration Project. The report also contains findings related to “base-line data,” lessons learned from the Project, and preliminary recommendations. A budget analysis and review of deliverables is contained in Section 11.

This documentation should provide guidance to the MTA and others who seek to develop additional Urban Televillages, in Los Angeles County or elsewhere. This report should also serve those who want to revisit the origins of the Blue Line TeleVillage prototype at some time in the future.

The Blue Line TeleVillage Demonstration Project consisted of planning, developing and operating for one year the non-profit facilities and technologies that make-up the core of an urban televillage. Starting from general guidelines embedded in the contract work scope, the MTA and the Drew Economic Development Corporation and its subcontractors (referred to in this report as the Drew Team) essentially invented the prototype urban televillage and its development process.

Funding for the project was provided by the Los Angeles County Metropolitan Transportation Authority (MTA) using Intermodal Surface Transportation Energy Act, Congestion Management-Air Quality and Proposition C.

### **Relationship of the Urban Televillage to Mobility**

The challenge facing public transportation systems in many regions in the United States, and especially in Southern California, is the public’s reliance on the private automobile as the principle source of mobility. According to UC Berkeley urban planning professor Melvin Webber, the reason for this reliance is that “the auto-highway system is the best ground transportation system yet devised,” offering “no-wait, no-transfer, door to door service.” (See Melvin Webber, *The Joys of Automobility in The Car and the City*, Wachs and Crawford, University of Michigan Press, 1992)

Unfortunately, this high level of personal service brings with it a number of significant social and environmental costs. These costs of automobility include a relatively large expense, high level of energy consumption, debilitating traffic congestion and health threatening air pollution.

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## Section 1

- In 1990, Californians spent more money buying new and used cars (\$30 billion) than the State spend on K-12 public education (\$27 billion).
- The South Coast Air Basin (which includes Los Angeles County), despite years of improvement, still has the worst air quality in the nation.
- According to the Southern California Association of Governments (SCAG), the average freeway speed at rush hours is currently 18 mph and congestion is predicted to triple by 2020. The ongoing recovery of the regional economy will only exacerbate congestion and pollution.

The personal automobile is certainly the transportation mode of choice in Los Angeles County where it accounts for almost 9 out of 10 trips. Public transit here and in many other cities satisfies a relatively small portion of trips. According to the MTA's "Baseline Travel Characteristics For Los Angeles County," 3.4% of all trips in the County are by public transit, and according to 1990 Census data, 6.5% of work-commute trips in the County are carried by public transit. These riders tend to be transit-dependent because of low income. One of the current transit issues in Los Angeles County is affordability of public transit to low income consumers.

Essentially three programs can be deployed to reduce automobile dependence. Each are included in the MTA's long range plan.

The expansion of public transit service is the most important. In Los Angeles County, both the Metrolink commuter rail network and the Metrorail system have provided new options to many consumers. The MTA has also recently committed to expansion of its bus service.

Innovative systems and technologies are also being deployed to expand services throughout the region. For example, the City of Palm Desert recently completed a demonstration of street-legal golf carts. Smart shuttles, incorporating a central role for telecommunications in fast response-dispatch, are planned for a variety of markets in the region.

Transportation demand management practices constitute a second program to reduce automobile dependence. Through tactics as diverse as ride sharing and bicycle stations, planners hope to eliminate some automobile trips. Home-based telecommuting or telework center-based programs have similarly been attempted as ways of deploying telecommunications in a short term effort to eliminate auto trips.

The third option is to change the urban form, the underlying land use structure that creates the need for automobility. This is often referred to as building "livable communities" (see the Federal Transit Administration's Livable Communities Initiative) or building "transit oriented communities" (TOCs -- promoted by advocates of the urban design movement known as the "New Urbanism"). Up until now, there has been no role for telecommunications in this approach.

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## Section 1

### Transit Oriented Communities - Livable Communities

Public transit services accept the physical dimensions of the urban form as they are. Bus and rail systems are deployed to physically move travelers from points of origin to intended destinations, often over long distances. Los Angeles County presents a particular challenge for public transit services since it is part of a dispersed region (as opposed to centralized or polycentric). Dispersion, often referred to as urban sprawl, is characterized by the absence of dominant centers so that most travel occurs within and between low density peripheral areas. The FTA's Livable Communities Initiative is an attempt to reverse sprawl.

The Livable Communities Initiative can be summarized as building mixed-use neighborhoods that feature walking distances to public transit which links residents to job opportunities and social services in order to reduce dependence on the automobile -- all with the local community participating in guidance. (See "Characteristics of Livable Communities" on the FTA's World Wide Web Home Page).

The definition of a "transit oriented community" (TOC) is very similar. The following is based on the report entitled "A Network of Livable Communities: Evaluating Travel Behavior Effects of Alternative Transportation and Community Designs for the National Capital Region" (Chesapeake Bay Foundation and the Environmental Defense Fund, May, 1996).

According to that report, a TOC is: "A center, town or village that is located on a regional transit system interconnecting it with other communities." Other characteristics include compact; central focus; many forms of transportation available; basic design facilitates public transit; favors pedestrian movement; residents have access to nearby employment opportunities as well as other functions such as retail and government services; and multiple owners and developers.

In summary, a transit oriented or livable community is a geographically defined community in which most residents live within walking distance of a) many of their most frequent destinations (such as work or convenience retail), or b) a public transit system that can take them to within walking distance of the destinations that are not found in their home community. A private automobile could be used but shouldn't be required.

The MTA's joint development program was compatible with just this kind community. The MTA has been interested in development on, over, and adjacent to rail stations in order to create an economic draw that fosters activity, integrates stations into the community's economic and social fabric, and reduces auto dependence by placing commercial and retail activities at stations. (See MTA Joint Development Policies.)

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## Section 1

### Mobility Benefits of Transit Oriented Communities

The mobility benefits of a TOC derive from *proximity* of origins and destinations, sometimes involving a public transit trip. One question is how to quantify these benefits when they occur.

Architect-urban designer Peter Calthorpe identified 4 measures that reflect the impact of land use/urban form on travel behavior. Over time, TOCs should cause the number of automobiles per household, the automobile vehicle trips per household, and the VMT via automobiles per household to decline. In addition, the mode split for the community should shift away from automobiles to walking, biking and public transit. (The Next American Metropolis, Princeton Architectural Press, 1993, page 47).

Note that these measures do not include trips saved in the short run. That is because a proximity strategy involves long term aggregate community behavior and does not lend itself to evaluation in terms of narrowly defined trip substitutions..

Although a proximity strategy is intuitively sensible, the Chesapeake Bay Foundation and the Environmental Defense Fund developed a computer model, called “A New Approach,” for forecasting transportation impacts of growth in the metropolitan Washington D.C. region. Applied to new growth experienced as either urban sprawl or a set of TOCs, and subject to a number of assumptions, the results showed that TOCs are forecast to produce a comparative reduction in vehicle trips, daily VMT, and daily vehicle hours of travel, and an increase in average daily highway speed.

In the results of the model, walk shares increased significantly and transit shares slightly within the centers. On average, for home-based work trips originating in the TOCs, there was a mode shift away from automobiles to walking, biking and public transit. (“A Network of Livable Communities,” P. 21).

Calthorpe also cited empirical studies conducted around 1980 in the San Francisco Bay area comparing traditional neighborhoods that were built with many of the characteristics of a TOC to newer, low density suburbs. These studies found fewer trips per household and a transportation mode shift away from automobiles to walking, biking, and public transit. (Calthorpe, 1993, page 47)

### Paths To Transit Oriented Communities

A TOC or a livable community, up until now, could only be produced by new “bricks and mortar” construction. TOCs, for example, are often discussed as one way to accommodate new urban growth.



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## Section 1

There are, in general, three opportunities to develop a TOC:

- in-fill within an existing community,
- redevelopment of an auto-oriented center within an existing community, or
- creation of a new community on a vacant tract of land.

Even though a TOC design usually includes a public transit node, one can be built without direct transit access since part of the mobility benefits are derived from origins and destinations being in close physical proximity to each other.

### **Limitations of Transit Oriented Communities**

Physical development of a TOC faces the following five limitations:

- **Cost:** A great deal of investment capital is needed.
- **New Construction Market Conditions:** Market demand for various types of new construction determine if and when building can occur.
- **Developer Coordination:** Coordination of a large number of individual developers is needed to concentrate investment into designated areas adjacent to transit -- a more significant problem when market demand for building construction is low.
- **Consumer Preferences:** A market of consumers must be willing to support a more physically compact life style.
- **Time:** It takes years to achieve a threshold of significance.

Regarding just the time issue alone, the projections of the Chesapeake Bay study quoted above were based on a 25 year forecast. The study concludes:

“Even if the actual numbers cannot be achieved for 20 or 30 years, the principles of the study remain valid. As a ‘what if?’ study, the results tell us that a shift toward proximity will be a shift toward regional transportation – and community – sustainability.” (“Network of Livable Communities,” P.24)

Due in part to the development issues associated with achieving the kind of results promised by TOCs, critics of the MTA’s rail construction program argue that the requisite amount of new construction required to make rail transit viable in Los Angeles County will never get built near the stations. (See Ryan Snyder, “A Bus That Can’t Turn,” Critical Planning, 1996, Volume 3, page 69)

These limitations in no way diminish the value and importance of bricks and mortar TOCs. However, the limitations suggest that a more affordable, more market friendly, faster solution to the same ends should be sought.

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## Section 1

The Blue Line TeleVillage demonstrated an alternative path to producing a livable community.

### **Network Technologies: New Tools For Compact Development**

Whether the MTA is trying to develop livable communities/TOCs, or simply trying to implement its existing joint development policy for transit compatible land uses which enhance multi-modal public transit, network technologies provide new tools that can help overcome the limitations of the traditional bricks and mortar approach.

Network technologies can, in some cases, substitute for real estate. This occurs when some of the functions of an organization are made available over a telecommunications network as well as at the building in which the organization is physically located.

Banks provide a good example of this phenomenon. Typical retail banking functions such as cash withdrawals, account activity/balance inquiries, and balance transfers can be accessed through an automated teller machine available at a convenient neighborhood location. This network technology has reduced the need for some consumers to visit a bank as frequently. Automatic loan machines as well as banking based on personal computers and smart cards will, in the future, further diminish the need for trips to banks and, ultimately, for buildings dedicated to banking activities. (See, for example, "The Future of Retail Banking," Deloitte & Touche Consulting Group, 1995)

Taking "compact" to mean a high density of functions at a given location, there is hardly a more "compact development" than the banking functions that can be created in the 9 square feet of floor space needed for an ATM. To many people, the network connections and the network node (the ATM) function just like the bank. It is the bank for people with those particular needs.

Kiosks, speaker phones connected to audio bridges, computers with modems, and a variety of video conferencing devices along with the appropriate network services can multiply the functions available at any particular location. The square footage in which these technologies are placed can be relatively small. No matter their actual physical density, such places will be perceived by the consumers as being highly compact functionally.

In other words, network technologies can be used to make it seem that many desired destinations are located at rail stations or bus transit intersections. A network can provide many of the same functions normally associated with bricks and mortar destinations and access to networks can be more flexibly located than dedicated buildings.

Seen from this perspective, a cluster of network technologies, properly configured and used, can provide many of the functions normally associated with a traditional village or town center containing

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## Section 1

100 acres of 3 to 5 story buildings and dozens of organizations that include employers, retailers, government, and schools.

Re-locating a function normally found at a particular geographic location to a network is exactly what happens in the following cases, all of which exist today.

- consumers satisfy some of their banking needs at an ATM,
- students take a distance education class at an off-campus location,
- citizens pay their traffic tickets at a government kiosk,
- employees work at a telework station near home,
- business people hold meetings over an audio bridge,
- work teams complete their collaborative assignments using e-mail, and
- consumers buy clothes over the internet.

This means that by clustering the technologies required to access the network, many urban functions can be spatially re-organized into new patterns that are conducive to public transit usage and walking. In a limited way, the automobile bias of the urban form can be changed.

This principle can be re-stated using the terms of the TOC/livable communities definition: Due in part to technological advances, it is now possible to deploy and use network technologies to quickly and affordably re-locate a number of normal trip destinations to residential districts (regardless of their density), rail stations, and other major transit stops. This would bring employment opportunities (and all related phenomena from business assistance to job market information), educational opportunities, business services, government services and retailing opportunities to within walking distance of residential concentrations and bus or rail transit – all without the need for extensive physical construction of new buildings. Throughout this report, the term “telemobility” is used as shorthand for this principle.

The Blue Line TeleVillage is a telemobility project.

### **Urban TeleVillage – A Network Oriented Community**

An Urban TeleVillage is, essentially, a *network oriented community* – a development with the functionality of transit oriented or livable community but consisting of a mix of physical and electronic services rather than bricks and mortar alone.

The Urban TeleVillage addresses the previously identified limitations of the bricks and mortar TOC/livable community in the following ways:

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## Section 1

- **Cost:** An Urban TeleVillage can be developed for a fraction of the cost of required for the bricks and mortar construction that would be required to provide the same array of functions.
- **New Building Market Conditions:** Because relatively little new construction will be required, an Urban TeleVillage development does not need to wait for the market for new buildings to improve. In fact, an Urban TeleVillage can bring new uses to excess building capacity in certain locations. Unlike physical TOCs, televillages are not restricted to new growth opportunities. Urban TeleVillages can be deployed so as to *retrofit* existing residential and commercial districts, no matter their density.
- **Developer Coordination:** The MTA won't need to offer incentives to attract new building construction to rail stations and transit stops because a) physical development may not be necessary, and b) the existence of the cluster of network technologies and its functions will, over time, attract physical versions of linked activities – and therefore act as a catalyst for new building construction.
- **Consumer Preferences:** Development of an urban televillage does not require increased residential densities in the service area. To the contrary, the scale and frequency of the Urban TeleVillage center adjusts to the residential density. In dense residential environments, there will be fewer but larger TeleVillage centers. In low density suburban residential environments, there will be many and smaller TeleVillage centers. Consumer acceptance of a new life style will not be an issue with TeleVillage development.
- **Time:** TeleVillage centers can be quickly developed in locations with adequate excess building capacity. If no construction is needed, the MTA could easily develop 20 to 25 Urban TeleVillages in a 5 year period.

Because of its mix of functions, the Urban TeleVillage, like the livable community, will address at least four community goals:

1. Mobility by locating urban functions at a nearby village center that is served by a variety of transit modes, thereby reinforcing the role of walking and current and future public transit systems.
2. Economic development since each televillage is a decentralized economic engine because it functions as a local marketplace for the material economy, an access point into the cyber economy and place to acquire education and information to enhance productivity.
3. Social equity in access to network technologies, so that no members of the community are denied access to the information superhighway.

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## Section 1

4. Community by reinforcing the functional importance of neighborhood and village centers where people interact face-to-face.

### Urban TeleVillage Defined

Although the Demonstration Project is referred to as *the* TeleVillage, it is technically the initial cluster of network technologies that are part of a TeleVillage *Center* and should be referred to as the “network access center.” Only through growth of the network access center and integration with the adjacent retail center and civic center will this area become a TeleVillage Center. In keeping with the imprecise but project-long association with the term, the network access center is referred to as the Blue Line TeleVillage throughout this report.

The area included within a .5 mile radius ring around the site can be considered the TeleVillage Center. This is because .5 of a mile is generally accepted as the outer limit of a walking distance (an argument could be made that the Center should be defined in terms of a .25 mile ring). The Center and the area within a 2 mile radius (12.5 square miles) can in the future be considered as the whole urban televillage.

Although an Urban TeleVillage is essentially a livable community (as described above), the following characteristics are proposed as a refinement of that definition. The characteristics of an Urban TeleVillage and the manner in which they were addressed by the BLTV are:

1. A TeleVillage Center is accessible to its residents via public transit and non-motorized modes. This means that it is located at a rail station, if there is one in the city, and/or at intersections of other types of public transit. In the future, it might also mean availability of a smart shuttle service, bicycle, and electric charging stations for electric vehicles.

*The BLTV was located at the Compton station on the Metro Blue Line. It also was the terminus for 6 MTA bus lines, was on the route of Compton Renaissance transit service and also included a Greyhound Bus Terminal.*

2. A TeleVillage Center contains a wide range of urban functions – some physically present and some electronically present. The vehicle for the electronic functions are the programs and services that are offered over the network access infrastructure. Ideally, the functions present will be those that tend to generate the most trips or the longest trips, and those that are of particular interest to the local community.

*The services offered during the demonstration year included computer classes, public access computing, private computer facility rentals, video conferencing, distance education, public*

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## Section 1

*library services, library staff training, business and professional seminars, art programs, and public access telework stations. See Section 8 for a complete discussion of services and functions. In general, functions that supported economic activities were desired by the community.*

3. A TeleVillage Center provides affordable access to broadband telecommunications systems, including both the access technologies and the network transmission services. It offers commercial, non-profit and government communications.

*The BLTV offered public access to standard computers, telework stations and video conferencing facilities.*

*The BLTV Project initially planned to use the MTA's fiber network between central Los Angeles and Long Beach. When it became clear that this was unfeasible, the Project applied for and was granted (with the help of the County Library Department) a double grant from Pacific Bell's Education First Program. This meant that the Project was able to use 8 ISDN lines at far below market costs. Proprietary government networks were not available at the site except for a "red phone" for instant transit information installed by the MTA for the final two months of the Project.*

4. A TeleVillage Center contains a mix of physical facilities that are commercial, government, non-profit and residential. Existing single function centers such as civic centers, shopping centers, office centers, or school campuses can be retrofit into different versions of TeleVillage Centers.

*The Blue Line TeleVillage Project was established inside the Martin Luther King Transit Center adjacent to the Compton Station on the Metro Blue Line. It is diagonal from the Compton Civic Center which also includes a County Courthouse. It is just north of a large shopping center. Approximately 10,000 people live within the .5 mile ring.*

5. A TeleVillage Center is a public space and offers services to all members of the public, regardless of age, race, religion or organizational affiliation.

*The BTLV Project offered service to every interested party. Memberships in the TeleVillage were offered as a mechanism for attracting community buy-in and for collecting data about users. Services offered are described in Section 8.*

6. A TeleVillage assures the security of all users, and of the premises.

*The building had on-site management that kept the premises clean and free of graffiti, and the Compton Police Department maintained a field station inside the building.*

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## Section 1

### What A TeleVillage Is Not

Other types of projects are sometimes confused with a TeleVillage.

#### Community Technology Centers

Centers such as Break Away Technologies, Puente Learning Center, Technology Exploration Center, Playing To Win, and Plugged In are a few examples of Community Technology Centers (CTC). CTCs are valuable additions to any community, particularly those with low incomes -- but they are not Urban TeleVillages.

In practice, three dimensions in particular distinguish an Urban TeleVillage from a CTC. The first is the conscious attempt in a TeleVillage to offer a very wide array of urban functions. For example, CTCs don't tend to offer distance education from a variety of educational institutions. They do not offer the opportunity for a visitor to pay a parking ticket, meet with a Social Security Administration benefits counselor, or buy clothes.

Second, CTCs are not consciously developed adjacent to major public transportation intersections.

Third, CTCs usually are found in stand-alone facilities whereas a TeleVillage is an integrated mix of not only the technologies and non-profit access of a CTC, but also an array of for-profit, not-for-profit, and government facilities.

The Blue Line TeleVillage Demonstration Project included a typical CTC as one of its facilities.

#### On-Line Communities

Project sponsors as diverse as the National Telecommunications and Information Administration (NTIA -- through its Telecommunications Infrastructure Improvement Assistance Program) and Caltrans have supported the formation of city-based on-line communities. The Davis Community Network, Net at Three Rivers and the Smart Communities initiative are examples.

While these are also valuable developments, they do not appear to have a direct linkage to mobility, social equity or territorial community. The economic development linkages for on-line communities are still being identified. In addition, a few down-side concerns have begun to emerge. On-line communities serve only a fraction of the market area since a personal computer with modem and telephone access is required. The financial basis for long term sustainability has not been demonstrated.

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## Section 1

The BLTV offered public access to all on-line community services over the internet or via direct dial-up and provided members with an e-mail address.

### Telework Centers

Telework centers (also known as telebusiness centers, or telecenters) were initially developed strictly as a mobility strategy for office-based information workers. Over \$10 million in the Southern California region alone was invested by public air quality and transportation agencies in the early 1990s. Such centers generally failed to meet their goals for a variety of reasons that include incorrect location, wrong size (too small), wrong product mix (not enough private offices, no value-added business services), lack of an effective marketing program, and poor management. In general, revenues were insufficient to continue the operation beyond the period of public subsidy. Only a couple of such centers, each with unique characteristics, continue to function.

The BLTV included a telework center as one of its facilities.

### **TeleVillage Evaluation Concepts**

Although a formal evaluation for the BLTV project was not funded, the MTA will naturally be looking for ways to evaluate its progress. The Drew Team offers the following suggestions.

From the perspective of development of a new urban phenomenon, it would be wise to first examine the degree to which the BLTV became “established.” This means, examining the level of use by people and organizations in the service area (Section 8), and the success in engaging organizations outside of the service area to use network technologies to provide some of their functions through the BLTV facility (Section 10). What lessons were learned that could help subsequent projects? (Section 13)

From a transportation perspective, the four indicators offered by Calthorpe for measuring the long term effectiveness of a TOC would be appropriate. These are 3 measures of household automobile trip behavior as well as the travel mode split for the community. Of these, the Drew Team made an attempt to collect data that would illuminate the mode split phenomenon (Section 9).

It would not prove effective to require some number of telecommunications for transportation tradeoffs since that is a short term TDM approach to what is essentially a long term land use strategy. As more experience is gained with TeleVillages, their scale and the level of funding required in different situations should also be addressed.



## **Origins Within The MTA**

One of the interesting “big picture” issues involves how a transportation authority utilizing traditional transit technologies came to experiment with an innovative mobility strategy. Part of the answer, previously discussed, is need -- the resilience of auto-dependent mobility vs the adverse environmental and social costs of auto-dependence. Opportunity is another part and this is discussed below. Events as dissimilar as telecommunications competition and urban riots helped create the path to development of the prototype urban televillage.

### **Metro Net Report: Plan For A County-Wide System Of Centers**

The concept of a TeleVillage was introduced to the MTA (then the Los Angeles County Transportation Commission -- LACTC) in 1992 through a report by Walter Siembab entitled “METRONET, Strategies for Fiber Optic Development.” The report was commissioned in order to identify options for a telecommunications development strategy for the MTA’s rights-of-way. De-regulation of the telecommunications marketplace with the emergence of new players needing to develop state-of-the-art networks created a market for rail rights-of-way which provided the stimulus for the report.

The Report identified three utilization strategies of a fiber optic network. Operations-customer service (#1) and revenue (#2) strategies were well understood. The third, the *telemobility* strategy option, was new.

To pursue telemobility, the Metro Net Report recommended a three step sequence: (1) Develop a public-private fiber transmission network and public-private network access nodes (since referred to as “urban televillages”), with the nodes located at Metrorail and Metrolink stations; (2) Extend the fiber network off the MTA’s rights-of-ways onto certain city and county streets. Civic centers, shopping centers, office centers or school campuses would be retrofit as Urban TeleVillages (network access nodes). (3) The network would then continue into neighborhoods surrounding each Urban TeleVillage with small scale access nodes (referred to as “neighborhood communication centers”) within walking distance of each person’s home.

An Urban TeleVillage, therefore, is a middle level access node in a four level hierarchy of access nodes. Central Tele-Districts (such as the Los Angeles central business district) are the largest and are followed by Sub-Regional Centers (such as Century City), Urban TeleVillage Centers (such as urban Metro stations, civic centers, shopping centers), and Neighborhood Communication Centers (such as libraries, public schools, churches, community centers, or housing projects).

According to this vision, government, non-profit and commercial options would be available for both network access and network transmission in each center. Broadband network access, services, and applications would be available to all regardless of income or geographic location.

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## Section 1

(This constitutes one model of universal service in the competitive broadband telecommunications marketplace.) Service to individual homes and businesses would be the domain of the private sector.

The METRONET Report also verified that this strategy is consistent with the MTA's mission, the goals of the Joint Development Department, and the "Urban Centers" policy of the City of Los Angeles.

### **BLTV Project Origins**

The METRONET Report stimulated interest by LACTC staff to try to demonstrate the telemobility concept. This interest resulted in the LACTC itself submitting an application to the 1993 Call for Projects to provide funding for development of a single network node adjacent to the existing fiber network.

The civil disturbance in 1992 also resulted in interest throughout the region to "rebuild LA." At that time, the only operating rail line and in-place fiber system was the Metro Blue Line that connects Long Beach with the Los Angeles Central Business District. The Blue Line runs through the heart of a low income community that was the target of many of the rebuild efforts. The project was proposed to be located somewhere in south central Los Angeles adjacent to the Metro Blue Line.

Only government agencies are eligible to submit projects under the Call. Generally local governments receive grants under the Calls for Projects. In a departure from this practice, the LACTC itself responded to the Call as an eligible government entity. This situation was further complicated when the State Legislature ordered the Los Angeles County Transportation Commission and the Southern California Rapid Transit District to merge, effective January 1, 1994.

This put the MTA in an unfamiliar role even as it was coping with integrating the cultures of the combined predecessor agencies. Furthermore, the new agency was required to implement a project designed by the smaller of its two predecessors.

The LACTC received a \$559,000 grant for the BLTV Demonstration Project. Shortly thereafter, the MTA issued an RFP for consulting services.

Consultants are retained because the principal organization is unable to complete a particular project with in-house staff. Specialized expertise may be needed, or existing staff may lack time to devote to completing the project. In the case of the MTA and the Blue Line TeleVillage Demonstration Project, both conditions prevailed. Had the project been awarded under the Call for Projects to a city government, as is normally the case, it is very likely that the city would also have retained a consultant since the work scope requires considerable amounts of labor with specialized skills.

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## **Section 1**

Proposals were due on October 26, 1993, and interviews in support of the proposals were held November 11, 1993. Following a “best and final offer” process, the Drew Team was selected to “plan, develop and implement” the BLTV.

Project initiation was delayed until August, 1994 as the newly constituted MTA and its new CEO froze all pending contracts in order to evaluate the MTA’s ability to support a variety of projects.

### **Contract Deliverables**

The following are the deliverables as originally listed in each of three contracts between Drew EDC and the MTA. In some cases, these deliverables were eliminated or redefined by MTA project management during the conduct of the project.

#### **Research, Design and Implement the Blue Line TeleVillage Demonstration Project**

Task 1 Detailed project overview and work scope including project implementation schedule. Detailed task description. List of coordinated efforts of the consultant and MTA project manager and staff. Preliminary project budget.

Task 2; Recruitment workshop

Task 3; Written report summarizing initial letters of commitment, and cash and in-kind contributions committed to the project, including an estimate of the monetary value of in-kind contributions. All letters of commitment to participate or make in-kind contributions shall be attached to the report.

Task 4; Report of recommended demonstration project sites with detailed analysis of selection criteria. Revised project budget based upon MTA site selections.

Task 5; Executed participation and in-kind contribution agreements. If required, a brief update to the site selection recommendation report described in Section 4.1. Budget refinement and in-kind contribution agreements.

Task 6; Executed leases of equipment or premises for demonstration project if required. Proper connection of all fiber optic and other communication equipment to properly serve the sites. Operational plan and start-up training for participating organizations.

Task 7; Marketing plan for demonstration sites and implementation. Reasonable operational assistance to participating organization. Participation in the MTA evaluation process.

Task 8; Final report.

#### **Federal Transit Administration Grant**

Task 1; Copy of course descriptions. Quarterly schedule of computer and distance education classes and training offered at the BLTV. Copy of curriculum for tailored BLTV courses.

Task 2; Copy of 28 minute and 3-5 minute promotional videos. Copies of marketing materials.

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## **Section 1**

Task 3; List of target leaders and organizations. Record of responses of target leaders. Records of meetings, presentations and tours that constitute the training sessions.

Task 4; Reports on market data. Reports on BLTV usage.

Task 5; Progress reports and financial reports. Quarterly reports identifying other sources of funding.

### **Operator Contract**

Task 1; Receipt of donations of in-kind service for use at the BLTV site. A quarterly summary of in-kind service contributions which consultant receives on behalf of the BLTV.

Task 2; A full-service TeleVillage project. A transition plan for transfer of the project to a non-profit corporation.

## **DEVELOPMENT PLAN**

The Drew proposal responded within the framework of the project as defined by the MTA in its RFP. The work scope portion of the Drew proposal is included in the Appendix. The following discussion addresses the key elements of the planning approach.

### **Budget Constraints**

The “planning, development and implementation” contract (referred to as the “Planning Contract”) was competitively bid by the MTA. The “best and final offer” or BAFO process reinforced the price competition aspect of the contract award. The Drew Team was awarded the contract for \$289,000. The MTA retained \$270,000 from the \$559,000 award under the Call for Projects as a contingency, and to pay expenses such as space rent, site improvements, equipment and furniture. An additional \$100,000 were subsequently added from an FTA grant. The work scope for this addition is described in Section 11.

In order to ensure that its bid was price competitive, the Drew Team employed a number of compromises in methodology. Several are discussed below.

The physical scale of the project was, of course, related to the available budget. The key expenses were all variable and had to be determined in balance with each other. As the amount of space increased, so the cost of furniture and equipment to fill that space would also increase. The level of donations were also unknown at the beginning of the project.

### **Planning Strategy**

The MTA had not designated a location and facility in its proposal to the Call for Projects. Therefore, the first step in project planning was the selection of a suitable site to develop. The physical location of the Project would then define the service area, the community and the community organizations that would need to be informed and recruited for participation. The site selection analysis is discussed in Section 3.

However, the primary planning task involved forming a set of *partnerships* between the BLTV and a variety of other organizations.

*Community Partners* are organizations located in the market area who represent or serve some segment of the population in the market area. These organizations also provide the best connection with the end users.

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## Section 2

*Service Partners* are located outside the market area and provide services to people or organizations located in the market area. Originally, they were limited to service providers located within a short distance of the Metro Blue Line between the Long Beach central business district and the Los Angeles central business district. This requirement was eliminated when access to the MTA fiber network became unworkable (see below).

*Resource Partners* are organizations that contribute equipment, supplies or facilities to the demonstration project.

*Employer Partners* are those organizations with employees who reside in the Metro Blue Line market area and who are willing to allow those employees with “information jobs” to telecommute from a telework facility in the TeleVillage Center.

A separate process was established to engage each set of partners and help them plan their participation. Eight months is a relatively short time period to recruit and educate partners at the scale required, to organize the community to help design the facility, and to physically develop the facility. The compromises inherent to price competition and the need for relatively fast results dictated the approach described below. Far more resources are needed to work with organizations resistant to innovation. Details are included in the Drew Team proposal and Task 1 Report (Implementation Schedule and Detailed Description of Work Tasks, September 3, 1994). Both documents are included in the Appendix.

### **Service Partners**

The Drew Team established three priorities to guide recruitment of Service Partners. The top priority included those organizations that were actively involved in or currently making plans for teleservices, telecommuting, or video conferencing. The second target group included those that may not be involved in network applications but who had an existing relationship to service organizations in the market area or with relationships to a significant number of residents (Kaiser HMO and Los Angeles Trade Technical College are examples). The final group of priority organizations were those with the requisite resources and an immediate interest and willingness to participate. For example, the General Services Administration of the federal government had shown an early interest in the BLTV. The results of these efforts are discussed in Section 10.

### **Employer Partners**

Similarly, employers known to have an existing telecommuting program were targeted for first contact. The anchor for the Telework Center was expected to be the County of Los Angeles, followed by the agencies that make up the federal community in Southern California, and the City of Los Angeles. The County has a long running, award winning telecommuting program, and the others were known to be starting programs. In addition, the telecommuting marketing and recruitment

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## **Section 2**

program of the Southern California Telecommuting Partnership (based in the City of Los Angeles, Department of Telecommunications) would be available to the BLTV.

Private employers and other local government employers were expected to provide a secondary source of demand for the Telework Center. The employer data base established by the South Coast Air Quality Management District (AQMD) was the expected source of leads for this demand.

### **Community Partners**

A TeleVillage is an innovation that brings to end users novel applications of off-the-shelf technology. Because the Project was highly innovative, a special process was required to engage the local community and encourage participation.

The Drew Team also recognized that the BLTV Demonstration Project would be introduced into a community that had a number of improvement projects underway, each requiring the time and energy of local leadership. The planning process employed would need to integrate the BLTV with existing initiatives to the extent possible. The community's leaders were the first priority of this planning process

Image was a problem that had to be overcome. The MTA did not enjoy universal approval within the various communities in South Central Los Angeles for a variety of reasons including previous community experience with the Metro Blue Line planning and development, and the existing quality of bus service.

In circumstances with a larger budget and a longer time frame for community education and planning, the process might have been started with educational interviews with selected leaders. Without the budget or time available, the Drew Team recommended a large community workshop that would introduce the project to community leaders, establish a framework for continuing community participation, and identify community priorities that would guide the applications for the BLTV. The workshop is described in Section 3.

The plan for continuing participation involved defining a set of Community Working Groups that would harness the energy and interests of a group of local leaders to help make decisions and guide the project through implementation.

### **Resource Partners**

Resource Partners were the remaining group that had to be recruited. It is fair to say that both the Drew Team and the MTA expected that the "excitement" of such an innovative project would attract vendors as investors. The solicitation plan was to utilize existing relationships between

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## Section 2

vendors and community organizations or the MTA. The back-up plan relied on cold-calling to present the merits of the project. As the final contingency, the MTA would pay for the necessary technology out of the remaining funds. See Section 6 for a discussion of the funding and expenditures.

### Key Assumptions

In addition to the planning strategy described above, the approach to the project included several key assumptions. For the most part, these assumptions proved to be incorrect. In the case of the fiber network, a better solution was found. In the case of the others, problems ensued. These are described below. See also Section 13.

First Assumption The network transmission services for the project would be provided by the MTA from its existing fiber network that was used for the Metro Blue Line operations. This assumption was a fundamental element of the Project's definition in the MTA's RFP. However, use of the MTA fiber network for the project proved to be infeasible. Basically, the fiber network had been built somewhat inflexibly and solely served rail operations. MTA engineers believed that the network retrofit would be cost prohibitive and, in any case, the network was already congested along certain segments. MTA engineers recommended using integrated services digital network (ISDN). The MTA technical report on this issue is included in Appendix.

The infeasibility of using the MTA fiber network actually benefited the Project. Existing fiber would have limited the number and type of Service Partners that could participate to those located adjacent to the Metro Blue Line. Applications were much more robust by using ISDN over a switched network capable of connecting to many locations in the County, region, state, nation and even the world.

Fortunately, Pacific Bell's Education First Program had previously been explored as a contingency. ISDN service under Education First was installed in time to begin the beta test period on March 1, 1996.

Two other assumptions were related to the fiber network. First, the BLTV would be located adjacent to the Metro Blue Line in order to provide rail access to the Project and to provide access by the Project to the existing fiber network. Second, the BLTV would be located at a station near the mid-point of the Metro Blue Line since this would allow resources to be imported over a maximum distance – the end points of the rail system in the central business districts of Los Angeles on the north and Long Beach on the south.



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## Section 2

In fact, the Project was located near the mid-point of and adjacent to the Metro Blue Line. This was because the site selection analysis was completed a year before it became clear that the MTA fiber network would not be available. In any case, direct access to the rail system was an essential element of the Project. And, locating the Project near the mid-point of the Metro Blue Line in either Compton or Watts was consistent with the “rebuild Los Angeles” goals.

Second Assumption The various roles associated with the operations of the BLTV would be performed voluntarily by Community Partners or Service Partners. No operator function had been defined by the MTA nor budgeted by the Drew Team.

Community Partners were expected to play a variety of roles in addition to participating on the working groups. The roles included administer the Telework Center, administer and use the Video Conferencing Center, and collaborate with Service Partners.

Each Service Partner was expected to develop implementation and operations plans for its own demonstration. The Drew Team planned to review those plans for feasibility and coordinate them in order to ensure the absence of conflict between Service Partners. In addition, the Drew Team would ensure that the equipment needs of each service demonstration had been met either by the Service Partner itself or by a Resource Partner.

Even with these assumptions, other significant responsibilities remained unaddressed. Personnel other than the building management was required to open and close each component of the BLTV, answer questions, solve problems, turn the equipment on and off and so forth. Another responsibility of an operator included maintaining records involving usage (numbers of people, purpose of each, residential location, etc.) for evaluation of the project.

The reality of the situation is that Community Partners or any community based organization in the service area already had a full set of responsibilities. They certainly did not have resources to take on additional uncompensated tasks.

One exception was the Business Assistance Center (BAC) of the City of Compton which agreed to host the Telework Center component of the BLTV. The BAC provided the physical space and, ultimately, the furniture. The scheduling and administration of the Telework Center became an operator function.

The MTA and the Drew Team came to realize that an operator function was needed but none had been created. In response, the Drew Team recommended that the MTA amend the Drew contract to include these new responsibilities.

This position became divisive. Some MTA staff believed strongly that it would be inappropriate for Drew to be responsible for planning and implementation and also receive a sole source contract to

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## Section 2

function as the operator. According to the argument, the MTA should go to bid via a Request For Proposals in order to retain an operator.

Others believed that the difference between implement and operate was largely a matter of semantics. Furthermore, an RFP would have required an additional 4 to 6 months and a mid-term delay in the development process. Such a delay would have effectively destroyed the Project's momentum just before the facility was ready to open.

Ultimately, MTA senior management interpreted operations as part of implementation and amended the Drew Planning Contract to include the additional work tasks associated with the operator function. Even as it was resolved, the conflict created its own legacy as the contract amendment required Drew EDC to turn the project over to another non-profit corporation at the end of the demonstration period. A new corporation formed for the purpose of continuing the BLTV was preferred by the MTA.

Third Assumption Due to budget limits, the Drew Team planned to rely on the existing public relations/promotion/marketing channels of the Community Partners, Service Partners, Resource Partners and the LACMTA in order to market the demonstration project to the community and to the region. The Project Team intended to coordinate the efforts of each participant and direct the overall strategy, rather than develop promotional tactics and materials itself.

In some cases, the system worked exactly the way it was intended. The Compton branch of the Los Angeles County Public Library for example, very capably promoted the range of library functions that were held at the BLTV.

In most cases, the assumption failed to hold. The organizations that would have been sponsors either never bought-in to the BLTV or didn't have very adequate marketing channels, even for their own programs. And, in many cases, the events that required marketing were created by the BLTV Operator and there were no Community Partners directly involved.

Fourth Assumption The Telework Center was to be the element of the BLTV that could open first because of the interest in the Project that had been expressed by large government organizations that either had active telecommuting programs or, like the Southern California Telecommuting Partnership, had a significant budget to recruit telecommuters.

This assumption did not quite outright fail. The County of Los Angeles, which has arguably the largest telecommuting program in the nation, did in fact provide candidates for the Telework Center.

Two problems kept them from participating. First, the City of Compton, who was hosting the Telework Center in its Business Assistance Center inside the Martin Luther King Transit Center, initially adopted stringent insurance requirements that the County was unwilling to meet. Second, the

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## Section 2

County's candidates preferred telecommuting on Friday. Offices of the City of Compton, including the Business Assistance Center, were closed on Fridays. The City of Compton eventually reduced its insurance requirements and changed the Friday policy for the BAC, but by that time the County candidates had made other arrangements.

The second expected source of telecommuters, the Southern California Telecommuting Partnership, failed to provide any candidates. The Drew Team was unable to recruit telecommuting candidates from other municipal governments in the area.

Fifth Assumption The MTA, through its RFP, directed that the Project would include a Telework Center, Computer Center and some form of video conferencing. The details of these components and the applications that would be supported by this infrastructure was left to the Drew Team to determine in collaboration with the community.

In fact, developing applications of specific interest to large segments of the community was one of the keys to the planned marketing strategy. The thought was that less marketing would be necessary if the mix of applications reflected community interests.

The basic infrastructure was developed as suggested by the MTA. The actual applications were a mix of those that could be offered (because of their availability) and those that reflected community needs and interests. The assumption that the right mix of applications would reduce the need for marketing proved to be naïve. A substantial level of marketing should have been included in the Project.

## **DEVELOPMENT PROCESS (August, 1994 to March, 1996)**

The development process consisted of 4 activities. They are briefly described below with the approximate dates each was performed.

### **Site Selection Analysis (8/94 - 12/94)**

Site selection was the initial priority because the site would:

- Define the market area which would determine the community to be organized and educated about the Urban TeleVillage development.
- Establish the space available which would determine the scale of the project in its demonstration phase.
- Establish the rent and tenant improvement expenses that would affect the allocation of the budget remaining for technology and furniture.

Several factors were considered in the selection of a site:

- Adjacency to a Metro Blue Line station so that Blue Line riders could walk to the site and so that access to the fiber network could be facilitated.
- Location near the middle of the 22 mile length between the central business districts of Los Angeles and Long Beach so that the fiber network could bring resources from the maximum distance possible. This meant in practice that the demonstration site would be located at one of 4 stations.
- Availability of a suitable facility with affordable, leasable space.
- Access to a low income population since this was conceived as a contribution to the post-riot “rebuild LA” initiative.

After a demographic analysis and visits to each of the candidate sites, the Drew Team recommended the Martin Luther King Transit Center in the City of Compton adjacent to the Compton Station on the Metro Blue Line. The Transit Center was an attractive, well maintained building with a large community meeting room and about 2,000 square feet of vacant space.

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## Section 3

The 103<sup>rd</sup> Street station in Watts arguably provided direct access to more people (the station is less than .5 mile from the Jordan Downs Housing Project), but there was no suitable facility at that location. The prospect of setting-up trailers for the Project was briefly considered but the time, expense and complexity of that task along with the suitability of the trailers themselves for the network technology core of TeleVillage resulted in the recommendation for the Compton station.

MTA staff accepted the Drew recommendation to locate the Project in the Martin Luther King Jr. Transit Center adjacent to the Compton Station. The MTA negotiated the space rent with the Compton Redevelopment Agency, the owner of the building. The complete Site Selection Report is included in the Appendix.

### **Community Participation (8/94 to 5/96)**

Two mechanisms were designed to foster participation of interested members of the greater Compton community in the development of the BLTV. The first was a community meeting and the second was a continuing opportunity through a formal Advisory Committee.

In addition, significant local institutions including the City of Compton and the Compton Chamber of Commerce were expected to make important contributions throughout the project – which they did. The Drew Team's attempt to recruit religious organizations as participants was unsuccessful.

The Drew Team had proposed a large community meeting as the initial vehicle for attracting community participation. The challenge in that meeting was how to define the TeleVillage concept specifically enough to convey the parameters and flexibly enough to engage the community's energy and imagination.

The plan was to invite representatives of selected programs from around the region and nation that could illustrate one of the several aspects of the TeleVillage concept. A brief research effort was conducted to identify those programs and individuals that should be invited to make a presentation. At the same time the Drew Team with help from the City of Compton assembled a list of organizations and community leaders from the greater Compton market area that should be invited to attend.

#### **The Community Meeting**

The meeting was held on February 17, 1995 in the community meeting room of the MLK Transit Center. Approximately 150 community leaders attended. The MTA produced a 14 minute video documenting the meeting.

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## Section 3

The meeting opened with presentations by organizations with programs that could illustrate each element of the televillage. These included representatives from the Playing To Win Network and Plugged In (part of the Smart Valley Project) talking about computer access. California State University at Dominguez Hills demonstrated interactive video technology that could be used to deliver distance education or hold video conferences. There were a number of other participating organizations including one that demonstrated the importance of computer access to the physically challenged.

The second phase of the meeting began with brief introductions of the organizations that had set up booths around the edge of the community room. A lunch with time to browse the various booths followed. The organizations with booths also illustrated the potential services that could be included in the televillage demonstration. These included HandsNet, Times Link, Kaos Network, Performagence, and others.

In the final phase of the meeting the participants broke into 6 to 10 person groups to discuss the priorities for the TeleVillage demonstration project. Each group presented its thinking to the whole assembly for discussion.

The following is a synopsis of the recommendations:

Comments were made by the attendees around three topics:

- Activities that should be included in the BLTV.
- Places to look for needed resources.
- Concerns or issues that are apparent at this stage of the development.

### Activities That Should Be Included In The BLTV

There were three major themes:

- Education and training; acquisition of job skills for youth, for job-retraining, and for re-entry into the community after prison or drug rehabilitation -- specifically, teach youth how to use computers
- Culture and arts; present work of artists (presumably electronic artists) and encourage diversity of culture
- Information and communications; make the BLTV a place to get comprehensive information on programs and organizations, provide 24 hour access to information on jobs and health, get community organizations to share information with each other

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## Section 3

Two other topics received multiple mention;

- Telecommuting work stations for government and business
- City and county service delivery

Finally, there was the general idea of using the BLTV to create an interactive relationship with the rest of the world – to bring information in and deliver information about people’s needs out to the system.

### Places To Look For Needed Resources

Two ideas were proposed:

- Solicit vendors for equipment.
- Recruit volunteers from the community to donate time, money or equipment.

### Concerns Or Issues That Are Apparent At This Stage Of The Development

The central concern of the workshop attendees was for local participation in the decision making process. One specific suggestion was for an “advisory board” and another was for Compton officials to take the lead in getting more members of the community involved.

A second and related concern was that the community of users should be able to affect the future (post-opening development) of the BLTV.

The remaining comments urged good access (physical, lingual, temporal), expressed concern about the small amount of space available, and suggested that Compton police might make good docents.

This Community Meeting resulted in formation of an Advisory Committee of approximately 25 interested leaders. The members are listed in the Appendix.

“In summary, the community meeting succeeded in introducing the concept of an Urban TeleVillage to many of the significant community leaders. It identified some of the priorities and concerns of the meeting attendees.

In general, these priorities guided the development of the BLTV. For example, the education and training priority was addressed through the recruitment of 35 organizations in the Business Support and Training cluster and 12 organizations in the Educational cluster.”

### **Continuing Community Participation**

The Advisory Committee continued in existence throughout the project. Its role was greatest during the design and development stages since that is when the design decisions were addressed. This period ran from approximately March, 1995 to June, 1996 when the open house was held to announce full scale operation of the TeleVillage. The first meeting of the Advisory Committee was held May 8, 1995 in the Community Room at the MLK Transit Center. The final meeting was held on May 18, 1996 for an open house planning session. In all, there were 8 meetings of the full Advisory Committee.

Consistent with the development plan, the Advisors assigned themselves to Working Groups according to their interests. Each Working Group met at its own pace and was guided by the decisions required for the development process. The following Working Groups were formed:

- Computer Center – The plan for this facility attracted the largest number of Advisors. Most of the effort was spent on identifying software needs, particularly in relation to the needs of children. This group met the most frequently because of their interest in the subject.
- Video Conference Center – Interest in this Working Group was split between those who saw the highest and best use of the facility in terms of formal programs of distance education, and those who saw interactive video in terms of artistic and cultural applications. The possible acquisition of video production equipment, more traditionally the vehicle for culture and art, helped relieve the conflict.
- Telework Center – This was the smallest Working Group. After the second meeting, the interest concentrated in members of the Advisors who were City of Compton employees and related to the Business Assistance Center, the host of the Telework Center.
- Space Plan and Furniture – This was also a popular group and the one that met the second most frequently. Frequent meetings were required by the nature of the task. For example, the group had to meet with the architect to discuss space options and with the various furniture vendors to evaluate difference systems for each facility in the BLTV.

The Advisory Committee did not meet again after the open house event on June 1, 1996. This means that they were not consulted at the end of the demonstration regarding disposition of the BLTV.



### **Responsibility Clarification/Contract Amendment (2/95 to 10/95)**

This step in the development process was not part of the contract and formal work scope. It arose out of an ambiguity in the contract. It is characterized here as a development step because of the time it took requiring revision of the development time line; and because the fundamental issue of role definition that is important to future Urban TeleVillages first arose in this period.

A number of months following the community meeting were spent working with MTA project management to clarify the next steps and the responsibilities of both the Drew Team and the MTA. The discussion centered on three topics.

The first was clarification of responsibilities in the remaining work tasks. For example, the discussions clarified that MTA project management would be responsible for negotiating the space lease from the Compton Redevelopment Agency, and for facilitating access to MTA's existing fiber network.

Second, the question of the operator function was identified and discussed. After numerous meetings, MTA Project Management decided in principle on May 5, 1995 to amend the Drew Planning Contract to include operator functions for the 12 months of demonstration. In October, 1995, \$99,700 was added to the Planning Contract for what became known as the Operator Contract. A contract amendment involving less than \$100,000 did not require approval by the MTA Board of Directors.

As mentioned earlier in this Report, because some MTA staff were concerned about a conflict of interest, the contract amendment required Drew EDC to divest itself of participation in the BLTV following completion of the demonstration period. The contract required Drew to hand off the project to a non-profit corporation. Drew was required to incorporate a 501 c(3) non-profit for this purpose. Failing to accomplish that incorporation, the MTA in consultation with the Advisory Committee would then determine how the assets would be distributed at the end of the one year trial, presumably by designating an existing community-based non-profit to continue the mission.

The third topic was separate from but closely related to the second in both timing and content. This was the relationship of Drew EDC to the MTA on the 1995 NTIA TIIAP grant application. At the same time that discussions about the operator were being conducted, Drew approached MTA project management with the proposal to co-apply with the MTA for a TIIAP grant. This grant would have added a year of operations to the demonstration year.

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## Section 3

Drew's proposal was based on a concept of the appropriate roles for a community non-profit and for the MTA in TeleVillage development. This concept was that the MTA should help fund a TeleVillage and then turn it over to an appropriate community organization to nurture and develop into the future. This would free MTA to concentrate on developing its fiber network to connect the TeleVillages and provide seed funding for the start-up period of new TeleVillages. Locally responsible organizations would develop a TeleVillage and work out long term funding for it. Furthermore, as a practical matter, Drew EDC believed that it brought the kind of community support to the project that responded to the TIIAP's selection criteria.

Due again to the unique role of MTA as project developer, the relationship between the MTA and Drew EDC was also unique. Sensitive about its relationship to Drew as in the operator controversy, some staff members believed that the MTA could not advance Drew EDC from the role as contractor on one grant to the role as co-applicant for another grant. In this case, senior management decided that the MTA should apply for the TIIAP Grant by itself.

The TIIAP grant application was submitted by the MTA without Drew EDC's participation. The application was not selected for funding.

### **Facility Development (5/95 - 3/96)**

The initial meeting of the Advisory Committee on May 8, 1995, formally initiated the process of facility development. The Advisors met as a whole 8 times in the ensuing 12 months with most of the decision making conducted by the Working Groups. The Advisors focused primarily on the numerous physical design decisions and to a lesser extent on the technology decisions.

#### **Space Plan**

The MLK Transit Center essentially had only two spaces available (a third was initially available but was leased to the Veteran's Administration just as the MTA began its negotiations with the City of Compton). The MTA leased the remaining space available.

The plan called for a computer center in one available space, a video conference center in the second, kiosks in the hallways, a small telework center in the Compton Business Assistance Center, cable television exhibition and production in the Community Room (as available) and government "circuit riders" in the project office (created out of the space used for the video conference center).

The Drew Team retained an architect to develop a detailed site plan for the tenant improvements and for furniture arrangements. The space occupied by the BLTV inside the Martin Luther King Transit Center is shown in Figure 2.

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## **Section 3**

### **Space Lease**

The lease agreement was negotiated by the MTA and paid for from the implementation budget controlled by the MTA. The agreement called for the MTA to pay \$1 per square foot per month for slightly less than 1,600 square feet of space to the City of Compton Community Redevelopment Agency, owner of the MLK Transit Center. The agreement covered 15 months, the first 3 of which was rent free in order for tenant improvements to be completed. The demonstration phase consisted of the 12 months that remained.

The lease agreement covered two spaces. The first was for an 800 square foot rectangular shaped room that became the computer center.

The second leased space was a triangular shaped 750 square room that was originally intended for use by the Compton Police Department. The agreement called for the MTA to pay for approximately 100 square feet of space for the Compton Police Department as well as the tenant improvements. The remaining 650 square feet was built-out as a 50 square foot project office, a 50 square foot storage area, and a 550 square foot video conference center.

### **Site Improvements**

Improvements were needed in both spaces leased as well as in the hall way of the building where kiosks were to be located.

The rectangular 800 square foot space had an existing drop ceiling with air conditioning ducts. The improvements needed included carpeting, a wall to create storage space, new lighting, and local area network (LAN) wiring.

Since the second space had never been occupied, it was unfinished and required ceiling, walls, electrical wiring, lighting, air conditioning ducts and so forth.

The MTA conducted a formal procurement process and Golden Bear Construction Co. was retained to complete the tenant improvements. The contractor completed the tasks within the 90 day time frame and the facility was ready for equipment installation beginning mid-February, 1996. The cost of tenant improvements was \$81,900.

The MTA finalized the construction drawings developed by the Drew Team's architect in order to issue bid documents as part of the procurement process. The MTA also provided construction management services for the tenant improvements.

### **Furniture**

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## Section 3

Furniture was required for 4 locations: the Computer Center, Video Conference Center, administrative office, and Telework Center.

The MTA conducted a formal procurement process for the furnishings used in the Computer Center and Video Conference Center. The Computer Center required tables for 12 computer stations, a LAN server, and 2 administrative work stations. The Video Conference Center required tables and chairs for 14.

The furnishings for the Telework Center (2 desk/chair combinations plus filing cabinet) and the administrative office (2 desk/chair combinations – 1 ultimately not used) were donated by GTE from its surplus warehouse. Subsequently, the GTE donations in the Telework Center were replaced by the City of Compton with furniture matching that which had been acquired by the MTA for the Computer and Video Conference Centers.

California Business Interiors (a vendor of Steel Case furniture) was selected by the MTA as the vendor and the cost of the furniture was \$14,700. The City of Compton's Telework Center furniture was in addition to this amount.

### **Technology**

#### Computer Center

The Center is equipped with 12 IBM pentium-90 computers, a local area network with a Compaq ProLinx server running under Windows NT, and a Hewlett-Packard laser printer. The LAN is connected to the internet via 4 ISDN lines, 3 of which can be switched over to Video Conference Center in order to make 6 ISDN lines available there if needed. There are also 2 similar computers on the LAN used for BLTV administration. The MTA managed the procurement and installation of the computers and the LAN.

The internet provider is Break Away Technologies, located in the Crenshaw district of south central Los Angeles. The initial software on the server includes Windows 95 and the Microsoft Office Suite.

Two additional computers dedicated to BLTV administration are located in the Computer Center and are also connected to the LAN.

#### Video Conference Center

The equipment is a CLI Radiance system with dual 32" monitors, remote control, and VCR. Conferences normally utilize three ISDN lines, but an additional 3 lines can be patched over from the Computer Center to make a total of 6 for those situations when higher resolution is required.

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## Section 3

### Telework Center

The Center includes two work stations, each equipped with computer, laser printer, telephone, and modem. The computers are also connected to the Computer Center LAN which means the work stations have internet access. The telephone system offers 10 voice mail boxes for frequent users. The computer equipment was loaned by the County of Los Angeles.

There is, in addition, an Intel ProShare computer for desk top video conferencing and for collaborative computing through screen sharing. This unit is located in the library area of the Business Assistance Center. The ProShare is served by 1 ISDN line. This unit was loaned by the Southern California Telecommuting Partnership.

### Solicitations

Solicitation of equipment donations basically did not work. Other than Pacific Bell's Education First Program and the loaned equipment from the County of Los Angeles and the Southern California Telecommuting Partnership, there were no significant donations.

One computer manufacturer indicated that it could not see a business case for its donation since the market in the greater Compton area was not attractive. Another indicated that the MTA was perceived as having substantial resources and a donation was not justified.

The computers and the video conference unit were acquired on a 3 year lease through the MTA computer vendor and CLI respectively.

### **Network Services**

The original concept called for access to the MTA fiber optics network that was installed as part of the Metro Blue Line light rail system. This fiber system was used by the MTA for train control and to connect video surveillance cameras at each station to a monitoring station at its network control center.

The prospect of using the existing MTA fiber system was discussed with MTA staff between April and October, 1995. The MTA Project Manager was in charge of those negotiations.

On July 11, 1995, the Control Center Committee and the Department of Telecommunications of the MTA declared access to the existing MTA fiber network to be cost prohibitive and recommended using ISDN over the public switched network.

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## Section 3

As a contingency to this eventuality, the Drew Team had begun discussions with Pacific Bell in June, 1995 regarding the possibility of using Pacific Bell's Education First grant program to provide network services to the BLTV.

Pacific Bell was amenable to the proposal but grants were restricted to either public libraries or public schools. However, these institutions could designate an off-site partner as the recipient of the service.

The County Library Department agreed to designate the BLTV as an off-site partner for two of its branch libraries located in the greater Compton area.

The Education First program provides 4 ISDN lines per grant at a nominal cost for installation and usage. Therefore, a total of 8 ISDN lines were available to the BLTV for its 12 month demonstration period.

The first four ISDN lines were assigned to the computer center to provide internet access. One line was used for the Intel Proshare computer located in the library of the Business Assistance Center, and 3 were used for the video conference center. Three of the 4 lines in the computer center could be manually switched to provide a total of 6 in the video conference room in case all 6 were needed for a high resolution video transmission. In practice, all video conferences were held with adequate resolution and movement using 3 or less ISDN lines. The wiring diagram for the BLTV is shown in Figure 3

### **Post-Demonstration (Beyond 3/97)**

In addition to finding continuing financial support, the main challenge faced by the BLTV was the organizational transition to a new owner with a new scope of work. Up until March 1, 1997, design, development and operations had been directed by Drew EDC.

As a condition of the amendment to the Planning Contract that created the operator function, the MTA required Drew EDC to turn over ownership of the BLTV to a 501 c(3) non-profit corporation beginning March 1, 1997. According to the contract amendment, the Drew Team was directed to incorporate a new entity to assume that role. If Drew failed to incorporate such an organization, the MTA tasked itself to consult with the Board of Advisers in order to decide the appropriate action.

In practice, neither of those steps was taken. Drew Operations' fund raising efforts were unsuccessful. The Drew Team believed that it would be unwise to create a new corporation without funds, in part because a track record is an important consideration in many grant programs. Therefore, beginning in December, 1996, the Drew Team began work on a contingency –

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## Section 3

identifying an existing community based non-profit corporation that would assume ownership of the Project. This tactic would comply with the spirit of the contract.

The following criteria were established to search for a suitable existing CBO.

1. A 501c(3) non-profit, community based organization
2. Represented on the BLTV's Board of Advisers
3. Located in the City of Compton
4. At least three years experience operating in the City of Compton
5. Experience managing some type of public technology program
6. Existing fund raising base and successful track record in fund raising
7. Familiar with the MTA's mobility mission for the BLTV and willing to operate and develop the BLTV faithful to the original vision and mission.

Organizations meeting these criteria would then be asked whether they had the resources and would make the commitment to operate the BLTV for at least a six month period while attempting to raise longer term operating funds.

Only Communities In Schools, Inc. (CIS, formerly Cities In Schools) met the seven criteria. On January 15, 1997, the CIS Board of Directors formally approved Drew's request to name the CIS in Drew's owner/operator recommendation to the MTA.

In the meantime, MTA had already offered the City of Compton bridge funding through the 1997 Call for Projects Transportation Improvement Program. The informal explanation for this departure from the contract was that the MTA was uncomfortable working directly with a community based organization and already had an existing, routine relationship with the City of Compton.

In response to the MTA's ownership decision, Walter Siembab of the Drew Team, provided a memo to MTA management entitled "Recommendations For Transfer of Blue Line TeleVillage Ownership & Clarification of MTA's Decision Process" and a report entitled "Considerations For Operating And Developing the Blue Line TeleVillage 1997 to 1999: A Report In Support Of MTA's Decision Regarding Transfer Of Ownership And Definition Of Roles." Both were dated February 10, 1997 and are included in the appendix to this report.

The MTA invested in the initial demonstration period of the BLTV and has now offered 50% of the funding for an additional 28 months. This amounts to another \$494,000, or a total over \$1million between 1994 and 1999. With this amount of time and financial investment, critics and advocates alike will justifiably expect significant results by 1999.

The operations year of March, 1996 through February, 1997 provided a good start – there with 620 members, over 6,000 visits, 22 video conferences, 171 computer classes, 2,020 individuals

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### Section 3

trained, 10 urban functions, 8 teleworkers, 32 participating organizations, and over 250 more organizations in some state of transition to participation.

However, despite the good start on activities at the facility, over 80% of what was accomplished is work in progress. That is, much of the first year's success was in positioning organizations on the participation ladder. The decisions of individual organizations to develop a service application over the internet, through video conferencing or via a kiosk is not related to the end date of the first year's demonstration. Each organization proceeded independently of the BLTV funding cycle. In order to ensure that the BLTV satisfies its potential, the very valuable work in progress should be made the priority for the next two year period.



## **SERVICE AREA CHARACTERISTICS**

Secondary data provide a number of insights into the needs of the community in the service area of the BLTV such as income and education, physical conditions such as housing, community behavior such as travel mode preferences, and potential sources of demand for services such as the number and types of businesses.

The following data were obtained from the Claritas Data Services. This data service provides specially assembled census data for some characteristics as well as projections for other data categories. The full set of data is included in the Appendix. These specific data are presented as Tables 1 through 5 in the Tables Section of this report. The analysis begins with a summary.

### **Summary**

- Just under 10,000 people live within .5 mile of the facility – the outer limit of walking distance. There are 41,600 people that live within 1 mile and 133,700 within 2 miles of the project.
- The market area is in a transition from African American to Hispanic origin with the current population at about 50% each.
- The market area is slightly younger than the County-wide population.
- Home ownership is below the County average near the BLTV Center and the rate increases to exceed the County average as distance from the BLTV increases.
- Housing throughout the service area is less dense than in the County average with density decreasing with distance from the BLTV Center.
- The household income in the market area was 61% to 65% of the average household income in the County.
- Over half the population over the age of 25 lacked a high school diploma compared to 30% of the County-wide population.
- About twice as many people over age 16 in the market area were unemployed compared to the County-wide rate.
- The market area contains a much higher percentage of blue collar workers (62.6% to 66.8%) than the County (40.1%).

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## Section 4

- A significant number of workers lack access to a private vehicle and this accounts for a comparatively higher rate of car pooling. Because of the greater tendency to use automobiles, use of public transit is slightly lower than the County average.
- There are 2 to 7 times more home based workers in the County than in the service area.
- In general, conditions are better and residents are more affluent as distance increases up to two miles from the site.
- There is also a significant amount of business activity in the market area. Local businesses can also exhibit demand for many of the TeleVillage services.

### Analysis

Table 1 presents the population characteristics of the market area in terms of radii of .5 mile, 1 mile and 2 mile rings around the site chosen for the Project. Comparable figures for the County as a whole are also presented in the tables.

### Population

Just under 10,000 people live within .5 mile of the project – the outer limit of walking distance. There are 41,600 people that live within 1 mile and 133,700 within 2 miles of the project.

Growth occurred during the booming 1980s but at a slower rate than in the County as a whole. Since the 1990 census, Claritas indicates that growth in the market area has been far below that of the County.

### Race

The greater Compton area was, in the 1950s, largely a white, working class area. “White flight” following the 1965 riots centered in nearby Watts resulted in a substantially African American population by the 1970s. Recently, the market area has been undergoing another change in racial mix from predominantly black to about equal proportions of African American and Hispanic.

In 1996, Claritas estimates the white population to be far lower than the percentage in the County, and the black and Hispanic origin populations far greater. In general, the proportion of Hispanics is greater closer to the Project (65.3% in the .5 mile ring) ) and decreases with distance (59.1% in the 2 mile ring). The black population pattern is just the opposite – lower proportion of blacks close and a greater proportion further away (37.1% vs 42.2%). Note that Hispanic origin is classified separately from race so the numbers presented do not total 100%.

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## **Section 4**

### **Age 1996**

The median age is relatively homogenous in each of the 3 rings around the Project. The median age in the market area (26) is substantially lower than the median age County-wide (32).

The following observations are drawn from Table 2 entitled “Housing Characteristics.”

### **Tenure**

There is a substantial difference in home ownership rates in each of the three rings around the Project. In the .5 mile ring, only 39.1% of the homes are owner occupied compared to a 48.8% rate for the County. However, the 1 mile ring of 47.6% owner occupied almost equals the County rate. And the 2 mile ring at 54.7% owner occupied surpasses the County average.

### **Units Per Structure**

The market area is predominantly a single family low density suburban area. There is a higher rate of single family detached houses in each ring, and a far lower percentage of units with 5 or more units per structure than exists in the County. Indeed, within the 2 mile radius of the total service area, almost 2 out of 3 houses are single family detached.

The following characteristics are drawn from Table 3 entitled “Income, Education and Employment.”

### **Household Income**

The median household income in the County in 1996 is estimated by Claritas to be \$43,815. The household incomes for the market area are lower than the County but tend to increase from the center at \$28,764, to the 1 mile ring at \$30,929 and to the 2 mile radius at \$32,653.

The average household incomes follow the same patterns with \$57,316 average for the County and \$35,578 for the .5 mile ring, \$34,691 for the 1 mile ring and \$37,271 for the total 2 mile radius.

Despite generally lower household income than the County-wide averages, 6% to 7% of the households in the market area had incomes over \$100,000 per year.

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## **Section 4**

### **Education**

Education levels throughout the market area were poor. Over half the population over the age of 25 lacked a high school diploma compared to 30% of the County-wide population. Those with a high school diploma in each of the rings about equaled the proportion with high school diplomas in the County. There was another large disparity between County averages for those with some college or college diplomas and the population in the market area. For example, 22.3% of the over 25 population in the County had 4 or more years of college while the proportion in the market area varied between 5.6% and 5.8%.

The following characteristics are drawn from Table 4 entitled “Occupation and Employment.”

### **Unemployed**

According to the 1990 Census, about twice as many people over age 16 in the market area were unemployed compared to the County-wide rate. In the County, 7.3% of the over-16 labor force was unemployed compared to 14.1% in the .5 mile ring and the 2 mile ring and 15.2% in the 1 mile ring.

### **Occupation**

Table 4 indicates that the market area contains a much higher percentage of blue collar workers (62.6% to 66.8%) than the County (40.1%). And the proportion of white collar workers in the market area is comparably lower.

The white collar totals by themselves are a little misleading since the category includes “clerical” workers. The market area is about equivalent to the County in the proportion of clerical workers, but far below in the categories of manager, professional, technical and sales.

### **Class of Worker**

The residents of the market area are less likely to be self-employed than County residents. Market area residents were slightly more likely to be employed by a private-for-profit company and much more likely to be employed by some level of government – local, state or federal.

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## **Section 4**

The following characteristics are drawn from Table 5 entitled “Transportation Mode and Vehicles Available.”

### **Transportation To Work**

A slightly higher percentage of workers in the market area than in the County used a car (truck or van) to get to work, from between 87.0%/88.6% in the market area to 85.6% in the County. However, a much higher percentage of market area automobile commuters drove in a carpool than in the County as a whole; 23.3%/29.5% for the market area to 15.5% carpooled in the County.

There was also a slightly greater percentage of public transit users in the service area near the BLTV Center (8.3%) and decreasing outward. In the total service area, the average was at 6.2% who use public transit vs 6.5% for the County.

The carpool level and transit use level is probably related to the unaffordability of private automobiles. The workers in the village center and the 1 mile ring had almost twice the proportion as the County of households without vehicles available. The percentage with one vehicle available was about equal to the County average throughout the market area, but for 2 and more vehicles available the proportions in the market area were again much lower than the County as a whole.

Also relatively fewer workers walked or biked to work in the market area than in the County. There was a large discrepancy in the 2.7% who work at home in the County VS 0.4%, 1.0% and 1.2% who work at home in the various rings around the TeleVillage.

### **Travel Time To Work**

Service area workers tended to take longer to travel to work than did workers in the County. In each travel time category from 10 minutes up to 90 minutes, there were higher percentages of service area workers. And, of course, many fewer market area workers working at home than in the County.

### **Business Establishments and Employees**

There are slightly more businesses considered to be commercial (which includes retail, commercial wholesale trade, restaurants, etc.) in the market area although there are significantly more people employed by manufacturing businesses (which includes heavy, light, high-tech, industrial wholesale, etc.). There are 121 business establishments and almost 4,000 employees within a half-mile of the TeleVillage.

## APPLICATIONS PLAN

The planned applications were the basis for the tenant improvements, furnishings and technology that were put in place between December, 1995 and March, 1996

This Section describes the facility and the applications it was expected to support from the perspective of March, 1996. Section 8 describes the applications that actually occurred.

### Description Of Initial Elements

The applications planned represent what the Drew Team believed was the outside limit of what would be achievable with the available space, equipment and planning budget. The modest scale of the project would allow demand over a period of time to determine which applications would contribute to mobility, and would allow the facility to grow roots in the community. This initial scale of development is roughly equivalent to a neighborhood level center in terms of the 4 level hierarchy of centers described on page 14.

#### Video Conference Center

This room seats up to 16 people in either a classroom or a meeting configuration. The furniture system was chosen for flexibility through ease of reconfiguration. The tables could also be easily moved against the walls or removed entirely to provide a seating or standing area for about 30 people.

Initial applications will include:

#### Distance Education Classes

A relationship was established with California State University at Dominguez Hills to offer distance education classes at the BLTV. Additional relationships would eventually be sought with other educational institutions throughout the region, and perhaps elsewhere in the state or nation. Class opportunities could include accounting practices for small business, web surfing, English-as-a-second-language and parenting skills.

An employer interested in improving the skills of its work force (in subjects such as basic mathematics, advanced accounting, or computer literacy) would be able to contract with CSUDH or another educational institution for a class to be delivered at the BLTV Video Conference Center.

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## Section 5

### Video Meetings

The Video Conference Center was expected to support a variety of electronic meetings conducted for business, civic, artistic or social reasons. For example:

Local business people can meet with business partners or colleagues in other parts of Southern California, the State, nation or even the world via a video conference.

Local community members can meet with community-based organizations, coalitions or church communities in other locations.

Citizens or local elected officials can interact with government officials representing County, State or Federal governments.

Employees who manage a local office of a large corporation can use the BLTV Video Conference Center in order to participate in central corporate meetings for the introduction of new products, or for training in new policies and procedures.

Staff members of community based organizations can attend as a video-participant those professional seminars that they cannot attend in-person.

Collaborative relationships can be developed with organizations located outside of the greater Compton area such as the one created by students at Compton High School and students at Manual Arts High School who worked together on a Housing Fair Project.

### Public Library Services

Pacific Bell's Education First Program provided ISDN service to a number of public libraries throughout the state. In support of that deployment of technology, the Education First staff planned to facilitate a number of video applications during the demonstration. The BLTV expected to participate in some of those applications.

One application arranged prior to the opening event was story telling for children. Three to five year old children at the Stellar Child Care Center located adjacent to BLTV facilities inside the Martin Luther King Transit Center attended story-telling hour over interactive video provided by the Pasadena Public Library (an Education First "model site").

Additional applications can involve lectures for adults originating at one or more of the libraries in the state.

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## Section 5

### Business and Professional Seminars

Business and professional seminars are less formal than distance education classes and are usually offered by organizations other than accredited educational institutions. Options from business development seminars to continuing education for teachers are possible. The City and County of Los Angeles can, for example, hold video conferences on minority business opportunities with the respective governments.

### **Kiosks**

Kiosks planned for the main hall of the building include the Caltrans Smart Traveler which provides access to basic information about the region's public transit and highway system; an automatic teller machine (ATM) from Wells Fargo Bank; the kiosk of the Housing Authority of the City Of Los Angeles which allows access by the general public to job and consulting opportunities with the Authority and to information about the mission of the Authority; the AIDS Information kiosk provided by the County Museum of Science and Industry which provides access to a self-guided tour of the facts about AIDS. At least two additional interactive transactional kiosks are being sought. Although the MLK Transit Center was designed to contain two ATMs, banks had previously declined to provide even one.

### **Computer Center**

The room is equipped with 12 computer stations configured so as to allow small group instruction at 4 stations and simultaneous independent work at 8 stations. Two of the computer stations have access to a telephone line so that users can connect with local BBSs or other dial-up services not accessible through the internet. The laser printer is at the head of the room adjacent to the LAN server.

The room includes two closed storage areas. One of them is planned for future use as a video editing room once the video production equipment has been acquired.

The room also includes two administrative work stations just inside the front door. One is designated for an instructor and the other for a "greeter" that will guide visitors.

Planned applications include:

### Public Access Computing



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## Section 5

Members of the public will have access to a computer to pursue personal or business goals. Uses are expected to include developing a resume, writing a school paper, creating a budget, drafting a screenplay, or storing recipes in a data base

### Classes

Classes will be offered for adults and children ranging from basic computer literacy to training in the specific software packages available at the BLTV. The software expected to be available is at a minimum the Microsoft Office Suite, including The Word (word processing), Excel (spreadsheet), and Access (data base management) These classes will serve individuals and community organizations including the Watts-Willowbrook Boys and Girls Club, rehabilitation programs, non-profit corporations, and churches.

### Internet Access

The BLTV will provide access to the internet to all Computer Center users. This provides the opportunity for adults to use computers to seek employment and job training opportunities for adults, and for children to explore a vast array of knowledge. The Blue Line TeleVillage will register its own domain. Members will receive their own an e-mail address and have the opportunity to create their own home page.

### Private Facility Rentals

Employers or community based organizations can reserve the Computer Center for special software and other vocational training for employees

## **Telework Center**

The Telework Center is being hosted by the Business Assistance Center of the City of Compton. Two work stations separated by a divider have been placed in an office in the BAC. The computers are connected to the Computer Center LAN for internet access. The Telework Center has its own printer. Each work station has a telephone with a voice mail box.

An Intel ProShare is also part of the Telework Center and it is located in the library of the BAC. Users also have access to the BAC's conference room and its photocopy machine.

Planned applications include:

### Telecommuting

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## Section 5

Professional work space for telecommuters -- residents of the greater Compton area who are employed in businesses located elsewhere. The County of Los Angeles has one of the most advanced telecommuting programs in the nation and several County employees who normally report downtown or to other facilities can telecommute 2 to 4 days per month from the Blue Line TeleVillage Telework Center.

### SOHO (Small Office, Home Office) Support

Professional work space for teleworkers -- residents of the greater Compton area who are self-employed and/or a home-based business who need occasional access to a professional work station. The objective is to encourage start-up businesses and the growth of very small businesses.

Similarly, typically small community based organizations in the greater Compton area can reserve a work station on an occasional basis for an employee to complete a special project outside of the commotion of the regular office.

### ProShare Training

Training sessions to interested local entrepreneurs and businesses on the use of desk-top video conferencing, including the screen sharing capabilities that facilitate collaborative work.

## **Community Room**

This is a large room capable of seating 300 or more that BLTV Operations can use on a reservation basis. The applications planned for this room include the following (see page 74 for the uses that occurred during the 12 month operational period):

### Public Lectures and Presentations

“A range of live, in-person educational programs can be presented in the Community Room under the auspices of the Blue Line TeleVillage. For example, Wells Fargo Bank has agreed to provide a program on consumer and small business banking issues. Agencies of the federal government will be sought to present information about their services and job opportunities. The Compton Chamber will be approached about possible collaboration on one or more events. The Latino Chamber of Commerce will similarly be contacted regarding possible lectures that it can either provide or sponsor. One such possibility is the “My Own Business” lecture series in Spanish.

The addition of either cable television or a satellite receive dish will make video based presentations possible. One example is a meeting for civic participation based on the 1996 presidential debates. Another possibility is a home shopping program featuring local artisans and professionals.”

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## Section 5

### Television Production Capability

The Blue Line TeleVillage plans to seek portable video recording and editing equipment and the capability of originating live signals for downstream distribution over the local cable television system. This will allow the TeleVillage to record and distribute the live, in-person educational programs as well as to develop special presentations for video such as a home-shopping program featuring businesses from the greater Compton area.

### **Circuit Rider Work Station**

One work station in the administrative area of the Blue Line TeleVillage will be used by “circuit riders” -- employees of a variety of government agencies who appear at the Blue Line TeleVillage on a regular schedule to provide information or directly deliver services. The year of operations began without circuit rider commitments, but a twice-a-month visit by a benefits counselor from the Social Security Administration is an example of what was planned.

### **Business Development Program**

In addition to the applications planned for the individual facilities within the BLTV, a single program that would integrate all elements was also planned. This was the “business development program.” This program also specifically responded to the needs of the community for applications that would lead to economic opportunities.

The concept was to market an integrated business development program instead of the individual facilities within the BLTV. Community members do not necessarily know how they can relate to a Telework Center, a desk-top video conference, or a computer station.

The business development program was planned to include the following elements:

- Introductory lectures by Small Business Development Centers delivered in the Video Conference Center, leading to certain individuals being selected for one-on-one counseling over the ProShare in the Telework Center.
- Business skills development such as spread sheet classes for budgeting, and business opportunity search over the internet both available in the Computer Center.
- Professional work stations and meeting space available in the Telework Center.

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## Section 5

- Business opportunity lectures (such as the minority business opportunities with the County) presented over interactive video in the Video Conference Center or presented live in the Community Room.

This idea of marketing the BLTV through programs that integrate the elements was expanded later and is discussed in Section 7. Some of the specific services planned for the business development program are listed in Section 7 and the outcome of the program is discussed in Section 8.

## **INITIAL OPERATIONS**

### **Beta test (March, 1996 to June, 1996) and Open House (June 1, 1996)**

#### **Beta Test**

The BLTV opened its doors for business on its March 1, 1996 target date for a 3 month “beta test.” The following were the main activities during the period:

Personnel to operate the facility were hired and provided with cursory training. Staffing was delayed because of difficulty in finding viable candidates. No one was hired from the first recruitment conducted in January and early February. Part of the challenge was defining the full range of ideal characteristics needed by an Urban TeleVillage, and another part was deciding where to compromise in order to staff the facility in a timely manner.

The second recruitment took until late February so that the Director and the Operations Manager were newly hired as the facility opened. The Director did not actually begin working until April 1, 1996.

A demonstration of the entire facility was planned and implemented on March 21 so that CSPAN could video tape a vignette of the BLTV for showing on its network in May, 1996. Compton High students served as the facility users for the event.

A press conference was planned and held on March 29 so that the MTA could cut the ribbon on the first Urban TeleVillage and introduce the facility to the public. County Supervisor Yvonne Burke provided comments as did senior representatives of the MTA and Drew EDC.

The Drew Team and the operations staff designed and developed a membership data base, operating policies and procedures, and a pricing schedule.

The Computer Center was open 20 hours per week and was available for walk-ins but no courses were offered. Memberships were accepted but not solicited.

One trial of the interactive video was conducted. It was an exercise in telecollaboration where students at Compton High School worked with students that they had never met at Manual Arts High School in order to jointly solve a problem. This is discussed in Section 8.

Recruitment of organizations to participate continued.

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## Section 6

The main activity was planning the open house, scheduled for June 1, 1996. The open house was planned to display the full range of capabilities of the BLTV for the local community and potential Community Partners.

### Open House

The BLTV was formally introduced to the public on Saturday, June 1, 1996. The open house occurred between 9AM and 3PM, with a formal program in each component of the facility scheduled between 10AM and 3PM. A band, decorations, food and drink services, and information tables for related community activities created a festive atmosphere. Compton High School students and members of Communities In Schools, Inc. served as guides. Advisory Committee members and members of the Inner City Computer Society provided information. Supervisor Yvonne Burke and City of Compton officials made brief presentations. Approximately 125 community members attended the event.

### Program

The following describes the demonstrations that were planned for each component of the BLTV. Table 9 shows the overall program by hour and component.

#### Video Conference Center

Attendees were offered the following opportunities:

- Meet resource people
- Ask questions
- Participate in demonstrations of interactive video
- Sign up for programs
- Leave comments

The following demonstrations of interactive video communications were planned:

From 10:00 to 11:30

California State University at Dominguez Hills made several presentations regarding the types of classes it can provide for businesses, non-profits and individuals.

From 11:30 to 12:00

The “story teller” from the Pasadena Public Library delivered a sample “story hour” for three to five year old children and their parents. This service was planned for a trial basis during the summer for

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## Section 6

children enrolled in the Stellar Day Care Center with possible expansion to families in the community if there is enough interest in the program.

From 12:00 to 12:30

A high ranking official from the U.S. Department of Transportation made a brief presentation about federal programs for “livable communities” and answered questions. This demonstrated the ease with which interaction can occur with government officials in Washington DC or in Sacramento.

From 1:30 to 2:30

Tele-teens video arts conference was held with KAOS Network, Ben Caldwell’s youth organization located in Leimert Park. Teen-agers electronically met with other teens to discuss how to use the technology to create video art.

Continuously during the day:

Resource people were available all day to answer questions about how to use the facility for business, non-profit organization, church, or family.

### Computer Center Program

Attendees were offered the following opportunities:

From 10:30 to 11:00 and 1:30 to 2:00

Carmela Federico, computer teacher at Crossroads School and former instructor with the Playing to Win Network on the east coast, led two orientation sessions for kids between the ages of 4 and 12 and their parents.

From 11:00 to 11:30 and 2:00 to 2:30

A representative from the federal Office of Personnel Management led two sessions on how to use a computer to search for jobs with the federal government.

Continuously during the day

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## Section 6

Open access to computers and opportunities to talk to resource people about the ways that organizations or individuals can use the TeleVillage Computer Center.

### Telework Center Program

Attendees were offered the following opportunities

From 10:30 to 11:30 and 1:30 to 2:30

Jack Nilles -- Futurist, author of Making Telecommuting Happen, father of the telecommuting phenomenon, and implementer of the telecommuting pilot programs in both the State of California and the City of Los Angeles was available in the Telework Center for employers, employees and entrepreneurs to discuss:

- introducing telecommuting to local businesses and governments,
- convincing your employer to let you telecommute
- setting up a home office,
- using the TeleVillage Telework Center in conjunction with a home office
- results of telecommuting programs conducted in both the private and public sectors

From 11:30 to 12:30

Evelyn Gutierrez -- Administrator of the County of Los Angeles' prize winning telecommuting program was available to discuss:

- introducing telecommuting to local governments,
- setting up a home office,
- using the Telework Center and a home office
- characteristics of a successful telecommuter
- results of the County's telecommuting program

### In Person

At various times throughout the day

A representative of the federal Office of Personnel Management offered one-on-one assistance in learning to access the on-line data base for federal jobs.



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## Section 6

### Via Desk-Top Video

At various times throughout the day

Dan Theobald, Program Manager of Pacific Bell's Education First Program with the Monterey Public Schools presenting the technical capabilities of the desk-top video computer

Continuously throughout the day

Resource people were available to talk about programs and services to support telecommuting, telework, access to work stations, training on desk-top video-conferencing, and the business mentor program.

### Kiosks

The main hall of the building had three kiosks with a fourth one planned. The kiosks were:

#### Housing Authority of the City of Los Angeles

Allows access by the general public to job and consulting opportunities with the Authority, information about the mission of the Authority; and how to apply for specific programs such as Section 8 Housing. Allows those on the waiting list to check their current position.

#### AIDS Information Kiosk

Gives a self-guided tour of the facts about AIDS and is provided by the County Museum of Science and Industry.

#### Bank ATM

Allows access to a variety of bank transactions through an automatic teller machine from Wells Fargo Bank. The Life Skills seminar was presented by Wells Fargo Bank in the Community Room as a preview of what is planned for delivery later in the year. A second ATM from the Bank of America is also planned.

#### Multi-Government Kiosk

Later this year, in cooperation with the City of Compton, a kiosk will be added that will allow access to a variety of government information and transactions. Ecotek made a presentation in the Community Room regarding this new technology.

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## Section 6

### Community Room Program

The following will be presented in the Community Room:

From 10:00 to 11:00

A demonstration of surfing the internet and World Wide Web was presented by Break Away Technologies.

From 11:00 to 12:00

A demonstration of surfing the internet and World Wide Web was presented by Carmela Federico in *Spanish*.

From 12:00 to 12:45

A demonstration of an “internet magazine” for teens was presented by Shirley Allen, President of Communities in Schools, Inc. and President of the Compton Chamber of Commerce.

From 1:30 to 2:00

A preview of the “Life Skills Seminar” was provided by Wells Fargo Bank.

From 2:00 to 2:30

A lecture and demonstration was made by Raven Rutherford of how she used a home page on the World Wide Web to become famous for her “cyber pies.”

From 2:30 to 3:00

A description of the government information and transaction kiosk that will added to the Blue Line TeleVillage later this year. The presentation was by Ecotek.

### **Surveys**

The Drew Team attempted to use the open house as a vehicle for conducting market research. Survey forms with questions about interest in each element were on tables throughout the facility. The data collected are not statistically valid due to the small number of responses, but they can be interpreted as anecdotal information.

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## Section 6

The circuit rider survey was set out on the main information tables. The main survey about the Video Conference, Computer, and Telework Centers had very few respondents (that is, not more than 10 responses to any question). There were 56 responses to the survey of interest in circuit riders. The Drew Team memo summarizing the results is included in the Appendix.

The survey asked four questions about interest in the Video Conference Center and 10 responses were received. The first was a query about preferences for distance education classes at the BLTV. Half or 5 respondents indicated an interest in learning Spanish, and 3 wanted to take English for Business. Others receiving 1 mention were classes in real estate, teaching accreditation, and sales. Surveys with such few responses are not conclusive but can indicate user interest.

The survey offered the chance to request additional information. The leading area of interest was distance education classes with 6 responses.

The survey also asked about interest in the Computer Center, and only 7 responses were received. The leading reason for needing access to a computer was listed as internet access with 4 responses and business with 4 responses. Database software (5 responses) and word processing and spreadsheet (4 responses each) were the leading software needs.

Questions about the Telework Center received 8 responses. Surprisingly, 6 of the respondents indicated they currently owned a personal computer. The technology of interest most often mentioned was a printer with 6 responses. Most of the software interest was in word processing (5 responses for MS Word and 6 for Word Perfect). More information was requested primarily about the business mentoring program.

These results suggest a reluctance among potential users to engage with the facilities offered and the services planned. One interpretation is that because the BLTV is new and very unusual, a substantial amount of time will be required to engage the community in using its capabilities.

The circuit rider survey listed about a dozen different Federal and County agencies and asked respondents to indicate which they would like to see represented at the BLTV. The top vote getter among Federal agencies was HUD which was mentioned on 95% of the 56 forms. The other agencies in the top five were Department of Education, Federal Emergency Management Agency, Social Security Administration and the Postal Service (at 73%).

The second question asked about interest in communicating with government representatives. The County of Los Angeles had 4 mentions, the City of Los Angeles and the US Government 3 each, and the State of California 2.

These survey results suggest several interpretations. The first is that government agencies are more familiar to most community members than the other elements of the BLTV and therefore received a

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## Section 6

higher response. It also suggests that there is an interest in the “circuit rider” function service and that certain agencies have a bigger market for this service than others.

However, respondents may also be unaware of the services provided by some agencies. For example, in expressing a desire to learn about housing-related services, respondents may have chosen HUD instead of County Social Services. This suggests that an ombudsperson or guide may be a good first service, and that two or more agencies related to a single service area (housing or child services for example) should adopt a presence on the same day.

## **SALES ACTIVITIES: MARKETING, RECRUITMENT AND SOLICITATION**

The attempt to establish the BLTV with appropriate capabilities required participation from three groups:

- organizations to which people travel in order to perform work or consume services
- residents and businesses that occupy the service area around the BLTV
- vendors who could donate equipment that would enhance the BLTV's capabilities without taxing the budget

Together, these activities formed the "sales" effort of the Drew Team.

In the terminology of the project, one task was to recruit Service Partners, Community Partners, and Employer Partners that could create the required broad functionality through a combination of physical presence (e.g., circuit riders) and electronic presence (e.g., data communications or video conferences). The second task was to market the facility to end users and to Community Partners with relationships to end users in order to bring consumers through the front door. The third task was to solicit vendors to donate equipment that would enhance the capabilities.

### **Recruitment**

#### **Community Partners and Service Partners**

The starting spot for recruitment is an understanding of the organizational topography of the service area. There are a variety of organizations that serve or represent the needs and interests of the residential and business populations of the service area. Each household and each business may have relationships with dozens of organizations, some strictly local (candidates for Community Partners) and some located elsewhere in the county, region or state (candidates for Service Partners).

The City of Compton's mailing list showed that the community includes a wide range of organizations such as educational institutions of a number of different types, religious organizations, governments, business support organizations, businesses of many different types, political organizations, charities, housing projects, neighborhood associations, arts organizations, recreation organizations, social service organizations and so forth. These organizations collectively function in a way that addresses community needs and interests.

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## Section 7

With a larger budget, an attempt would have been made to work with at least some of each different type of organization, thereby covering the entire range of urban functions. As it was, only a few types and a relatively small number of organizations were included.

Theoretically, there was a choice between those that might have the greatest impact on mobility and those that might have the greatest impact on economic opportunity. In practice, the Drew Team had no data about which urban functions generate the most vehicle trips or vehicle miles (although the journey to work is generally acknowledged to cause about 40% of the region's vehicle trips). Therefore, the priority for contact went to those organizations with potential economic impact. This choice reflected the priorities that were identified at the community meeting, and that also had a good chance of finding consumer acceptance due to the objective needs of the community.

From there the priority was to identify those organizations with the willingness to innovate and the resources to continue. Very little could be done with disinterested, lagging, or badly undercapitalized organizations.

Recruitment of Community and Service Partners centered on the following 10 categories of organizations with the list in declining order of effort. These are loosely defined clusters or communities of interest that helped guide the recruitment effort. Employer Partner recruitment is presented separately.

- Business Support
- Educational
- Federal Government
- Government Other Than Federal
- Children
- Religious
- Health Care
- Culture/Arts
- Commercial
- Social Service

Community Partners were recruited for two reasons. The first was simply to gather support for marketing the programs and opportunities at the BLTV. Religious organizations, for example, were expected to be more effective as a gateway to end users than as a group of users themselves.

The second was to engage the Community Partner as a sponsor or co-sponsor of a program, event, or application. Sponsorship could take the form of working locally to facilitate a program delivered by a Service Partner, or using the BLTV to deliver its own service. Community Partners who

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## Section 7

became program sponsors were thought to have a better chance of sustaining their role after the demonstration period.

One of the concerns in recruitment was to ensure that an external Service Partner did not compete with a service already delivered by a local organization. Collaboration through co-sponsorship was proposed in those situations.

The recruitment method had five steps following identification of a lead, contact, or telephone number (often from the basic community mailing list).

1. Initiate contact with an organization, either through a telephone call or direct mail. This step was often repeated as the first contact referred to another contact, sometimes through several cycles.
2. Attempt to contact until a response is received. A positive response means that the recruitment proceeded to the 3<sup>rd</sup> step.
3. A tour of the BLTV or a site visit to the organization, and sometimes both occurred
4. If interest persisted, then an attempt was made to identify useful applications.
5. If interest persisted, then an attempt was made to develop an implementation plan for one or more of the priority applications.

The analysis of organizational penetration in Section 10 extends this model with five implementation steps into a 10 step “Ladder of Participation.” . The complete inventory of organizations are listed by cluster and designated as either a Community Partner or Service Partner in Section 10. The participation level of each organization contacted is expressed in terms of the maximum step on the ladder achieved during the demonstration period.

This section addresses only the level of participation achieved in terms of the recruitment process.

In all, 289 organizations were contacted either by telephone, an in-person presentation, or mail. For example, virtually every member agency of the Federal Executive Board saw a presentation on the project and received at least one mailing describing the opportunities. Some agencies were also contacted by telephone regarding a specific opportunity to participate.

The first recruitment issue was whether or not the initial contact could produce a response. In order to get a response, the right person needed to be reached. In large organizations, this can take repeated effort through referrals from one person to another. Sometimes the right person must be contacted repeatedly before a response occurs. Often, the BLTV could not be put on their radar

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## Section 7

screen. As shown, 62% of the organizations contacted did not respond to the various contact attempts.

### Recruitment Success

Category	Number	Responded	No Further Than Response	Could Not ID an Applction	At Least ID an Applction
Business Support	35	100%	37%	51%	49%
Education	12	100%	25%	33%	67%
Children	12	100%	0	0	100%
Federal Govt	118	7%	95%	96%	4%
Non-Fed Govt	9	100%	11%	11%	89%
Religious	70	11%	97%	100%	0%
Health Care	10	100%	30%	50%	50%
Culture/ Arts	6	83%	17%	33%	67%
Commerce	12	75%	42%	42%	58%
Social Serv	5	100%	40%	80%	20%
Total	289	62%	72%	77%	23%

The two largest communities of interest proved to be the most difficult to recruit to the project. As indicated in the table, only 7% of the federal agencies and 11% of the churches acknowledged the contact.

The federal community is represented by the FEB -- an "umbrella" organization in that most federal agencies in Southern California are members. Religious organizations in the greater Compton area do not belong to a single umbrella organization and so they were contacted individually but at the same time. Each received an invitation to a special event by mail with telephone follow-up.

Beyond those two clusters, almost all calls or letters were acknowledged. A returned call meant that the Project could be explained interactively and some negotiation about participation could occur. This usually involved an in-person visit to the organization's facility or a tour of the BLTV.

As the table shows, about a quarter to a half of the organizations that returned the Drew Team's telephone calls or letters progressed no further up the ladder. In those with no further progress,



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## Section 7

reaction was split about evenly between good intentions to continue and no further interest at that time.

The objective of the Drew Team’s recruitment effort was to identify for as many organizations as possible a good variety of ways that each one could use the BLTV to further their own goals, such as cost-effective service delivery. The ability to visualize an application provided an important incentive to the organization, and the types of applications envisioned provided a better picture of what a robust BLTV might look like.

Once applications were identified, the process of planning and implementing them could occur. And the reasons why certain organizations or organizational clusters were more or less effective implementing its ideas could be analyzed. This is the topic of Section 10.

As shown in the table, the cluster of organizations that provide children’s services or are some type of non-federal government agency were the most successful at identifying possible applications. Cultural organizations, educational institutions, commercial businesses, followed in a second tier.

A third group consisted of the business support organizations, health care institutions and social service agencies. As mentioned, the federal community and the religious community were the most difficult to recruit.

Overall, 23% of the organizations contacted were able to identify at least one possible application with the BLTV. Applications could involve something as simple as a visit by a circuit rider, to an employee training use of the Computer Center, or the most complex – an interactive video conference. In other words, the Drew Team needed to work with four organizations to get one to identify some way that it could use the BLTV.

The recruitment results show that if an in-person meeting could be negotiated, the chances were excellent that an organization would eventually identify an application. A little less than  $\frac{3}{4}$  of all of organizations either didn’t respond or got no further than returning the telephone call. Of the 28% of the organizations that took the next step and visited the BLTV (or the Drew Team visited their facility), 80% continued their involvement to the point of identifying an application.

The success rate, of course, was much greater when the religious and federal communities are excluded. The following table shows the resulting participation levels.

**Participation Ladder – Recruitment Steps  
Excluding Religious and Federal Communities  
Percentages**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5+</b>	<b>Total</b>
CP	4	7	3	8	20	42

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## Section 7

SP	1	16	8	11	23	59
Total	5	23	11	19	43	101

Excluding federal agencies and local churches, the contact success rate was almost at 95%. That is, almost everyone contacted at least returned the call or responded to the letter. Over 62% identified possible applications and 43% started planning the implementation.

### Employer Partners

Recruitment of Employer Partners followed two tracks. The first was recruiting through existing regional organizations either established to promote telecommuting or with a mission that involved advocating telecommuting. These organizations included the following:

- Southern California Telecommuting Partnership (SCTP) – established by a grant from the US Department of Commerce to aid earthquake recovery by funding programs that would promote and facilitate telecommuting.
- International Telework Association, Southern California Chapter (TAC) – the leading professional support organization for telecommuting and telework in the nation.
- Southern California Association of Governments (SCAG), Southern California Ride Share (formerly Commuter Transportation Services) – the regional transportation demand management agency focusing on ride sharing but with peripheral interest in telecommuting.
- South Coast Air Quality Management District (AQMD) – responsible for controlling air pollution through a variety of programs, but primarily owner of an employer data base that is useful for recruiting telecommuters.

This track produced a few leads but no results.

The Drew Team found the SCTP to be unresponsive to requests for assistance. Initially the SCTP refused assistance because the BLTV Telework Center would not become operational until March, 1996. The Drew Team wanted to recruit ahead of time in order to have telecommuters in place once the facility opened. Once the Telework Center was open, the SCTP was unable to include the facility in its marketing program, or to refer any telecommuters produced by its marketing effort. SCTP expired in August, 1996.

A presentation about the BLTV was made at a TAC meeting, and TAC Chapter officers discussed the possibilities. The following leads were offered: Metropolitan Water District, Nissan America,

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## Section 7

and City of Long Beach. When contacted, each employer expressed interest in the BLTV, but either had no eligible employees living in the greater Compton area, or was not expanding its existing telecommuting program at that time.

Southern California Ride Share was, unfortunately, being formed as a unit of SCAG from the former CTS at the time of initial request for assistance. Partially as a result of the transition and reduced levels of funding, SCR reduced its telecommuting services to basic information and referrals to consultants. It no longer actively marketed telecommuting to its clients. However, SCRS did hold a meeting of employee transportation coordinators at the BLTV, and it did attempt to provide access to the AQMD employer data base. The Drew Team was not allowed to identify employers with existing telecommuting programs from the data base for reasons of confidentiality.

The MTA eventually acquired the complete employer data base from the AQMD. The data base was not sorted by employers with employees in the zip codes that the Drew Team had specified. It was, therefore, ineffective as a tool for recruitment.

The second track for Employer Partner recruitment consisted of direct contact with public sector employers known to have telecommuting programs. These employers were the County of Los Angeles, City of Los Angeles and all agencies in the federal community in Southern California.

Of those organizations, the County of Los Angeles had the most advanced telecommuting program. One of its features is a central mechanism for distributing information about telecommuting opportunities to its many diverse departments.

In December, 1995, an article and picture detailing the Telework Center appeared in the County's internal newsletter, "Commuter Digest." The effort resulted in 40 inquiries for space at the BLTV Telework Center.

The Drew Team proceeded with the normal interview and evaluation process in order to eliminate applicants that lacked either appropriate job tasks, or their supervisor's permission. Ten applicants remained viable including employees from Mental Health, Health Services, Community Senior Services, AIDS Program, and the Chief Administrator's Office.

Recruitment of the Federal Executive Board has been described above. Essentially, a more sustained effort was needed to attract agencies of the federal community to participate in any aspect of the BLTV.

The commitment of the City of Los Angeles to telecommuting is much more ambivalent than the County's. Essentially, the City's Commuter Services Work Group, responsible for organizing the City's telecommuting programs, lacked the resources to conduct a special recruitment for the

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## **Section 7**

BLTV. Also, in early 1996, the Work Group was engaged in developing telecommuting policy and implementation guidelines for City Council approval.

### **Marketing**

Marketing directly to the community was not included in the original work plan. The plan assumed that marketing would be conducted by Community Partners and Service Partners in support of their own programs.

While this did not happen often enough to be effective, there were cases of exactly this relationship. The most effective Community Partner in marketing programs at the BLTV was the Compton Branch of the County Library. In both instances of the video conferenced readings, the Library was able to effectively publicize the event to its constituents.

There is also evidence of successful internal marketing to organization's members or clientele by such as Valu Med Regional Job Training Center, the Boys and Girls Club, Compton Chamber of Commerce, and the Inner City Computer Society.

To the extent that the BLTV Operator, using a small amount of money provided by a supplemental FTA Grant, made a marketing effort, it consisted of three elements – BLTV publications (usually distributed at the facility itself), published articles written about the BLTV, and paid advertisements in print publications or commercial radio outlets. These efforts are described below:

#### **BLTV Publications**

- Brochure
- Monthly calendar
- Fliers
- Information sheets

#### **Media**

- CALIFA (newsletter for multi-cultural harmony) - September, 1996
- Carson Newspaper - January, 1997 (regarding Women's Day Conference)
- California Black Health Newsletter
- Los Angeles Herald Dispatch - January, 1997 (regarding Women's Day Conference)
- KACE Radio - Turning Point Live talk program appearance
- LA Sentinel - Article on Women's Day Conference

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## Section 7

- LA Watts Times - Article on Women's Day Conference
- Compton Cable - shows class schedules and service info on public access character generator

### Advertisement

- Drew University Newsletter August 1996
- City Beat, City of Compton Employee News, monthly
- Community Circle News (Leimert Park residents) August, 1996
- KJLH Radio on The Front Page program (resulted in 8 memberships)
- LA Focus Newspaper (Christian) - monthly listing of workshops
- KACE Radio - PSAs for open house, workshop schedules, Women's Day Conference
- KJLH Radio - PSAs
- KKBT Radio - PSAs
- KPRW Radio - PSAs
- KTNQ Radio - PSAs

In the final analysis, the marketing successes were most likely due to the community of users themselves. The membership form included one question about how the member found out about the BLTV. The overwhelming response was by word of mouth.

There was one additional strategy that was conceived and developed by the Drew Team. This was the idea of packaging various elements of the BLTV and addressing the package of services to a specific need. In this way, a potential consumer need not understand the complexities of the various elements of the BLTV. A potential consumer needed to know only that he/she is unemployed, or running a home-based business, etc. The text of two of these packages are included below. These can be considered as sub-elements to the Business Mentor Program.

There apparently was a break in communications between the Drew Team and the Drew Operations staff as there is no evidence that these packages were ever included in information sheets or handouts that were available at the BLTV counter. It is impossible to know whether such an approach would have been effective.

### Service Packages

Five service packages were defined:

- Home-Based Business and Other Start-Ups Seeking Assistance
- Unemployed Persons Seeking Jobs and/or New Job Skills
- Established Businesses Seeking Additional Resources
- Community Organizations and Non-Profit Corporations

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## Section 7

- Families and Children

The combination of services offered through two of the programs are provided below. Each of the service packages was similar.

### Home-Based Businesses And Other Start-Ups Seeking Assistance

#### Business Mentors And Counselors

- Screening Application
- Start-Up Business Orientation Seminar
- Financing Small Business Seminar
- One-On-One Mentors and Counselors

#### Distance Education Classes In Basic Business Skills

- Accounting
- Advertising
- Management

#### Computer Skills: Basic To Advanced

- Word Processing
- Data Base
- Spreadsheets
- Professional Presentations
- Graphics
- Internet and World Wide Web

#### Telework Stations

- Voice Mail
- Semi-Private
- Access To Computers, Software, And Internet

#### E-Mail Address

- Send And Receive Business Correspondence

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## Section 7

Business Loan Program (Through Business Assistance Center For City of Compton Residents)

- Application Assistance

Web Page

- Business Advertising

For Spanish Speaking Entrepreneurs

- Access Microsoft Office classes given by a bilingual instructor.
- Use Microsoft Office in Spanish assisted by bilingual staff members.

Planned

- Business Training Seminars – In English And Spanish
- Electronic Marketplace For Local Businesses
- MTA Minority Business Registration Seminar
- Business Commerce Daily For Consulting Opportunities
- Lectures By The IRS
- Affordable Business Services -- From Bookkeeping To Web Page Design

Blue Line TeleVillage Services for Unemployed Persons Seeking Jobs and/or New Job Skills

On-Line Job Search

- Los Angeles Times Classified
- Federal Office Of Personnel Management
- Other

Resume Preparation

- Introduction To Word Processing
- Access To Computers

Distance Education Classes

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## Section 7

- English Composition
- Basic Mathematics
- Accounting

### Computer Skills: Basic To Advanced

- Word Processing
- Data Base
- Spreadsheets
- Professional Presentations
- Graphics
- Internet and World Wide Web

### Telework Stations

- Voice Mail
- Semi-Private For Calling Employers
- Access To Computers, Microsoft Office Suite And Internet

### TeleVillage Membership Card

- Includes E-Mail Address

### E-Mail Address

- Send And Receive Business Correspondence

### Planned

- Seminars About Careers In Banking And In Telecommunications
- Educational Opportunities Day

## Solicitation



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## Section 7

There were two passes at solicitation. The first was during the physical development of the facility where technology donations were the goal. The second was near the end of the demonstration year where funding was the goal (this is discussed in Section 11). Neither effort was particularly successful.

During the first solicitation effort, over 21 technology companies and 3 government agencies with “surplus” equipment were formally contacted. Many others were informally approached at various trade shows.

The outcomes were minimal, with the best response coming from the government agencies. In general, personal computer manufacturers were not experiencing a robust market in late 1994 and early 1995. In some cases, the BLTV’s request had missed the donation cycle for the year. One donation was offered by a firm entering the video conference arena but the equipment would not have been immediately compatible with other video conferencing units, potentially leaving it without meaningful applications.

The most revealing comments received were that 1) the project was interesting but the vendor did not see a future market for itself in the low income community in the service area, and 2) the project was perceived as being part of the MTA and the MTA was perceived as having deep pockets.

The most egregious situation occurred when Continental Cablevision refused to live up to its franchise agreement with the City of Compton. Continental was obligated to wire the Community Room in the Martin Luther King Transit Center but refused stating that it “could not see a business case for doing so.” The City’s pressure for compliance was not effective within the time frame necessary for the Project. The absence of simple cable television reception and the lack of video production equipment eliminated an entire family of applications. Ironically, Continental (now Media One) installed basic cable service in the Transit Center after the close of the demonstration year.

Software manufacturers directed the Drew Team to Gifts-in-Kind America, the national recipient of corporate software donations and distributor of donated software to non-profit corporations. The Drew Team’s experience was that the extensive list of desirable programs that had been compiled by the Computer Subcommittee of Advisors could not be satisfied through Gifts-in-Kind America. It seemed that what the BLTV needed was never available and what was available was not what we needed.

Since the technology budget was tight, the MTA rescued the software acquisition effort by providing a site license to the BLTV for its Windows NT and Microsoft Office Suite. Eventually Microsoft donated the Office Suite in Spanish, but since it was for DOS and not Windows NT, the BLTV returned it unused. Microsoft has agreed to replace it with the correct product.

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## Section 7

The County of Los Angeles loaned from its Ford Foundation grant for telecommuting two 486 chip computers with printers and modems to the BLTV. These were installed in the Telework Center in which the County intended to have some of its employees telecommute.

The Southern California Telecommuting Partnership loaned an Intel ProShare computer that had been used in the office established for the earthquake recovery effort and was no longer needed.

GTE provided furniture for the Telework Center from its surplus warehouse. This donation was eventually replaced by the City of Compton with new furniture that matched that purchased for the Computer Center and the Video Conference Center.

Other firms provided discounts on purchases, such as California Business Interiors on Steelcase furniture.

Pacific Bell, with the cooperation of the Library Department of the County of Los Angeles, provided a double grant of 8 ISDN lines under its Education First Program. The BLTV was designated as an off-site partner by the County. The Education First Program also facilitated the lease of CLI video conference equipment that had been negotiated by Pacific Bell for participants in the Program.

The computers for the Computer Center were acquired through the open purchase order that the MTA maintained with its vendor. The furniture was competitively bid in a process managed by the MTA.

The MTA also made significant in-kind donations to the BLTV. These included final site design and construction management services for the tenant improvements. It managed the acquisition of services and products through competitive bids for the tenant improvements and the furniture. The MTA also installed the computer systems and the local area network including the inside wiring that allowed the Telework Center equipment to be added to the LAN.

## **FULL SCALE OPERATIONS (June, 1996 to March, 1997)**

This Section contains a description of what actually happened in the full scale operations at the BLTV. It presents a profile in terms of the end users and the activities that occurred. Numerical counts are provided whenever possible, and qualitative descriptions are provided in other cases. A critique of these results is offered as a guide to future action. Analysis of the organizational participation patterns are included in Section 10 below.

### **Membership Totals**

The BLTV accepted members from June 1, 1996 through the end of its demonstration period. There were 620 memberships sold during that period, or an overall average of 69 per month. By excluding the 134 members that joined during the first month, many of them at the open house event, about 61 new memberships were sold per “normal” month. The lowest levels of new members occurred during the year-end holiday season. The highest levels occurred during the summer when children are out of school and in the early fall as the school year began. Table 10 shows the memberships sold per month.

Five membership categories were offered. The distribution of membership and the fee structure for each is as follows:

			Fee (\$)
Adult	37%		10
Family	15%		20 (for 5 maximum)
Student	26%	5	
Senior	12%		free
Organization	9%		50 (for 8 maximum)

The memberships were for a 12 month period. Fees were set low by operations staff in order to encourage usage rather than revenue. Approximately \$6,000 of revenue was realized by selling memberships. Members were given discounts on training programs, received an e-mail address, and had access to the Telework Center. Non-members were welcome for every service and program except the Telework Center, and non-members did not receive the discounts on training programs and were not given an e-mail address.

### **Operating Hours And Staffing**

The Martin Luther King, Jr. Transit Center was open from 7AM to 9PM Monday through Saturday and closed on Sunday. To operate the BLTV outside of those times required advanced permission from the City of Compton (owner of the Transit Center), and often required charges beyond the

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## Section 8

lease payment to pay for building management and security. Because of the permission and extra charges required, the BLTV seldom operated outside of the normal building hours.

The BLTV was generally open from 9AM to 6PM Monday through Friday, and from 9AM to 4PM on Saturdays. There were 52 total operating hours each week.

The Computer Center was open for business during those 52 hours per week. The Video Conference Center was generally available on an appointment basis, since there are no drop-in services available. The exception was the use of the Video Conference Center as a simple meeting room with no utilization of the technology.

The Telework Center also required a reservation with BLTV staff. Reservations for the Community Room were submitted directly to the building's management (employees of the City of Compton).

BLTV staff deployment varied, partially in response to turn-over in personnel. Operations staff included one full-time director who was in charge of the overall project and specifically charged with raising funds. A second full-time person, referred to as the Operations Manager, ensured the performance of the technology, taught introductory classes, and supported customers. One person was hired part-time to develop computer training curriculum as needed, for the Boys and Girls Club for example. Eventually a full time clerical position was added to answer phones, open and close the facility, etc. After the Operations Manager left the Project in November, 1996, a lower level technical person was retained to maintain records and provide customer support.

### **Computer Center Activities**

The Computer Center was the most popular element of the BLTV. Its popularity was based on the widely held belief among community members that computer literacy is a vehicle to jobs. In addition, interest in the internet was at a fever pitch. On the supply side, there is a relatively low rate of personal computer ownership in low income communities.

Computer technology also lends itself to use by individuals on a walk-in basis. A video conference, in contrast, requires a substantial level of planning, and can't be used by just individuals at the BLTV.

The results of the Computer Center operation are described in terms of the applications that were planned (as described in Section 5).

### **Public Access Computing**

This service was equivalent to a very low cost Kinko's computer access service. Individuals had access to computing power for a range of uses that include writing personal letters, constructing a resume, surfing the web, doing after school research, pursuing hobbies on the internet, developing a

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## Section 8

budget for a business plan, establishing a data base of contacts, and so forth. Unlike Kinko's, guidance and other assistance were available to users (the closest Kinko's was over 10 miles away).

Although it varied, about 40 of the 52 hours per week of operations were dedicated to walk-in public access computing. As public access accounted for over  $\frac{3}{4}$  of the operating hours, it understandably accounted for most of the visits.

Operations staff recorded visits by BLTV members to the Computer Center and did not record visits by non-members. There were 3,526 visits by members over the nine months of full scale operations, for an average of 392 visits per month by members. This is an average of 5.5 visits per member, or a visit by each member once every six weeks on average.

### **Public Classes**

The operations staff provided a regular internet workshop as a marketing tool for the BLTV. The workshop was offered as a marketing device at no charge to non-members, and members were welcome to attend. Over the nine months, 331 people attended these workshops, or about 37 people per month.

The operations staff also offered classes that included basic Computer Literacy, Introduction to Windows, and Microsoft Office Suite -- Access, Excel, Powerpoint, and Word for Windows. The four applications programs were available at the beginning and intermediate levels. An advanced class was planned but there was never sufficient demand to teach the class.

Members were charged \$18 for each class, and non-members were charged \$25. The classes were held routinely at the same times every week. A monthly calendar was distributed showing the class dates and times, and any special uses of the facility that might affect access to it. No classes were held in June or July, 1996, the first two months of full scale operations

Over the 7 months during which classes were offered, 210 people attended these classes, for an average of about 26 a month. Approximately  $\frac{2}{3}$  attended a very basic class -- either Computer Literacy, or Introduction to Windows. This is consistent with the self-assessment of level of computer literacy provided by each BLTV member (see discussion below in Section 8). Of the  $\frac{1}{3}$  of the students that took a class more advanced than Computer Literacy or Introduction to Windows, about  $\frac{2}{3}$  learned word processing. Only 3% of all trainees took an intermediate course -- it was Microsoft Access, a data base program.

### Private Classes

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## Section 8

Theoretically, any community based organization could have contracted with the BLTV to provide privately for its staff or its members the same classes offered to the public.

In the documented cases, the operations staff contracted to provide training to three organizations. In the first case, the BLTV developed curriculum at the request of a Community Partner, the Watts-Willowbrook Boys and Girls Club. Between 6 and 8 children aged 8 to 10 years old received instruction in this curriculum one session per week for 6 weeks.

In the second case, 12 staff members of the National Tracking System (a commercial business) came to the BLTV from central Los Angeles via the Metro Blue Line on 2 occasions to obtain training on Excel and Access.

In the final case, the Drew University School of Medicine arranged for 2 internet training classes for a total of 24 people.

### Private Facility Rentals

On a number of occasions, the entire Computer Center was reserved by a Community Partner. Operations staff may have been present but did not provide formal training. Sometimes the organization was charged a fee but most often the facility was made available at no charge. Table 11 provides the complete list of these private arrangements, with a summary at the end of this section.

There were several variations of this arrangement. In the first, the Community Partner provided open computing for its own members with no formal instruction. BLTV operations staff provided software assistance to the users. The cases include the Champions for Kids after-school computer club run by the Compton School District (8 to 14 students once a week), and the Church of Compton 7<sup>th</sup> Day Adventists (6 to 12 children once a week).

In the second, the Community Partner provided its own instructor in order to conduct training sessions for its own staff, members or clients. No BLTV operations staff were present. Drew Medical University (staff training, 25 people for one session), the Inner City Computer Society (member training, approximately one night per month, attendance varied), and Valu-Med RJTC (client training, 19 people one session per week), Community Development Commission Family Resource Center (client training, 12 people for one session to date), Latino Chamber of Commerce (member training, 2 sessions to date), Los Angeles County Probation Department (clients, 3 to 7 gang members 1 session per week for 6 weeks), and Mandela Children's Learning Village (clients of a private elementary school, 16 children in 2 groups one day per week).

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## **Section 8**

In the third, the Community Partner used the facility to host a workshop of invited members of the public. The only example of this application was the Global School Net Foundation that hosted a free workshop for 50 adults as part of the “Thinkquest” national web page contest.

It was also possible for an entrepreneurial teacher to lease the facility for a fixed fee or a profit sharing arrangement, and market his/her own class. This never occurred although, as noted above, a representative of the Latino Chamber of Commerce taught an Introduction to Microsoft Word in Spanish. The instructor was not charged a fee by the BLTV and the class was offered free of charge to the students.

### **Video Conference Center Activities**

There were two primary uses of the Video Conference Center. The facility was built in order to conduct interactive video conferences with one or more remote sites. The additional use that occurred was as a simple meeting room.

The most frequent use was as a meeting room. This was in part due to the frequent need for a meeting space. The other part was its ease of use compared to the elaborate logistics often required by a video conference.

The Drew Team itself often used the space for on-site team meetings. Every informational tour either began or ended in the Video Conference Center so that a presentation could be made to the whole group. Virtually all collaborative meetings took place there, such as the multi-organizational planning sessions for the June 1 open house. Other examples are identified in Table 12 and summarized at the end of this section.

The applications plan presented in Section 5 anticipated video conferences in 4 categories – distance education, video meetings, library services, and business and professional seminars. In practice, a few other categories emerged, although all applications could reasonably be included in the general category of video meetings. Conferences, continuing education and arts are introduced as separate categories.

Eleven different applications were demonstrated involving a total of 24 individual interactive video conferences.

#### **Distance Education**

CSUDH delivered a distance education class entitled “New Technologies in the Workplace.” Four meetings for the entire senior staff of the City of Compton were held as a video conference and a fifth meeting was held on the CSUDH campus.

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## Section 8

### Video Meetings

Three events occurred as video meetings.

The first arose out of the housing fair that was being held at Manual Arts High School. The after school “Finance Academy” was responsible for several aspects of the housing fair, including promotion. While the Drew Team was investigating the possibility of holding part of the housing fair over the interactive video system, a connection was made between the Finance Academy and the Compton High School video production class. The Compton High students met with the Manual Arts High students over 5 video conference sessions in order to define the promotional needs and ultimately to develop a promotional video for the housing fair.

The second was organized by Pacific Bell’s Education First Program. It involved a single video conference between 4 sites – the BLTV, Sacramento Public Library, Pasadena Public Library and the Education First office in San Francisco. The purpose of the meeting was to initiate a dialogue between libraries participating in the Education First Program about how to improve the use of interactive video for delivering library services or developing library staff. One of the results of the meeting was a computer “list-serve” to facilitate collaboration between participating libraries.

Both the high school and the library application were examples of what is referred to as “tele-collaboration” – the use of interactive communications for real time problem solving. The BLTV reached the semi-final level in the National Information Infrastructure Award competition in 1996 based on the initial Manual Arts - Compton High experience and the potential for more telecollaboration.

The third video meeting was held at the June 1 open house as a representative of the U.S. Department of Transportation in Washington DC made a brief presentation and entered into a dialogue with attendees at the BLTV. This demonstrated the potential for using the Video Conference Center to allow local organizations to meet with elected representatives and staff professionals in state and federal governments.

### Public Library Services

Two types of library services were demonstrated; book readings for an adult audience and story telling for children.

The Education First Program, working with the Pasadena Public Library (an Education First “model site”), organized multi-point video conferences around author’s book tours normally held for a local audience at a particular library or book retailer.



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## Section 8

The first of these was a reading by noted African American mystery writer, Walter Mosley. Mr. Mosley read from his new novel to a 200 person live audience in Pasadena while viewers in the Malcolm X Library in San Diego, the Sacramento Public Library, and the BLTV watched. Following the reading, people in the live audience were allowed to ask questions and then the opportunity to question Mr. Mosley passed in turn to each of the remote sites.

Fourteen people attended the reading at the BLTV. The event was catered by a local book retailer who then also sold autographed copies of the Mosley novel (that had been arranged by the Drew Team) following the reading. This demonstrated the potential for linking sales in the material economy to a cyber event.

Dave Barry in Cyberspace was the title of the second event. It was handled in the same manner, except without the local book sales. In both cases, the Compton Branch of the County Library successfully marketed the event for the BLTV.

The second service application was story telling for pre-school children. The Stellar Day Care Center is one of several other businesses located in the Martin Luther King Transit Center. Arrangements with the Day Care management allowed the kids to simply walk across the hall to enter the Video Conference Center.

On three occasions, the children's story teller located in the Pasadena Public Library led an interactive video session with between 4 and 12 children from the Stellar Day Care Center. The first of these was held as part of the open house in order to demonstrate to parents the range of services available for children. The first of the other two sessions was a trial with 4 children, and the second involved 12 children.

### **Business and Professional Seminars**

There are a number of opportunities for informal education and training separate from the formal programs offered by educational institutions. The BLTV "business mentor program" presented in Section 5 included several such opportunities.

In Los Angeles County there is a substantial network of organizations dedicated to providing assistance to small businesses, start-up businesses, home based businesses and potential entrepreneurs. The Compton Business Assistance Center, host of the BLTV Telework Center, is one of these organizations.

There are various types of assistance including business advocacy, assistance for small business, general business assistance, and financing. There are specialized areas such as import-export, manufacturing, and retail. Community Colleges, regional job training centers, city funded offices,

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## Section 8

federal and state funded offices, and County-wide economic development corporations are involved. Each organization varies in its level of resources and the scope of its services.

The Drew Team attempted to develop relationships with several different types of organizations that would complement the services available at the Compton BAC. The CBAC had recently cut back its one-on-one mentor services in order to emphasize provision of technical assistance for a new loan program for Compton businesses. The BLTV business mentor program that included introductory seminars, individual counseling, a well equipped office environment, and skills improvement actually helped fill a local void.

Two Introduction to Business Planning seminars were delivered via video conference as part of the Business Mentor Program. The first was a two point conference originating in the meeting room at the Pasadena Public Library. Six people attended in Pasadena and 12 people attended at the BLTV.

The second conference involved 3 locations and the presentation originated at the BLTV. Fourteen people were present at the BLTV, four at the Pasadena Library and two in a meeting room at KCET.

An informal pole of consumer acceptance was taken following each session. Without exception, the attendees approved of the video conference experience.

Another professional seminar over interactive video originated at the BLTV and was received at the Pacific Bell booth at the Los Angeles County Tech Expo. The BLTV had been designated as "Best Practices in California" and the presentation explained the project to an audience located at the exposition.

### Conference Speakers

One of the unexpected applications involved bringing guest speakers to a conference via video as part of a conference held primarily in the Community Room. This demonstrated how conferences held in a TeleVillage Center can get access to speakers otherwise unavailable, or can save travel expense and VMT associated with bringing them physically to the conference.

BLTV Operations sponsored its own conference entitled "Women's Day." Over 100 women of all ages attended in order to learn skills needed in the marketplace from cosmetics to technology. As part of this event, interactive video conferences were held with an artist in Texas and a government representative in Washington DC. In both cases, the far side video site was in a Kinko's facility.

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## Section 8

### Continuing Education – Health Care

Continuing education for a variety of professionals including lawyers, engineers and accountants could be one of the regular applications at the BLTV. An event of this type was hosted by the Black Health Leadership Council. It demonstrated the possible role of interactive video conferences with medical professionals. The far side connection was with the Drew Medical University.

### Arts/Social

Two video conferences at the open house event demonstrated how interactive video conferences could be used by the arts community, or more casually by passers-by. The more that people encounter data and video communications, the more likely they will become frequent users.

The KAOs Network located in Leimert Park has a youth oriented video artists program. The Electronic Café in Santa Monica pioneered the use of interactive video both as art and as an every day phenomenon. Video conferences with both facilities were demonstrated at the open house event.

### Telework Center Activities

The Telework Center had two components: two telework stations in cubicles in a single office and connected to the LAN for fast internet access, and the desk-top video conferencing unit that used Pro-Share software for switched access via ISDN (i.e., this software did not support internet video such as CU See Me). Both were underutilized.

Two distinct but related uses were planned for the Telework Center: telecommuting and a access to a professional office as a type of incubator for local start-ups or home-based businesses.

This element was used by 8 individuals for an approximate total of 80 days during the 9 months of full scale operations. Of these, 1 was a telecommuter, and the other 7 were community teleworkers.

The ProShare was difficult to use. One problem was that it required specialized software and therefore required a basic training session before someone could use it. The screen sharing capabilities that make collaborative work possible required a little more training than just the video capabilities. The more significant problem was finding other desk-top video conferencing units that were compatible. Intel was unable to identify for the BLTV known locations of the similar equipment because its customer list was proprietary.

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## Section 8

Two uses occurred. The first was a connection between the BLTV and a junior high school in the Inland Empire. This connection was made to demonstrate the link, not for genuine user service. The second was a training session for librarians about how to use multi-media in library service delivery. The session originated at San Diego State University and was attended by the head librarian at the Compton Library.

There was one telecommuter. The expected demand from the federal, City and County governments, and the SCTP did not materialize. An analysis of barriers is in Section 10.

### **Kiosk Activity**

Official user activity was maintained only by the City of Los Angeles Housing Authority. The AIDS Information Center had no automatic recording device. Wells Fargo declined to provide ATM usage volume. However, Bank of America added its own ATM after the demonstration year, thereby suggesting a satisfactory volume of transactions. The Caltrans Smart Traveler kiosk was not installed and operational before the March 1, 1997 termination of the demonstration period.

Other devices such as the “Postal Buddy” demonstration of the U.S. Postal Service, “Info California” and “Info LA” were pursued by the Drew Team. In each case, the device had completed a trial and was being evaluated, and/or had been withdrawn from service.

In March, 1996, the Housing Authority of the City of Los Angeles installed a prototype kiosk referred to as an “information center” (HAIC). The HAIC was designed for the client population of the Housing Authority as well as for the general public. Users could access four types of information on-line using a standard computer keyboard (this did not offer touch-screen access):

- General information (mission, location, hours of the Housing Authority)
- Jobs available with the Housing Authority
- RFPs issued by the Housing Authority
- Section 8 housing information

The HAIC was in-service for 162 days between March 5 and August 30, 1996. It was then out-of-service until January 22, 1997 when it was returned to service. Children and other people unfamiliar with computers would often casually flutter the keyboard in order to see the screen flicker. This would usually require a BLTV Operations staff member to re-boot the computer, and eventually caused the extended period of repair.

The following usage data were provided by the Housing Authority. These data reflect usage during the 162 days of operation in 1996. A single use was considered to be access to any one of the topic areas. In other words, one person visiting each of the 4 topic areas constituted 4 uses.

Total number of uses: 5,927

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## Section 8

Uses by topic area:

General Information	1,666
Job Information	2,297
RFP Information	487
Section 8 Information	1,477

Average uses per day 36.6

As a reflection of the economic needs of the community, the 2,784 inquiries into either jobs or consulting opportunities were almost double the inquiries into either general information or Section 8 housing (and almost ½ of the total number of inquiries). About 1 in 4 inquiries were, however, about some aspect of subsidized housing.

Under the assumption that each person made 2 inquiries, then 18 people per day used the kiosk. This is about 2 people per hour over a six month period.

### Community Room Activity

Five large meetings were held in the Community Room. Approximately 435 people attended. Virtually none of them signed the User Log so their visitation was not previously counted, but some clearly became members as a result of their visit.

There was a slight barrier to using the room. The City of Compton rented the room (to generate a modest revenue source) to community members for events such as weddings and receptions, and to community organizations for events such as dances and membership meetings.

The BLTV did not have a budget to use the room and virtually always requested a fee waiver. The City was often reluctant to make a commitment to a no-fee user too far in advance because it did not want to lose revenue.

Finally, the cable television equipment that was needed and requested never materialized. Continental Cablevision, the cable franchisee in the City of Compton, was asked to provide: cable service to the building; two-way capabilities so that live programs could originate at the BLTV and be cablecast downstream; and a modest video production package to make it possible to video tape activities or originate live programs.

Despite a franchise requirement to wire the building (service to all public buildings was required), Continental Cablevision refused to comply. So the BLTV was unable to even receive basic cable service, let alone satisfy the other video interests. In at least one case, the lack of cable service resulted in the inability to stage an event – civic education around the presidential debates sponsored by the Chamber of Commerce.

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## Section 8

The room users were the following (see Section 10 for a discussion of the various organizations):

RBAN – 75 business assistance professionals  
ICCS – 100 members of the organization  
Compton Chamber of Commerce – 75 members  
Women’s Day Conference – 100 attendees  
MTA TeleVillage Workshop - 25 attendees  
IRS - Compton BAC Small Business Conference – 20 attendees  
100 Women in Hats showcase – 30 attendees  
Book Fair USA fund raising event - 10 attendees

Total 435 visits

### **Circuit Rider Activity**

The Circuit Rider form of bringing urban functions to the BLTV was virtually not tried. It is impossible to estimate the potential impact had Service Partners been willing to participate in this way. It appeared from the two surveys of visitors to the BLTV that there was interest among users for such a presence. It is possible that some Service Partners will participate in the coming year at the BLTV.

There was one minor exception that should be noted. In response to several requests for some form of transit information at the BLTV (many people wandered into the various businesses in the MLK Transit Center looking for bus information – the BLTV got more than its share of these inquiries because of its association with the MTA ), the MTA provided a help desk for 2 hours a week on Wednesday afternoons for three consecutive weeks.

This effort, while substantially more than any other Service Partner, was not sufficient enough nor sustained long enough to develop a market for it. Because of that, virtually no one used the service and it was justifiably withdrawn.

Near the end of the demonstration period, the MTA installed a “red phone” that offered direct bi-lingual access to transit information. This service is something of a cross between a kiosk and a circuit rider. It provided much better response to sporadic walk-up demand than an actual Circuit Rider could.

### **Operations Summary and Conclusions**

The Drew Team was required to accomplish several key milestones during the demonstration period:

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## Section 8

1. Developing the network technology core at a place accessible by public transit,

*The facility was physically developed, equipped and operated adjacent to the Compton Metro Blue Line Station and at the intersection of 6 MTA bus lines. The development process taught a number of lessons.*

2. Incorporating end user needs and interests in the design of the physical plant and the programs.

*The facility's design and the programs emphasizing economic opportunities were based on the guidance provided by the large community meeting and the continuing group of Advisers.*

3. Recruiting organizations that produce urban functions.

*The project engaged 289 organizations in the Project, 32 of them as active participants (excluding vendors and potential funding agencies), resulting in 11 urban functions appearing at the Transit Center that were otherwise not available there. This simulated 13 bricks and mortar destinations that were functionally but not physically present at the BLTV.*

4. Attracting and serving end users.

*The BLTV Center had 620 members; received at least 6,419 visits, 3,526 of them for computer access; offered 177 classes, trained 2,020 people, and directly supported 8 local businesses.*

The following provides a critique of each component and a guide to future action.

### **Blue Line TeleVillage – As A Whole**

The chart of Urban Functions and Physical Places on page 86 identifies the normally distant physical places whose functionality was provided through the BLTV. While the list is modest compared to what should be offered in a village center, it does demonstrate the point that urban functions can be delivered via network technologies into a transit served, central community location.

One problem was that most community members did not know what to expect at the BLTV. The network technology core of the BLTV is an entirely new kind of facility -- neither a library, school, government office, nor shopping mall. It contains an array of sophisticated and somewhat unfamiliar technologies. In many cases, the applications were entirely novel.

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## Section 8

People go to a mall because they know what to expect there. It will take time and effort for people to know what to expect at the BLTV and to also know how to use the facility to satisfy their own needs.

The prototype was located at a transit center that had many good features – access to rail and bus transit, excellent maintenance and security, light and attractive environment, and containing complementary activities such as the Stellar Day Care Center, the Business Assistance Center, community room, and the Chamber of Commerce.

The location also had a few bad features. It was not an existing regular community gathering place that could benefit from high levels of walk-in traffic. It was physically isolated from the adjacent shopping center due to a prominent dividing wall. The space available was a little less than what was needed and, in the case of the Video Conference Center, poorly shaped for the function.

Something more needs to be done to integrate the fragmented pieces of the BLTV. One option, marketing the existing BLTV with the Compton Civic Center and the adjacent retail mall is discussed in Section 12. Full scale implementation of the “Business Development Program” is another possibility.

Materials outlining the services provided under the Business Development Program were distributed at the BLTV front desk. Some individuals attending an SBDC video conference were identified by the Drew Team for possible connection to a mentor. The business support cluster of organizations was the most effective at using every element of the BLTV. However, greater effort than that was handicapped by the lack of a formal marketing program in general. There was no attempt during the first year to recruit candidates and guide them through the various services available. Formalization and marketing of this program is one of the works-in-progress that the new owner will hopefully pursue.

### **Computer Center**

A Computer Center with internet access does not, at this time at least, provide many urban functions. This will change over time as financial transactions become secure and the internet becomes more of a marketplace. As this occurs, the level of consumer retailing will increase.

Already some universities, CSUDH is among them, offer college degrees with curriculum delivered over the internet. In some cases, those students never travel to campus.

Gradually, all levels of government will also transfer their “front desk” functions to the internet or an intranet available at Urban TeleVillages. And so forth with other urban institutions and businesses.



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## Section 8

While the network is not yet used in those ways by a substantial number of society's institutions, there are still two important telemobility related functions of the Computer Center. The first is training drivers for the "information superhighway" so that when the destinations are in place, the consumers will have the requisite skills to get there. It is comparable to a driver training facility for the world of automobility.

The second is reinforcing the BLTV as a destination. Training on computers and computer based training on other subjects has become an urban function. It is effective to locate these facilities at transit centers while the function is still embryonic.

Also, the Computer Center serves well the other goals of the BLTV – economic development, equal access to information technology, and face-to-face community -- which in turn will help it succeed as a transportation strategy.

Internet classes and introductory computer literacy classes were the most popular. They are being expanded and the number of beginning level classes of the various MS Office Suite programs are being reduced.

There has been virtually no demand for intermediate or advanced classes. Demand for intermediate and advanced classes might increase through a program that was planned but not implemented due to limited operational capacity that would refer people completing intermediate or advanced courses to local businesses.

There was a growing trend of private for-profit and not-for-profit organizations to lease the facility for internal training activities, or for delivery of their training services to their own clients. This can become a source of income and lead to expansion of the Computer Center.

The demand to develop custom training programs for Community Partners was less than anticipated. This suggests that staffing need not include curriculum development beyond the basic software packages, at least at this time.

The closest organization to becoming an "anchor client" for the Computer Center but also for the entire BLTV was Drew Medical University, a large, sophisticated organization located within 4 miles of the BLTV.

### **Video Conference Center**

This element can have more immediate transportation impacts than any of the others. Almost any function can be offered from a distant location. It is technically easy to use and can literally be controlled by children. There was a great deal of unused capacity in the Video Conference Center during the first year. This is related to the problems with using video.

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## Section 8

There are three downsides to the Video Conference Facility. First, the system is very difficult to use organizationally. The communications are synchronous, meaning that participants must be coordinated to participate at the same time at their respective places. If the application involves an open public meeting, there are marketing requirements at both ends, or more ends in cases of multi-point video conferences. These logistics are often difficult to do well and expensive to do at all. This will change as video conferences become a more routine activity of business and government.

The second downside is the cost of the equipment which limits its availability. A constant problem at the BLTV was the lack of a far side video facility for an identified application. This problem resulted in an over reliance on the Pasadena Public Library. The PPL, as a model site for Pacific Bell's Education First Program, was well equipped and distantly located so as to be an ideal far side partner. The management and staff of the PPL were extremely cooperative and contributed to the successes at the BLTV. Nevertheless, congestion occurred around access to their equipment as the PPL had its own programs it was trying to develop, and of course also function as a far side partner for other organizations as well. As the cost of video equipment continues to fall, more far side partners will emerge.

Third, the technology is not as reliable as voice telephony and usage requires commitment of staff time. The preparation for every video conference included a test connection a day or more in advance of the actual application, and a one hour lead for making the connection on the day of the application. A staff member provided camera control and nearby trouble shooting during each video conference.

Distance education classes made up less of the facility utilization than expected. The educational institutions are not yet willing to routinely provide distance education courses for regularly enrolled students. Contract classes require a significant marketing effort based at the BLTV. A fee collection system is also needed. These are organizational problems that can be solved with more time.

The library services, the book tours and story telling, produced two kinds of benefits. The first was the cultural enhancement of the community that occurred with no or very low transportation costs. The second was the value of the demonstration itself. Certainly the story telling over interactive video had never been tried elsewhere and probably the book tour was relatively novel. That these were accomplished at all changes the way in which citizens and library professionals alike think about the flexibility of library services and perhaps other government services as well.

The book tour helped demonstrate another important aspect of the BLTV. A retail book dealer catered the evening and then sold autographed copies of the book after the event. This suggests an entire family of possibilities by which the local material economy can benefit from a cyber event.

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## Section 8

The story telling demonstration had some problems which led to its cancellation. First, the PPL children's story teller was courageous in her willingness to experiment, but that experiment came at her own and the PPL's expense. Unlike the SBDC seminar which was delivered to an in-place audience at its point of origination as well as the far side audience via video, the story telling was done specifically for the far side audience without an in-place audience of children. If there is an in-place audience, the cost of serving the second audience is the marginal cost of the network usage. Without an in-place audience, the story teller is doing additional work and the cost becomes much higher.

The reason for the decision to conduct the service for the video audience only is related to the nature of controlling a room full of children and a far side room full of children. The problem of room control came up in the third and final trial. Because of a miscommunication between the Drew Team and the Stellar Day Care staff, approximately 12 children participated where formerly 6 or less had been involved. And the 12 children were not properly supervised. The result was an experience that was too chaotic.

However, both problems can be solved. Additional trials with book reading with an older audience were and are warranted. Until the trials can be demonstrated with both an in-place and a far side audience, the costs should be spread around by recruiting other libraries such as the Sacramento Public Library and the Malcolm X Public Library in San Diego. It is unrealistic for the PPL to pay disproportionately for the costs of innovation.

The Small Business Development Center seminars demonstrated the most cost-effective use of video. One presenter can serve audiences at three (or more) locations. This not only saves transportation costs but it also improves organizational cost-effectiveness. If video conferencing became a regular practice, each SBDC could spend less time presenting introductory material and allocate more time to developing sharper specializations in each locale which could then be widely shared with others throughout the region with an interest in those special topics – without the need for additional travel.

### **Telework Center**

The Telework Center also had a great deal of unused capacity during the first year. This is especially disappointing since the re-organization of the work function into Urban TeleVillages is an essential aspect of telemobility.

One surprise was that the dominant usage of the Center was for local based telework rather than for telecommuting. It was a surprise because of the relatively low level of home based work in the service area reported in the 1990 Census, the relatively ineffective job of implementing an integrated business assistance program, and because of the unsuccessful recruitment of Employer Partners.

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## Section 8

On the positive side, this also means that the local SOHO/incubator function may be a more productive market than initially assumed. This may become even more true with the “welfare to work” policy of the federal government due to be implemented in the next 12 months. If new “work” can be developed and nurtured at a TeleVillage Center, then the job commute may not become necessary.

The failure of the telecommuting function has several causes. The first is the general problem with attracting telecommuters. Most employers do not allow it. Two actions could help the situation. The MTA, SCAG and the AQMD – all organizations with missions that are supportive of telecommuting – could make a commitment to developing facilities-based telecommuting programs for their employees, particularly in Urban TeleVillages. Second, this same group of organizations plus others such as the City and County of Los Angeles could form a consortium that would become regional leaders promoting telecommuting to private enterprise, particularly in Urban TeleVillages.

The second problem is with time and timing. The research results of the Telework Facilities Exchange Demonstration Project (a multi-governmental telecommuting program conducted using available offices in government buildings throughout the South Coast Air Basin by the Institute for Local Self Government between 1992 and 1995) suggested that organizational participation in telecommuting follows a ladder (like the one discussed here in Sections 7 and 10). Progress up the ladder proceeds only during certain windows of opportunity. This requires a virtually permanent recruitment process that continuously revisits organizations to see if they have become receptive. The Drew Team could recruit for only about 6 months..

The third problem was somewhat self-inflicted. It took an extraordinarily long time for Drew EDC and the City of Compton to develop an MOU for the use of the Business Assistance Center as the host of the BLTV Telework Center. Problems included the insurance coverage required of telecommuter’s employers, and the hours of operation. City offices were generally closed on Fridays, and Friday became a prime day for telecommuting demand.

The reason that the ten potential telecommuters employed by the County of Los Angeles (described in Section 7) were not placed at the BLTV can be traced directly to the delay developing an MOU. It is also true that organizational lapses are part of the start-up of any operation and such problems are to be expected. In this case, telecommuters are hard to find and the loss was not replaceable.

Telecommuters can be found for the Telework Center in the future. A sustained recruitment and education effort will be necessary.

### **Kiosks**

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## **Section 8**

The kiosks were well received by the public as evidenced by the large number of uses of the Housing Authority Information Center. The Caltrans Smart Traveler device was not delivered within the first year. It has since been installed.

Every effort should be expended to add kiosks in the coming years. There are at least two more floor positions that have been wired for electrical and telephone connections in order to accommodate additional kiosks. Devices from the federal government and commercial retailers should be sought in particular.

### **Community Room**

The community room was used to host a number of meetings that were used to introduce the BLTV to a wider community of potential users. The inability of Continental Cable (now Media One) to wire the facility within the first year's operations significantly hurt the Program.

Many opportunities were missed to hold meetings around some cablecast events. The Presidential debates is one example where the Compton Chamber of Commerce intended to host a civic education event. This would have helped reinforce the BLTV as a central meeting place and would have provided another means for introducing new applications of information technology to the community.

Cable service has recently been installed. Investment will be needed to improve the infrastructure of the room. A single big video screen, several smaller monitors, appropriate wiring, and a satellite dish for reception should be added.

Now that the City of Compton is operating the BLTV, it may become easier and less expensive for the BLTV to reserve the community room for developmental events.

### **Circuit Rider**

This function almost completely failed during the demonstration. Yet its potential impact is great since it would very concretely bring urban functions to the TeleVillage Center.

The Circuit Rider function is currently handicapped by the shortage of space. The original intention was to use administrative space that has since be appropriated by the Project Director as her office and is no longer appropriate to share with a circuit rider. The Telework Center remains a possibility although it is remote and could interfere with the operation of the Business Assistance Center and the privacy of the other teleworkers.

The MTA circuit rider simply set up a table in the hall way of the transit center. This may be the best approach but an agreement will be needed with the City of Compton.

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## Section 8

Recruitment of circuit riders centered on the federal community. Given the difficulty recruiting federal participation in the Project, subsequent attempts to recruit circuit riders should broaden to state and county offices.

Finally, this innovation may work out the best if it were combined with the telecommuting function. The telecommuter could directly deliver service to the public as opposed to the normal “back-office” profile of most telecommuters.

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**Section 8****Computer Center Activity Summary**

Service	Organizations	Classes/Events	Person- Visits
Public Access	Does not apply	Does not apply	3,526
BLTV Public Classes	N/A	45	331
Contract Classes	3	10	90
Facility Rental Classes	10	98	1,323
Internet Classes	N/A	18	210
			1,954 Trained
Total	13	171	5,480

**Video Conference Center Activity Summary**

Service	Organizational Appearances	Classes/Events	Video Confernces	Person-Visits @ BLTV
Distance Educ.	2	1	4	48
Telecollab. Mtgs				
- Comp/Manl	2	1	5	12
- Lib Staff	4	1	1	4
Library Services				
- Readings	8	2	2	24
- Story Tell	2	1	3	16
Bus Assistance				
- SBDC	4	2	2	18
- Tech Expo	2	1	1	1
Conference Women's Day	1	1	2	70
Continuing Ed - BHLC	1	1	1	12
Arts	2	2	2	12
Govt Access	2	1	1	6
Meeting Room	Unknown	50	0	200
Total -- Video Only	30	14	24	223
Grand Total	30+	64	24	423

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**Section 8****Telework Center Activity Summary**

Facility	Activity	Users	Person- Visits
Telework Station	Telecommuting	1	10
Telework Station	SOHO	7	70
Pro-Share Vid Conf.	Staff devel. training	1	1
<b>Total</b>		<b>9</b>	<b>81</b>

**Operations Summary**

Component	Activity	Organizatnal Appearances	Events or Classes	Video Conferences	Person - Visits
Computer Center	Classes	13	171	-	1,954
	Open Computing	-	-	-	3,526
VideoConfer Center	Video Conf	30	14 (6 Classes)	24	223
	Meetings	Unknown	50	-	200
Telework Center	Telecommute/ SOHO	1	7 people	-	80
	Desk Top Video Conf.	2	1	1	1
Community Room	Meetings or Conferences	7	8	-	435
Kiosks	Info- Transactions	3	HHIC only	-	5,927
Circuit Rider	Information	2	-	-	Unknown
Total Classes of All Types			177 (6 Video)	25	2,020 Trained
Total w/o Kiosk					6,419
<b>Grand Total</b>		<b>58*</b>			<b>12,346</b>



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**Section 8**

\* 32 different organizations

**Facility Use By Organizational Cluster**

Organizational Cluster	Computer Center	Video Center		Telework Center	Community Room	Kiosk
		Video	Meeting			
Business Support	X	X	X	X	X	X
Education		X				
Government	X	X		X	X	X
Children	X	X				
Religious			X			
Health Care	X	X				
Culture/Arts		X				X
Consumer	X			X		X

**Urban Functions And Physical Places  
At The Blue Line TeleVillage**

**Urban Functions**

**Physical Places**

Public library services

Central library

Arts & culture

Museum

Artist studio

Education

High School campus

College campus

Meetings

Office building

Office work place

Retail sales

Bookstore

Technology access

Community technology center

Training

Training center

Business assistance

Regional Small Business Development

Government program information

Federal Building

Los Angeles City Hall

Retail banking

Branch bank

## **MEMBER CHARACTERISTICS**

The need for documentation was one of the reasons that the Drew Team required a membership in the BLTV as a condition of access to the Computer Center and Telework Center. New members completed a brief questionnaire that asked about their residence, personal characteristics, interests and mode of travel to the BLTV Center. Applicants could and sometimes did fail to provide all information requested, and no attempt was made to verify the validity of the responses received. Nevertheless, the membership data base provides valuable information about participants in the demonstration.

### **Membership Totals**

The BLTV accepted members from June 1, 1996 through the end of its demonstration period. There were 620 memberships sold during that period. Refer to Section 8 for a more complete discussion of membership totals.

### **Location of Members**

The membership survey requested the zip code of each member. Both dispersion and concentration are evident from these data.

Members came from 91 zip codes, which is about 50% of all zip codes in the “central” area of Los Angeles County that includes everything south of the San Fernando Valley and west to the Orange County border. The most distant member was from Brentwood, approximately 40 road miles from the BLTV.

Members were not simply visitors since members were required to complete a form and pay money. Furthermore, there was very little County-wide publicity. Therefore, this level of dispersion of members may suggest a wide-spread interest in the services of a TeleVillage.

Members were also concentrated in 3 zip codes, with 316 or 52% located relatively adjacent to the Project site. The Project was located in the northeast corner of zip code 90220 about 1 city block from the western boundary of zip 90221. These two adjacent zip codes accounted for 250 members or 41% of the total membership. The third primary zip code is 90222 and it is 4 city blocks away at the northern boundary of 90220.

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## Section 9

The three primary zip codes include the City of Compton, small pieces of Gardena and Los Angeles, and small pieces of the Rosewood and Willowbrook districts of the County of Los Angeles.

The concentration suggests that the TeleVillage has a local pull, functioning as an activity center for the immediately surrounding territory. This is consistent with the concept.

### Travel Behavior of Members

Los Angeles County functions through automobility. As discussed on in Section 4, a higher proportion of the residents in the BLTV service area use automobiles for their journey to work than in the County as a whole. The relatively high rate of car pooling by residents in the service area explains this rate of automobile use. The poorest families tend to use public transit more often than the County average, and the wealthier families tend to use public transit less.

No firm conclusions can be drawn from the travel mode data for the BLTV members. The journey to work and the trip to the BLTV are not comparable. The membership data base included some overlap in travel mode categories. The numbers are small. Nevertheless, these data create a preliminary picture of the potential for telemobility even in a County based on automobility.

As expected, most members of the BLTV used an automobile to travel to the facility. However, the proportion of those using an automobile was dramatically lower than the rate of automobile use for the journey to work.

There was a significant difference in the propensity of members to use an automobile to travel to the BLTV, compared to the County and service area averages for the journey to work. The County rate for auto use is 85.6% of households, vs 88.3% for the total service area. In comparison, only 70.8% of the members used an automobile to travel to the BLTV.

The County rate for taking public transit to work was 6.5% of households, and the average rate in the service area was 6.2%. In comparison, 20.2% of the members used public transit to reach the BLTV.

The County rate for walking to work was 3.3% of households, and the average rate in the service area was 2.4%. In comparison, 9.0% of the members walked to the BLTV.

This means that, when the BLTV was the destination, there was over 3 times the likelihood that public transit would be used, and a little under 3 times the likelihood of a walking trip. Taken together and compared to the County average (since BLTV members are drawn from the entire

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## Section 9

County), members were 3 times more likely to walk or take public transit to reach the BLTV, with the savings causing a reduction in automobile usage.

As mentioned in the previous discussion about distribution of members, 52% of the members reside in three zip codes that are the closest to the facility. Of these 316 members, 72.2% used an automobile (compared to 70.8% of all members) to reach the BLTV; 13.0% took some form of public transit (compared to 20.2% of all members); and 14.9% walked (compared to 9.0% of all members).

This slightly higher rate of auto usage by those closest to the facility suggests the convenience of the car, and perhaps a slight tendency to chain car trips with the BLTV functioning as only one destination. This interpretation supports the idea that as more trip purposes can be accomplished at a televillage, fewer auto trips might result. Alternatively, since the longest trip to the BLTV from any of the three adjacent zip codes is around two miles, such trips can be easily accommodated by some form of smart shuttle transit, or by low range, low cost electric vehicles.

The significantly lower rate of public transit usage and significantly higher rate of walking by the members closest to the facility might suggest that, on average, walking distances can reduce the demand for any kind of motorized transit.

In looking at the mode split by the public transit users, 77.2% of all transit-using members took rail and the remainder used a bus. For the members residing in the three concentrated zip codes, only 65.8% used rail to reach the facility. This relative decline in rail use seems to make sense in so far as the rail runs on a fixed north-south route. Those that live the closest will doubtless require access from east, west, north-east, and south-west that can be most effectively achieved by bus.

Additional travel mode data are presented below for “frequent users.”

### Member Characteristics

The member survey requested only a few characteristics of the members. These characteristics were those thought to have a potential relationship to programs, such as age and gender.

About 22% of the members failed to provide their age. Comparing those that did with comparable Census categories suggests that the age distribution of the members approximates the age distribution in the service area. For example, 33.7% of the members were high school age or younger, while 36.1% of the service area were high school age or younger.

The gender split among members almost exactly reflected that in the service area – 50.4% female and 49.6% male. In the Census, 50.5% of the service area population was female.

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## Section 9

The survey asked members to assess their degree of computer literacy. A little over 70% of the members responded. Of the 446 responding, 28.9% had no computer experience, 38.9% were novices, 27.8% were intermediate, and 4.5% were advanced. Combining categories, slightly over two-thirds of the members responding had no or relatively low computer skills. If you assume that those with intermediate and advanced skills were more likely to respond to the literacy question, then perhaps as many as three quarters of all members had low computer skills.

Breaking down computer literacy by age, every respondent under age 10 was a novice or less. Seventy-one percent of junior/high school age was a novice or less, 58% of college age was a novice or less, 60% of adults under 60 was a novice or less, and 85% of those over 60 was a novice or less. Based on these data, the age groups most in need of computer training are the very young and those over 60, followed by junior and senior high schoolers.

Regarding gender, an equal proportion of both males and females were computer novices or less – about 2/3 of the respondents for each gender.

### **Member Service Preferences**

The membership application asked a variety of questions about interests. The problem with this approach is that the TeleVillage is a novel phenomenon, and new members could not possibly understand the options to which they were asked to respond.

For example, 98 members or about 16% of the total indicated an interest in the Telework Center and its services; 87 members checked interest in using a telework station. Since the Telework Center was substantially underutilized, the Drew Team conducted a telephone survey of a small number of those members who indicated interest in a telework station.

The survey excluded those who indicated interest but who failed to provide their age, or who were younger than 18. From the remaining 45 members, 10 individuals were contacted by telephone (22% of those eligible) in order to determine whether they had used the Telework Center, and generally why they were interested.

Of those 10, 7 did not understand the difference between a telework station in the Telework Center and a computer station in the Computer Center. For the most part, these members also had only a single experience in the Computer Center.

The 3 members that understood the function of the Telework Center were not strong candidates for its use. One individual was interested in an unspecified video conference application but was unaware of the difference in capabilities and applications between the Telework Center's desk-top

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## Section 9

video-conferencing unit and the Video Conference Center. The second individual was interested in telecommuting from the Telework Center, however he worked a late shift as an MTA policeman. Realistically, he would be a very unlikely candidate for telecommuting. The final respondent visited the BLTV on two occasions but found the Telework Center closed (the Business Assistance Center hosting the Telework facility was closed on Fridays until November, 1996). He never received follow-up assistance from operations staff. Since his age was 69, his interest was for personal objectives that could have been accommodated in the Computer Center. He was definitely not a candidate for telecommuting.

The member interests reflected Table 13 should be used as base line data for comparison to new members in several years, and should, in the current year, be interpreted as a general outline of member's interest. For example, one individual at the open house event expressed interest in video conferencing because he knew that powerful players in the record industry used video conferencing. He believed that if he gained experience with the technology, he might be an attractive candidate for employment in the record industry.

Seventy-five members (about 12% of total membership) indicated some interest in the Video Conference Center. The most popular application was distance education for college courses and this most likely reflects a sincere interest among members in improving their level of educational achievement. A little over half of those checking the Video Conference Center indicated interest in electronic meetings.

Seventy-eight members indicated an interest in at least one kiosk. Over  $\frac{3}{4}$  (61) of those responding were interested in the ATM. Nearby in second place was the Los Angeles City Housing Authority kiosk at 70% (55 responses) followed closely by the AIDs Information Kiosk provided by the Museum of Science and Industry (47 responses). The Caltrans Smart Traveler was a distant 4<sup>th</sup> with only 22 responses (28% of those with an interest in at least one kiosk). It is impossible to know whether this reflects little interest in transportation and transit information or whether the unavailability of the kiosk diminished interest in it. In any case, Smart Traveler never became operational at the TeleVillage during the demonstration year. The membership survey did not ask about interest in kiosks that were either not present or promised, such as a kiosk for retailing.

The preferences for the Computer Center were strongest for internet related applications. These included internet classes (122 responses), Netscape (101), and web page design (94). The category IRC-internet relay/chat was selected by 67 members and this relatively low number probably reflects low familiarity with the nature of the application. Open computing (106) was also highly favored as was desk top publishing (97). In general, the applications of lowest interest were specific software packages; Word (47), Power Point (43), and Excel (49).

## **Frequent User Survey**

The Drew Team also surveyed people who were using the facility, primarily the Computer Center, during the last two weeks of the demonstration year. Operations staff tried to get every visitor during that period to complete the survey. Visitors on repeat visits during the survey period were restricted to only one response. The effect was to obtain information on about 1/3 of what might be considered the 100 or so most frequent users.

Thirty-four forms were collected during the two week survey period. No person completed two forms but a small but unknown number of users left without completing a form. Every question was not answered on every survey. The percentages given in this analysis are the percentage of people who answered any given question. The people surveyed were at the BLTV specifically to use the Computer Center.

Among this group of users, 27% (9 of 33) said that they had a personal computer at home. Their median age was 29, and 81% (21 of 26) were already a BLTV member.

In terms of frequency, 33% came daily, 15% 2 or 3 times a week, and 42% once a week. This means that 91% of those surveyed used the BLTV at least once a week.

One person was on his/her first visit, 1 person attended every 5 or 6 months and 1 person responded that he/she attended "when I can."

In terms of preference for days and times, the data are sketchy. It appears that Monday is the only clear day of preference, and that mornings are slightly more popular than afternoons among the users surveyed.

Twenty-two of the respondents provided their zip code. The distribution of zip codes suggested a greater concentration near the BLTV than the total membership with 60% responding to this survey originating in the 3 nearest zip codes (vs 52% of the total). Three of the remaining ten users came from zip codes that are between 1.5 and 2.5 miles away. The most distant zip code was about 6 miles away as the crow flies.

A very crude estimate of the average distance traveled by these 22 frequent users was developed by measuring the distance as the crow flies from the BLTV to the center of each zip code. The average distance by this method was 1.95 miles, while the median was 0.5 miles. In other words, the frequent users appear to be much more local than the total membership.

In a particularly promising result, transportation usage by this group of predominantly frequent users showed about the same interest in walking as the total membership, but an even greater interest in



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## Section 9

public transit over private automobiles. Private automobiles were used to reach the BLTV by only 45% of those surveyed (vs 70.8% for all members, and 85.6% of County residents for their journey to work); public transit was used by 44.1% (vs 20.2% for all members, and 6.5% of County residents for their journey to work); and 10.3% walked to the BLTV (vs 9.0% for all members, 14.9% for those members who live in the closest three zip codes, and 3.3% of County residents for their journey to work).

The split within transit users was close to the split for all members; about 70% in this survey used the Metro Blue Line (vs 77% of all members) and 30% took a bus (about 23% of all members). While the numbers are small, the results reinforce the trends found in the membership data base, and these data represent those who make most of the trips to the BLTV.

Also of interest, these users chain their trips to the BTLV to other nearby locations; 11 responded that they also visit the supermarket in the adjacent shopping center, and 8 also visit some facility in the Compton civic center (which includes the library, post office, city hall, and county court building) which is about 1/3 mile from the BLTV.

The services of greatest interest were related to the internet; 21 of the 34 respondents indicated internet access and 15 checked E-mail. Computer classes were checked by 10 and specific software uses were checked by 8 (4 indicated their interest was in word processing).

The average satisfaction rating of the respondents was 9.6 on a scale of 1 to 10, 10 being best. The lowest rating received was one 7, while twenty-three people gave the BLTV a 10.

### Travel Patterns

	County	Service	Member	Core User
<b>Auto</b>	85.6	88.3	70.8	45.4
<b>Transit</b>	6.5	6.2	20.2	44.1
<b>Walk</b>	3.3	2.4	9.0	10.3

### Telework Center Survey

As discussed in Section 8, the Telework Center was the most underutilized element of the TeleVillage. There was 1 telecommuter and the business development program had yet to produce

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## Section 9

a candidate for the “incubator” function. There were, however, several regular users of the Telework Center. Profiles of the telecommuter and 2 SOHO teleworkers are included next.

Telecommuter

Business: Attorney

Date Joined: July, 1996

Residence: Compton, .5 mile from the BLTV

Normal Office: Los Angeles Central Business District

Source of Reference: Chance visit (but had seen a reference to the BLTV in the newspaper)

Travel Mode: Not given

Reason for Use: Internet access, computer access but eventually bought his own computer

Actual Frequency: 1 day per week

Target Frequency: 3 days per week

Needs: Sunday access, e-mail, better on-site technical support

Other BLTV Services: None, although he was aware of video conferences; Comments: None

Teleworker #2

Business: Attorney

Date Joined: September, 1996

Residence: 4 miles from BLTV

Normal Office: Home office

Source of Reference: At the MLK Transit Center for other reasons

Travel Mode: Private automobile and Metro Blue Line

Reason for Use: Internet access, a professional work environment to complement his home office, BAC fax machine, and the BAC conference room

Actual Frequency: 1 day per week (Friday)

Needs: No response

Target Frequency: No response

Other BLTV Services: Computer Center, unaware of the video conference based services

Comments: Concerned about long term stability of the BLTV. Has seen Compton lose too many demonstration projects once the original funding runs out.

Teleworker #3

Business: Film and TV production

Date Joined: February, 1997

Residence: Near Los Angeles Central Business District

Normal Office: None

Source of Reference: STTP News (transportation publications out of Washington DC)

Travel Mode: Metro Blue Line

Reason for Use: A professional work environment to complement his home office, and the BAC conference room

Actual Frequency: Several times a week, usually in the mornings

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## Section 9

Needs: Expanded hours to include evenings and Sundays

Target Frequency: None given

Other BLTV Services: Not answered

Comments: Happy with his experience

## **PARTICIPATION ANALYSIS: SERVICE PARTNERS AND COMMUNITY PARTNERS**

The impact of telemobility and the long term success of Urban TeleVillages are a function of the rate at which organizations adopt a network strategy. A network strategy will enable organizations to conduct a higher proportion of their business over telecommunications networks, rather than through bricks and mortar buildings.

With a network strategy, organizations will use networks to hold meetings, share information, and perform the central coordinating function that formerly required face-to-face presence. E-mail, voice-mail, audio conferencing, and video conferencing are network tools for those functions.

Organizations will use networks to provide services and information to customers, clients, and constituents. From information about material products and physical locations to actual on-line transactions, organizations have available a large number of network technologies that include telephone, cable and broadcast television, fax, kiosks, and the internet.

Organizations will also use networks to produce services and products that in many cases no longer require a central location in order to facilitate management oversight or to provide special machinery or files. Personal computers and networked computers allow employees and business units to function with more physical dispersion than ever before. Telecommuting is the term used to describe these activities.

While a network strategy represents a major innovation to most organizations, movement toward increased network utilization is inevitable because of the economics of the technologies that are involved. A network strategy can, for many organizations, both reduce costs and increase revenues. Costs can be lowered by substituting network services for personnel, real estate, inventory, or transportation. Revenues can be increased by offering value-added services or by capturing a larger market share through the competitive advantage of speed (e.g., faster paced transactions over a network).

Furthermore, these economic trends should gain, not lose, momentum since the price-performance ratio of computer and telecommunications technologies are improving at rates unprecedented in the history of any technology.

*The issue, then, is the rate at which a network strategy is adopted by those organizations that produce the urban functions that require travel. Spatial re-organization of urban functions can occur only once a threshold of organizations have committed to a network strategy. It is through the flexibility of networks that organizational functions can become manifest as places outside of the physical bricks and mortar location.*

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## Section 10

Therefore, one of the aspects of this study is to learn about the status of progress toward adoption of a network strategy by organizations within key industries. The project has produced a snapshot of the diffusion process of the network strategy in Los Angeles County.

The framework for this analysis is an expanded version of the 5 step ladder introduced in the discussion of the organizational recruitment process in Section 7. The first 5 steps remain the same while steps 6 through 10 represent implementation steps culminating in adoption of a network strategy.

### **Ladder of Participation**

1. Attempt to contact (no response)
2. Initial contact (phone call or meeting or letter)
3. Additional contact – usually in-person visit – at BLTV or their site
4. Identify possible applications
5. Initiate planning for applications
6. Complete planning for applications
7. Conduct a trial for an application
8. Implement additional applications or trials
9. Develop routine use
10. Adopt or connect to a network strategy

This ladder represents a first attempt to model the process and describe the progress County-wide for the transition from bricks and mortar to network technologies. It also creates a clear picture of the work that has been started but is still in progress. Depending on the organization, it might take several years to make it as far as step 7 or 8.

Some of the limitations of the “Ladder” include the following:

- It does not account for participation that was “easy” vs “hard.” For example, providing a circuit rider or using the Computer Center is easy relative to developing a video conference application. Note that the level “9”s are all regular users of the Computer Center.
- It does not account for when in the overall development process the contact occurred. An organization that was contacted early before the facility was open might not be as responsive than if it were contacted at a time when participation could follow immediately.
- It does not tell how much effort was required by the Drew Team to attain the level listed. Some may have attained a high ranking because of the Drew Team’s effort while others could have been higher with additional Drew Team support.

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## Section 10

The findings for each cluster organizations are presented below. Organizations have been assigned to their cluster on the basis of the particular service of interest to the BLTV, not necessarily their dominant mission. In any case, cluster boundaries are imprecise.

The presentation of each cluster begins with the Participation Ladder for that cluster. This is followed by a number of organizational profiles that provide a narrative of what occurred, applications identified, and reasons for not advancing to the next step on the Ladder. For the clusters with the greatest number of organizations, a brief overview of progress is included. Community Partners are tracked separately from Service Partners to see if there are consistent differences in performance.

Complete lists of organizations by cluster, labeled as to Community (CP) or Service Partner (SP), and step level on the Ladder are at the end of the Section.

### **Business Support & Training**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	0	2	1	2	1	0	2	0	1	0	9
SP	0	11	4	4	2	1	1	2	1	0	27
Total	0	13	5	6	3	1	3	2	2	0	35

#### Inner City Computer Society (ICCS, Level 9)

The ICCS is a grass roots, non-profit organization with the goal of helping inner-city businesses and individuals capture the benefits of information technology. Programs include training, education and applications development. The founder and President of the ICCS was a leading member of the BLTV's Board of Advisors.

The ICCS provided support at the June 1 open house event. The ICCS also held one of its quarterly meetings at the BLTV and subsequently developed a monthly computer training program that is based at the BLTV. This fulfills one of the objectives of the BLTV in that the facility serves as a "common carrier" for diverse community interests, each with the skill to utilize the resources.

#### Small Business Development Centers (Level 8)

The network of SBDCs is funded by the California Trade and Commerce Agency, the Chancellor's Office of California Community Colleges and the United States Small Business Administration. It is

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## Section 10

a one-stop business center serving both start-up and existing businesses through general information presentations and individual counseling sessions.

There are five of these centers in Los Angeles County, each with competency in core business assistance topics such as preparing the business plan, as well as expertise in a business specialization. For example, the Pasadena SBDC specializes in entertainment business development and international trade.

In general, aspiring entrepreneurs attend an orientation session in which the basics of starting a business are covered. They then may attend more focused sessions on topics such as small business marketing or import/export issues for small business, or they may work individually with an SBDC counselor on those or other topics.

The applications planned included holding a large group orientation seminar as an interactive video conference, and holding an individual counseling session over the desk-top video conference computer.

The first orientation seminar originated at the Pasadena Public Library where a group of nine attendees had gathered rather than at the nearby offices of the SBDC. Eight people attended the seminar at the BLTV. The South Central Los Angeles and the City of Pasadena offices marketed the event and also managed the reservations. The BLTV contributed a small marketing effort involving fliers on-site, materials given to the Latino Chamber of Commerce for distribution, and a mailing to people who had attended the June 1 Open House.

Participants in Pasadena came from Bellflower, Long Beach and West Covina as well as the greater Pasadena area. This suggests the utility of a network of Urban TeleVillages capable of multi-point video conferencing. The audience in Compton was essentially local.

A second trial was planned and implemented. This time the presentation originated at the BLTV and it was delivered as a multi-point video conference with sites at the Pasadena Public Library and KCET studios. There were 23 people at the BLTV, 2 in Pasadena and 2 at KCET.

Each session was well received by both the presenters and the audience. The video conference element was especially well received, although it is impossible to determine the degree to which the novelty of it played a role in consumer acceptance.

The orientation sessions produced a candidate in Compton for the individual counseling service planned to complement the large seminar. The candidate wanted advice about running a home-based business. The Torrance office of the SBDC had matching technology with the desk-top video conference computer at the BLTV, and had counselors who could help the candidate with her home-based business.

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## Section 10

However, the Torrance SBDC had never used its system at that site for lack of an application and far-side partner. The unit was unable to receive or initiate calls, possibly because the ISDN line had not been properly programmed. In any case, the technical problem was not solved before the end of the BLTV demonstration period and the individual counseling trial was not implemented.

The participating SBDCs indicated an intention to continue the use of video conferencing at the BLTV. Two additional applications were identified:

- Video conference of SBDC statewide quarterly meetings.
- Video conference of the “Quick Start Program” originating at SW College in San Diego.

Neither application was pursued as the demonstration period expired before the applications could be planned.

The specific benefits of participation in the BLTV identified by SBDC managers included:

- The video conferencing capability allowed the SBDC to deliver each basic orientation class to a larger audience, thereby freeing time in each office to develop more refined specializations or conduct more individual sessions.
- The BLTV provided a safe, clean, well equipped meeting place that was judged better than the alternatives available for similar seminars.

### Latino Chamber of Commerce (LCoC, Level 7)

The Latino Chamber of Commerce functions area not only as a business support organization but also as a more general advocacy organization for the Hispanic community in the greater Compton area.

According to the Chamber, approximately 70% of the Spanish speaking community in the City of Compton is not bilingual. Therefore, services offered only in English are most often not utilized although they may be needed. It also appears that a growing percentage of the Hispanic population own and operate small, independent businesses, such as garages, grocery stores, and restaurants.

Based on these observations the Latino Chamber identified the following applications for trial at the BLTV:



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## Section 10

- A Spanish language version of the business development seminar known as “My Own Business.” This program was invented by a successful, local Caucasian business person and had been well received by English speaking members of the LCoC.
- English as a second language classes (ESL) and citizenship programs aimed at Hispanics. Although ESL classes are widely available, they are often not available at the right time (e.g., in the evening) or are over crowded.
- Computer instruction in Spanish.
- Special programs that link work force training to needs of Latino businesses. For example, Latino businesses in the Compton area have historically had a difficult time qualifying for SBA loans due to the unschooled accounting methods of small Latino entrepreneurs. A program to train Hispanic students in bookkeeping in exchange for a one year internship doing the books of local businesses, could improve the economic conditions for the entire community.

The following results occurred:

- The owner of the “My Own Business” seminar series declined to participate at the BLTV as he was negotiating an exclusive agreement for national distribution of the curriculum. See separate discussion below.
- Neither ESL nor citizenship classes were arranged. The Drew Team gave priority to technology applications and none of the potential Community or Service Partners that were capable of delivering ESL or citizenship classes had access to the necessary equipment, or could offer the classes via distance education at a competitive price to the in-person classes.
- A member of the LCoC presented an introductory computer class in Spanish. The class was well received and it was repeated once.
- Microsoft donated nine copies of its program MS Word in Spanish. Unfortunately, the program was Word for DOS rather than Word for Windows NT and so the copies were returned to Microsoft.
- Special programs such as the bookkeeping concept required too much effort for the demonstration year. It is possible that this idea and others will be pursued in the second and subsequent years.
- It appears that marketing the BLTV within the LCoC as a whole was not especially successful. For example, the Drew Team was unable to get permission to make a presentation except to the 3 members of the technology committee with whom we regularly interacted. One of these

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## Section 10

committee members suggested paying for advertisements in La Opinion (regional Spanish language newspaper) as the best way to market the BLTV to Hispanics.

### Los Angeles County Economic Development Corporation - Regional Business Assistance Network (Level 7)

The Economic Development Corporation of Los Angeles County (LAEDC) is a private, non-profit organization dedicated to providing leadership and designing programs that retain jobs and enhance and expand economic enterprise in the County.

The Drew Team's initial interest involved using LAEDC to provide counseling services at the BLTV. The LAEDC provides no direct counseling but refers requests for assistance to the network of small business assistance organizations that are operated by city governments, community colleges and independent non-profits. These business assistance providers have been coordinated by an umbrella organization created by the LAEDC known as the Regional Business Assistance Network (RBAN). RBAN became the focus of the Drew Team/s attention.

An application and a way to help with marketing were identified.

- Hold one of the RBAN quarterly meetings at the BLTV in order to introduce the facility to the business assistance community (note, the Compton Business Assistance Center, host of the Telework Center, was a RBAN member). The goal was to obtain feedback on possible BLTV applications and propose the BLTV as a partner for any other organization in order to facilitate communications among providers and/or clients.
- Add the BLTV to the RBAN "Business Resources Book" that it provides to its member organizations.

Both activities occurred. However, no additional organizational relationships developed as a result.

### Compton Chamber of Commerce (Level 7)

The Compton Chamber is the leading business advocate in the City. The Chamber was considered an important ally because of its relationships with the local business community, and specifically for such practical resources as its mailing list. The Chamber leases space adjacent to the BLTV's Computer Center in the Martin Luther King Transit Center.

In the initial planning stages of the Project, the Chamber showed little interest in cooperation. However, a change in Executive Director significantly changed the interest of the Chamber. The

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## Section 10

new Executive Director also headed a local program that provided computer access to children and was therefore very aware of the potential benefits of the BLTV's success.

As a result, the Chamber held a quarterly meeting at the BLTV so that the facility could be introduced to the business community. It also provided its mailing list and assisted with the business survey conducted by the Drew Team. The new Executive Director was one of the leading members of the BLTV's Board of Advisors.

### Public Counsel (Level 5)

Public Counsel is the largest pro bono law office in the nation. It is the Southern California affiliate of the Lawyers' Committee for Civil Rights Under Law, as well as the public interest law firm of the Los Angeles County and Beverly Hills Bar Associations. Public Counsel has a staff of 12 attorneys working in six project areas with access to over 9,000 volunteer lawyers and law students. Individuals, businesses, and groups are all eligible. Most clients fall below HUD poverty standards.

Public Counsel provides staff for the Southeast County Legal Aid office in Compton. Services include presentations and workshops. There is little one-on-one counseling by Public Counsel staff since this is usually transferred to private sector volunteers.

A representative of Public Counsel toured the BLTV in January, 1997. A second meeting was held at Public Counsel offices in central Los Angeles. The following applications were identified:

- A video conference including the BLTV, a location in central Los Angeles, and a location in either the San Fernando Valley or West Los Angeles on the topic of intellectual property rights. If successful, other seminars would also be video conferenced.
- A video conference between the BLTV and the Korean Youth and Community Center (KYCC) with an interpreter translating the seminar into Korean.
- In addition, the manager provided a list of agencies that provide a variety of free counseling services in Los Angeles County. This would be a resource in developing additional relationships and applications.

Planning began but was not completed for these applications. The reasons include:

- Lack of project time. The applications were not identified until there were less than 30 days left in the project. Given the lead time required to plan and publicize a seminar, this could not be accomplished within the time remaining. This represents work in progress and has been turned over to BLTV Operations staff.

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## Section 10

- The KYCC has access only to internet video, and the BLTV uses only switched ISDN video and so the systems are not compatible.

### My Own Business, Inc. (Level 4)

This is a program developed by a successful Southern California businessman who wanted to return something to the community. He has developed a “how to” series for business entrepreneurs which has previously been offered in Compton sponsored by the Latino Chamber and the Regional Job Training Center

The My Own Business program consists of 8 weekly 2 hour seminars. The program was developed originally in English but was translated into Spanish by a member of the Latino Chamber. When offered in Spanish, the program attracted 4 times more attendees (100 to 25 for the English version). Advertised in La Opinion, attendees came from as far as San Fernando and San Bernardino.

The owner is in the process of revising the program in order to license it to a large organization who could distribute it more widely – Rotary International was a candidate.

The following application was identified:

- Test market into distant locations the revised program using the video conference capabilities of the BLTV. Perhaps, share one seminar with Rotary International in Lansing, Michigan.

No planning for this application occurred.

- The owner declined to participate at this time, and would consider the opportunity once the revised program had been tested.

### Los Angeles Regional Technology Alliance (LARTA, Level 4)

LARTA was created by the State legislature as a network and assistance program for businesses in Southern California . Its mission is to assist local technology-based businesses find partners, access resources, and expand markets. It was, in 1996, hosted by the LAEDC.

In meetings with the Executive Director and senior staff members, the following applications were identified:

- Participate in LARTA’s Venture Forum held in central Los Angeles via video conference.
- Become a host site for the Regional Agile Manufacturing Program (RAMP).

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## Section 10

- Become a host site for a prototype electronic marketplace for small business referred to as 1-800-GET-BIDS.

The following actually occurred:

- The Venture Forum application was not a priority to LARTA, and the idea possibility was not pursued.
- Participation with RAMP required a satellite video system which the BLTV lacked.
- 1-800-GET-BIDS consisted only of a computer interface design and required additional funding before it could be beta tested. This did not occur during the term of the Project.

However, thanks to LARTA's support, the BLTV was invited to participate in the 1996 Tech Expo, where it was designated one of the "Best Practices" in California.

### Service Corps of Retired Executives (SCORE, Level 4)

SCORE is a volunteer management consulting program sponsored by the U.S. Small Business Administration. Retired executives volunteer their time to counsel small business owners and managers on a variety of issues including business plan development. Monthly seminars include "Start Your Own Retail Store," "Promoting and Protecting Your Invention," and "Home Repair and Construction Trades." The start-up workshop is held at SCORE offices in Glendale, and also at Universal City. Seminars are also presented at Chambers of Commerce and at individual office locations.

SCORE also developed a Business Information Center (BIC) at 3600 Wilshire Blvd. Although counseling services are available at that location, the BIC's primary purpose is to provide clients with access to a small computer center (with business plan programs) and reference library.

Two applications were identified:

- A counseling session between a SCORE mentor and a business candidate at the BLTV using desk-top video conferencing.
- Some general program involving the computer centers at the two locations, perhaps relationships between business candidates.

Planning began but was not completed on these applications. The reasons include:

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## Section 10

- SCORE was unable to locate a mentor for the BLTV's candidate at the time of day needed and in the vicinity of the available technology (Pasadena Public Library). The SCORE manager also had some reservations about the effectiveness of a video relationship.
- The Business Information Center had no capability for data communications, including no internet access. This made interaction between the centers impossible at that time.

### Watts Community Labor Community Action Committee (Level 4)

The WLCAC is perhaps the most successful and largest community based organization in South Central Los Angeles County. The WLCAC was in the process of developing a cultural museum, legitimate theater and sound stage at its headquarters in Watts. Preliminary talks were conducted about a number of events being staged at the WLCAC that could be video conferenced to the BLTV. However, the requisite ISDN lines would not be installed and the interactive video equipment would not be purchased in a time frame compatible with the Project. This is also work in progress and should be revisited by the new BLTV owners.

### Worldport LA (Level 4)

Worldport LA is the City of Los Angeles department that administers the Port of Los Angeles. In this capacity, Worldport LA frequently issues requests for proposals in order to obtain a range of products and services. The Drew Team learned of a bidder's conference that was planned by Worldport LA at its San Pedro offices and approached the appropriate management about the possibility of conducting the conference as a video conference with the BLTV as an alternate site – about 15 miles northeast of San Pedro. Management was interested but before planning for the event could occur, the Drew Team discovered that Worldport lacked video conference capability.

### Economic Development Department (Level 4)

Due to budget cuts, the EDD was in the process of reducing 123 field office to 70. The operation was moving from store front intake of claims to telephone intake with processing via a back office. In the longer run, the EDD intended to make its "jobs available" data base accessible over the internet. One of the offices being closed was in nearby Lynwood. EDD officials believed that the computer access and video conferencing capabilities at the BLTV could be used to support a virtual EDD operation that would help cushion the impact of closing the Lynwood office. The planning for this possibility got folded into the One Stop Career and Human Services Center being planned by the City of Compton. Since OSCHSC would be implemented in 1997-98, the EDD withdrew from working with the Drew Team.

### El Camino Community College (Level 3)

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## Section 10

El Camino is classified here under business assistance because the potential application involved the business assistance function of the College, rather than its distance education function. Based on attendance by an El Camino mentor to one of the SBDC video conferences, a preliminary attempt began to replicate the service with a business seminar originating at the El Camino campus. The effort was quickly abandoned once he learned that the College lacked the video infrastructure for the application.

### Convention Centers for the Cities of Long Beach and Los Angeles (Level 2)

During the initial stages of BLTV development when it was still assumed that the MTA fiber network would provide the network services to the project, the Drew Team attempted to identify potential partners for video conferences that were located along the route of the Metro Blue Line. The convention centers of both cities are situated close to the route of the fiber and the rail. While both facilities could receive satellite signals, neither facility was equipped to participate in an interactive video conference over the public switched network.

### Latin Business Association, Black Business Association (Level 2)

Only preliminary contact had been accomplished with each organization. Both were solicited to participate in the second SBDC seminar at the BLTV. The LBA was interested but did not participate in that event. The BBA did not respond.

### Center for Non-Profit Management (Level 2)

The Center for Non-Profit Management provides a set of seminars for the board members and staff members of non-profits. Topics include "Fundraising," "Volunteer Management," and "Human Resources and Strategic Planning." One of the attendees at SBDC video conference seminar needed counseling from a non-profit specialist, so the Drew Team contacted the Center for a possible desk-top video conferenced counseling session. The Center lacked the technology and the interest to pursue a relationship. The offer was made to host one of the seminars at the BLTV and video conference it to Pasadena or elsewhere. The representative was disinterested, believed the offer would result in more organizational work for the Center, and suggested we look elsewhere.

### Business Support & Training Summary

The 35 organizations contacted made this the third largest cluster in the Project (behind the Federal Government and Religious clusters that had umbrella organizations). This emphasis reflects the needs and interests of the community.

Some of the most significant successes in the Project occurred in this cluster. Two organizations have become regular users, although their use is concentrated in the Computer Center. As

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## Section 10

mentioned, the Video Conference Center and the Telework Center are more difficult for an organization to develop routine use around.

The Small Business Development Centers developed the most effective video applications in the Program. With additional support in the coming year, these organizations can become routine users of the Video Conference Center and perhaps the desk-to video conferencing unit. These organizations are close to becoming a driving force behind the BLTV's Business Mentor Program.

The most significant obstacle to participation identified in this cluster was the lack of access to compatible technology. In most cases this involved video applications. In at least one case, the Watts Labor Community Action Committee, the appropriate technology has since been installed. This suggests the need to revisit all the organizations with technology obstacles to see if they subsequently gained access to the necessary equipment.

The Latino Chamber made progress during the Project but had many more applications that could have been both identified and developed. Given the high proportion of Hispanics living in the Service Area, working with the LCoC should be a priority in the coming year.

### Education Institutions

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	0	0	0	1	0	0	0	0	0	0	1
SP	0	3	1	4	2	0	1	0	0	0	11
Total	0	3	1	5	2	0	1	0	0	0	12

#### California State University, Dominguez Hills (Level 7)

CSUDH, located about 5 miles southwest of the BLTV, is one of the leaders in providing distance education classes. Live, interactive video classes are offered as well as classes offered entirely over the internet. Some classes involve interactive video and the internet. Microwave and cable television distribution systems are used as well as satellite and ISDN over the public switched network.

A representative of CSUDH served on the BLTV's Advisory Board and played a key role in advising on the technology package for the Video Conference Center.

CSUDH provided a contract education class at the BLTV for the department heads and City Manager's Office of the City of Compton. The class was entitled "New Technologies in the



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## Section 10

Workplace.” The class met on four consecutive Fridays at the BLTV with the final meeting held on campus.

Additional classes were not held because of the time required by the Drew Team or the Operations staff to market the educational products of CSUDH to businesses in the service area. The contract classes were priced at approximately \$2,000 each and would, therefore, require a convincing sales effort. This prospect should be included in the future marketing efforts of the BLTV.

The option of providing regular courses over interactive television at the BLTV was not explored by CSUDH. Similarly, CSUDH was not interested in pursuing a relationship with the BLTV to become a classroom for the off-campus program for adult learners referred as PACE.

The general problem with the BLTV offering distance education classes from CSUDH or any other campus is marketing those courses to the local audience. One approach would be to develop a menu of courses that could be offered. Interested students could then sign-up for courses and pay their fees. Courses that did not meet the minimum would not be offered. Businesses will most likely become a much larger market for distance education classes than will unaffiliated individuals.

In any case, until the originating institutions agree to provide regular curriculum for their enrolled students, the only remaining option is to find an effective method for the BLTV to market the contract classes.

### California State University, Chico (Level 5)

This is a campus of CSU located in northern California. The Drew Team originally contacted CSU Chico regarding its Emergency Medical Services Administration – a program that combined video tape, e-mail, the internet, audio conferencing and mailed materials.

CSU Chico recommended instead that the BLTV participate in the CSU Satellite Network Project funded by the NTIA. This project delivers 50 upper division courses per year to students at remote locations. CSUC would purchase and install satellite reception equipment for partner sites, such as the BLTV. CSU Chico was very interested in the BLTV and reserved a satellite dish for its participation.

The barrier to participation was the requirement that the BLTV reserve a classroom weekdays from 8 a.m. to 10 p.m. (4 p.m. on Fridays) exclusively for the CSUC program. Given the under utilization of the Video Conference Center, the prospect of functioning as a distance education classroom for CSUC should be reconsidered in the future.

### San Diego State University (Level 5)

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## Section 10

All State University campuses are equipped with video conferencing capability but each campus uses its equipment differently. The International Training Center of SDSU offers a distance education program via satellite, microwave or cable tv to approximately 100 sites, many in Latin America. The 1996 series was entitled “Strategies for Global Competitiveness.”

The Drew Team met with SDSU to discuss the prospects of the BLTV becoming a receive site. SDSU was enthusiastic, particularly because there were no receive sites in the Los Angeles area.

The relationship did not develop because a satellite dish or cable connection was required. A second issue, although more manageable, was a \$200 fee required per video conference.

### University of Southern California – Business Expansion Network Office (level 4)

The initial objective was to recruit a Service Partner for the Business Mentor Program. USC had recently renewed its efforts toward greater community involvement and had graduate students and faculty who might be available for video conferenced mentoring sessions. Possible distance education classes were also an interest.

The point of contact was the Entrepreneur Program which, it turned out, has a mission unrelated to interest from the BLTV. That Program assists business school graduates with job placement. The Drew Team was referred to the Business Expansion Network Office.

A representative toured the BLTV and agreed to look into a mentor relationship. After a period of time with no contact, the Drew Team learned that the representative had left his job at USC. A second package of materials was sent to his replacement, who also subsequently left USC before a relationship could be established.

A third set of materials was sent to the new person followed by telephone calls. The Office was interested but never geared up for applications planning.

The reasons that progress stopped at level 4 (applications identification) include:

- Staff turnover which resulted in a loss of momentum.
- Requirement for interdepartmental coordination at USC; potential business mentors are in the Business School, community development is the responsibility of the Office of External Relations and the Center for Economic Development (in the School of Urban Planning and Development), and the video conference equipment is controlled by the Engineering School.

### West Los Angeles College (Level 4)

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## Section 10

WLAC is a community college located about 25 miles northwest of the BLTV. A college counselor contacted the Drew Team about the prospect of providing academic support to students at both WLAC and Harbor College (a community college about 15 miles southwest of the BLTV).

Both colleges have a “Pass +” Program which provides one-on-one counseling and tutorial assistance for 270 students. The emphasis is on English, science, and especially math programs which have a 90% failure rate.

The proposed applications would involve:

- Math study groups formed over the internet with students at other institutions.
- Computer based math classes
- Computer and math classes in Spanish
- Homework mentoring in-person or over desk-top video conferencing.

Planning for these applications did not begin because the counselor at WLAC lacked time to devote to the project.

### Compton College (Level 4)

Compton College is a community college within the 2 mile service area of the BLTV. It has approximately 5,000 students, most of whom also live in the service area. The College needs access to more computers than it has and hopes to develop a Vocational Technology Center on campus.

A College official identified 2 applications for the BLTV:

- Advanced computer classes and classes in Spanish.
- English as a Second Language classes during the evening hours because the demand is high and the College has no space for additional classes.

The plan for realizing these potential applications involved the BLTV Operations Manager joining the College’s Technology Committee. The offer was made at about the time the Operations Manger left the Project and no replacement occurred. This represents a missed opportunity that was caused by personnel turnover on the BLTV Operations staff.

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## Section 10

However, near the end of the demonstration period a representative of the BLTV joined the school's Technology Roundtable. Distance education courses originating at Compton college may be offered at the BLTV after the demonstration period.

### Los Angeles Trade Technical College (Level 4)

LATT is among the leading educational institutions in the county, particularly for working class students, many of whom reside in south central Los Angeles. The Drew Team attempted two separate relationships with LATT.

The first occurred near the beginning of the Project when it still appeared that the MTA fiber network would provide the network services. LATT is adjacent to the Metro Blue Line at the Washington Blvd. Station, about 1 mile south of the Convention Center. The fiber network ran past the campus and a junction box was less than 50 feet from the campus border. In fact, LATT was seen at the time as being the perfect Service Partner – an organization reasonably distant from the Project site and adjacent to the fiber network.

The applications initially discussed involved trial distance education classes, on-line off-campus registration for classes, in-person marketing presentation by LATT staff, and BLTV as PACE (off-campus, adult students) classroom.

The problem was the lack of an distance education culture at LATT. Specifically, there was no technology infrastructure, few experienced teachers and no shelf-ready distance education classes. The cost of wiring the campus and one of its buildings to connect to the fiber network was beyond the means of both the LATT and the MTA. When it became clear that the MTA fiber network would not be used, LATT lost interest in this round of recruitment.

In the second round, near the end of the demonstration year, a representative from a different department at LATT contacted the Drew Team. The MTA had contracted with LATT to provide a particular engineering curriculum for MTA personnel. LATT was interested in establishing a part-time, off-campus classroom at the BLTV Computer Center to teach this curriculum and eventually other types of classes as well. Community members would be allowed to register for unfilled spaces in the courses offered.

The problem was the economics of the proposed deal. Although the BLTV would have received substantial exposure through the relationship, there was very little revenue available to compensate the BLTV for its use of the Computer Center. The arrangement was proposed near the end of the demonstration when the BLTV was attempting to establish self-sufficiency and a commitment to

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## Section 10

uncompensated institutional use was not seen as beneficial. However, the opportunity remains and can be explored by the new owners/operators of the BLTV.

### California State University, Long Beach (Level 2)

CSULB uses its video facility for distance education programs over the CSU Satellite Network, which is coordinated by the Chico campus as discussed above. Therefore, in order to receive such programming, the BLTV would have to dedicate a class room as described.

The video facility (capacity of 45 or 100 if no video involved) was also available for a fee for other applications. The Drew Team did not develop applications that would have used the CSULB video facility, but could do so in the future.

### UCLA Anderson School of Management (Level 2)

Very preliminary discussions with the ASM took place as part of the effort to create a Business Mentor Program. Distance education possibilities were to follow. The appropriate contact people were never identified and the effort was abandoned early. This was in part due to the relative success that was developing with the small business development centers regarding the same services.

### DeVrie University (Level 2)

DeVrie is a leading private trade school in the region that specializes in technical training for jobs such as telecommunications technician. The Drew Team introduced the BLTV to a DeVrie senior representative. That individual was receptive to developing a relationship, but acknowledged that it would have to be in-person since the DeVrie campus was not equipped with video conferencing capabilities and did not offer courses over the internet. Since technology-based service partners were the goal at the time, the relationship was not pursued further.

### Education Summary

The Drew Team worked with 2 universities, 4 campuses of the Cal State system, and 3 community colleges. Except for CSUDH, none of the institutions progressed past the point of identifying possible applications. In one case, the problem was lack of follow-through by BLTV Operations. In the other cases, the problems were related to:

- Mis-matched infrastructure (the BLTV needs equipment to access cable and satellite networks, or Service Partner educational institutions need to use ISDN over the public switched network).

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## Section 10

- Bureaucratic size where the right person can't be found, staff turnover changes who the right person is, or interagency coordination is needed meaning there are several right persons.
- Inflexibility in length, content, and instructor availability in some formal educational products, and, in some cases, a requirement for attendance verification so that 3<sup>rd</sup> party funding sources can be satisfied.
- Collection of fees since formal educational products are usually not free. In contrast, business assistance organizations receive funding indirectly, not from end users.
- Lack of local marketing machinery whereby a menu of educational products can be offered to local businesses, non-profits and government agencies, and can allow unrelated individuals to aggregate demand around a set of course products.

Note that CSU are all equipped as part of a network strategy. The generally lower rankings in terms of the Participation Ladder reflect that these strategies did not connect well with the end user, the BLTV in this case. Generally, this had to do with inflexibility in product type and lack of multi-channel distribution networks on 2 campuses.

### Children's Services

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	0	0	0	0	2	0	3	0	4	0	9
SP	0	0	0	0	0	0	3	0	0	0	3
Total	0	0	0	0	2	0	6	0	4	0	12

#### Boys and Girls Club, 7<sup>th</sup> Day Adventists, Mandela Village & Champions for Kids (Level 9)

Champions for Kids is the after school computer club at Compton High School. The other three are community based organizations that offer a variety of programs for their enrolled children. In each case, the organization developed a regular schedule for using the Computer Center at the BLTV. The Drew Team also intended to develop a book reading program originating at a public library similar to the story teller but for older children. A library Service Partner could not be found for this demonstration.

#### Family Resource Center, County Probation Dept. & Global School Net (Level 7)

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## Section 10

Each organization was able to plan and implement one application. The Family Resource Center conducted a trial of the Introduction to Windows for its members. The County Probation Department brought a small group of formerly incarcerated gang members to the BLTV for one 6-week unit of computer classes. The Global School Net held a workshop to promote its "Thinkquest" competition for web page design. Both the Family Resource Center and the County Probation Department are candidates to continue their usage in the future.

### Stellar Day Care (Level 7)

The Stellar Day Care Center is located off the south hall of the Martin Luther King Transit Center. Approximately fifty 3 to 5 year old children are enrolled in the Center. Staff of the Center actively participated on the planning committee for the June 1 open house event.

The Drew Team proposed to the staff that a live story telling application could be developed for the children originating in the Pasadena Public Library (the profile for the PPL is included under the "government" category). The staff agreed to participate.

The story telling application was proposed to the staff of the PPL and senior management as well as the children's story teller graciously agreed to try the experiment. A test of the activity was conducted at the June 1 open house event. This was followed by two additional trials with 5 children at the first, and 12 at the second.

### Compton High and Manual Arts High Schools (Level 7)

In the process of identifying applications with schools and libraries with compatible video conference equipment, the Drew Team discovered that a housing fair was being planned for the Manual Arts High School campus. The initial plan was to conduct an interactive video conference during the housing fair, with interested families gathered at the BLTV. This did not occur as a Community Partner was not found to sponsor the event at the BLTV. Drew EDC was the logical candidate to do so but declined because of lack of resources to organize and promote the event in the greater Compton community.

The housing fair at Manual Arts was being planned and promoted by an after school club known as the Finance Academy. One of the BLTV's Advisory Board members taught video production at Compton High School, and he offered his class as a resource to the Finance Academy. Six video conferences were held so that the Compton video class could identify the needs of the Finance Academy well enough to write and produce a short video tape for cable television promoting the housing fair. The interaction between the two high school groups is referred to as telecollaboration - the category within which the BLTV received a Semi-Final Award in the 1996 National Information Infrastructure competition.

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## Section 10

### Ella Fitzgerald Day Care Center (Level 5)

Like the Boys and Girls Club and Mandela Village, the Ella Fitzgerald Day Care Center was interested in using the Computer Center on a regular basis. This has not happened on even a trial basis because the Center lacks appropriate transportation.

### Charles R. Drew Head Start (Level 5)

Project Head Start in Compton is sponsored by Drew University. The program serves 1,700 children at 24 sites in Lynwood, Paramount, Compton, Carson and Los Angeles. Sixty percent of the children in the program are Latino and an estimated 50% of their families lack private automobiles.

Head Start also trains parents in child development and in job skills. Classes were held at South West College and Compton College.

Two broad areas of applications were identified. The first was computer training for Head Start employees and for parents of children in the program. Head Start has only 26 computers for the entire operation, and most staff members lack adequate training in their use.

The second general application was health care information. A recent needs assessment conducted by Head Start discovered that its members needed better information about nutrition, preventative care and prenatal care.

The following specific applications/actions were identified:

- Survey parents of the 80 children enrolled at the Martin Luther King Transit Center regarding computer literacy, preparatory to developing a computer training program at the BLTV for these adults.
- Develop a cost proposal for a one-semester training program for Head Start employees – about 250 people.
- Contact the Watts Health Program, St. Francis Hospital in Lynwood, Drew Medical Center, and Community Health Program regarding their ability to provide health care information in the categories of interest.
- Contact Vons Markets about sponsoring a nutrition seminar.

Planning for these applications began but was not completed.



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## Section 10

The Drew Team provided Head Start with input into the computer literacy survey, established a fee for employee training, and initiated contact with the various medical organizations named above.

Two conditions changed with Head Start:

- The interim Executive Director with whom the Drew Team was working was replaced by a permanent Director. This required restarting the process and verifying the priorities.
- Head Start moved its administrative offices from the Compton area to Long Beach. The move disrupted the applications planning process as all available attention at Head Start was required to re-establish its offices.

The Drew Team was unable to re-engage Head Start in the planning process. This remains work in progress.

### Children Summary

Every application except one was based in the Computer Center. The exception was the interactive video story telling, which was initiated by the Drew Team. There will be a number of opportunities in the next year to bring library services to Stellar Day Care as well as to the population of older children who are regular users of the Computer Center.

While the Children's organizations used only one element of the BLTV, their mastery of computers will, in the long run, produce economic and mobility benefits. The high rate of use among organizations contacted suggests the latent demand in the community for those services.

Only 2 organizations that participated failed to implement an application. Both are clearly work in progress that are close to implementing an application.

In one case, the organization has not yet arranged bus transportation to bring the children to the facility. This will likely change in the near future. In the other case, there was both a change in leadership and change in location that disrupted the recruitment process. The initial interest in the opportunities was high so that it is reasonable to expect that Head Start will also become a regular user in the next year.

### **Federal Government**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
SP	111	1	1	3	1	0	1	0	0	0	118

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## Section 10

Whenever possible, it is best to work with the organization in which other organizations are members. The umbrella organization provides a cost-effective channel for communicating about an innovation with its many members, and it often has communication or computing needs of its own that can be satisfied through an urban televillage.

For example, the Chamber of Commerce organizes small businesses in a particular city and a trade association organizes firms in the same business but of different sizes and locations within the region.

There are two such umbrella organizations associated with the federal government in the greater Los Angeles area. The Southern California Federal Executive Board (FEB) is an umbrella organization for the federal community (the departments and agencies of the federal government) in the region. The Cooperative Administrative Support Unit (CASU which is part of the Department of General Services) organizes the purchasing power of the federal community in a particular region. Like commerce and trade organizations, neither the CASU nor the FEB have any authority over their member organizations.

The Drew Team initiated its recruitment effort for Service Partners and Employer Partners with the CASU in the period November, 1994 through January, 1995. Preliminary talks resulted in an offer to identify appropriate agencies and managers for BLTV participation, referral to the FEB, and suggestions to pursue two innovative initiatives – the Postal Buddy kiosk of the Postal Service and the U.S. General Store.

A presentation on the BLTV was made at an FEB meeting in January 1995. A tour of the BLTV by executive management of the FEB did not occur until February, 1996 while preparations for the beta test period were underway. As a result of that meeting, the following applications were identified:

- FEB designation of the BLTV as the location for a U.S. General Store.
- Deployment of federal kiosks at the BLTV including the Postal Buddy and the Career America Connections (offering job listings of the Office of Personnel Management).
- Trial of a telemedicine application through the Veteran's Administration field office already located inside the Martin Luther King Transit Center.
- Use of the video Conference Center and Computer Center by the National Guard for Guardsmen training.
- Use of the Computer Center and the desk-top video conferencing unit in the Telework Center to bring SBA services to the Compton BAC.
- Use the Videoconference Center for a National Energy Committee Conference.
- Wide recruitment within the federal community for circuit riders.

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## Section 10

The Drew Team initiated two separate pushes for federal participation at the BLTV. The first occurred in March, 1996 soon after the initial tour of the facility while the applications ideas were still fresh.

The other occurred in November, 1996, to try one more time to get federal participation before the demonstration year ended. The FEB mailed a recruitment letter drafted by the Drew Team requesting circuit riders, telecommuters or any other application that might have merit. The letter was sent to over 116 federal agencies in Southern California. The Drew Team was unable to conduct a telephone follow-up to those receiving the piece because, for security reasons in the aftermath of the Oklahoma City bombing, the FEB was unable to release the names and addresses.

### Veteran's Administration (level 5 - initiate planning for applications)

Meetings with the medical specialists from the VA in Long Beach identified interest in the following medical applications at the BLTV.

- Workshops and clinics on health care issues for veterans through the Video Conference Center.
- Computer training for staff and for veterans at the Computer Center.

In addition, the VA was moving to a new community based service delivery strategy called "access points." The BLTV fit nicely with the new strategy and a pilot program at the BLTV was discussed.

Planning for those applications began but was not completed. The reasons are as follows:

- The relationship proposed with the BLTV depended upon using the existing VA field office in the Transit Center, and this required negotiation with a different department within the VA. This negotiation did not proceed.
- The alternative was to develop a community based medical clinic but this was not affordable.
- Initiation of the "access points" strategy was delayed due to VA funding constraints.
- The costs required were thought to be too large compared to the size of the audience. The VA must target its services specifically to veterans, and so the applications developed could not serve a broader, secondary audience.

### Office of Personnel Management (Level 7)

Discussion with OPM identified interest in the following applications at the BLTV, all based on the use of- and training for- .on-line data bases for federal jobs.

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## Section 10

- Printed support materials for accessing the database via the internet.
- A stand-alone kiosk
- User training, either in-person or via video conference, in how to access the database.

The OPM downsized its Los Angeles office and consolidated its operations in northern California in early 1996. Nevertheless, the applications plan resulted in the following:

The OPM provided printed support material for accessing the database over the internet.

Deployment of the stand-alone kiosk required partial funding by the local government and this option was not pursued further.

The OPM provided staff for an in-person training workshop at the June 1, 1996 open house. Due to lack of staff in Los Angeles, the OPM was interested in providing additional workshops via a video conference but was unable to locate a suitable, affordable video conference facility near its northern California offices.

### Small Business Administration (Level 1)

The FEB took responsibility for contacting the SBA about the following applications:

- Distributing SBA training via desk-top video conferences or through the Video Conference Center.
- Providing educational video tapes for the BAC library.

As a result of FEB contact, the SBA did not try to reach the Drew Team to discuss the options. However, the Drew Team independently contacted the Service Corps of Retired Executives (SCORE) which is funded by the SBA. The results of the SCORE contact are discussed under the Business Support category in this analysis.

### Housing and Urban Development (Level 3)

Very late in the demonstration year (December, 1996), the FEB referred HUD representatives to the BLTV to discuss a new program referred to as "Neighborhood Networks." The program was being introduced across the nation. It consisted of a public relations expert exhorting the regional federal community to search for independent local funding to build a computer center in federally insured or assisted housing projects in order to empower residents and help them become more employable. No HUD funding was provided for equipment or training. The BLTV was initially considered a "hub" location for such a network but this possibility was not pursued by HUD

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## Section 10

program officials. In the end, the Neighborhood Networks program represented a different model from the BLTV and no point of collaboration was found.

### Internal Revenue Service (Level 4)

Staff from the IRS educational outreach work group toured the BLTV in August, 1996. They were looking for a suitable, inexpensive meeting space in South Central Los Angeles for their outreach program. The following applications were discussed.

- Training seminars about tax filing held in-person or as a video conference.
- In-person training for using the internet to distribute and collect tax forms.

Neither application occurred. An affordable video conference facility could not be found near IRS offices in central Los Angeles. The IRS felt that developing print materials for training sessions, whether in-person or video conferences, would be too expensive to attempt.

### Immigration and Naturalization Service (Level 1)

The IRS took responsibility for contacting the INS about INS education and outreach programs. The INS did not contact the Drew Team.

### National Guard (Level 1)

The CASU had directed the Drew Team to National Guard officials in Washington D.C. who were searching for training facilities for Guardsmen. Our telephone calls were not returned.

### Postal Service (Level 2)

The Drew Team inquired about the status and availability of the Postal Buddy. The best information we could obtain was that the kiosk had been withdrawn from its pilot test and was being evaluated.

### Office of the Comptroller of the Currency (Level 5)

As the regulator of the commercial banking industry (and not a member of the Southern California FEB), the OCC got involved with the BLTV through our search for one or more banks to install an ATM at the Transit Center.

The OCC saw that the BLTV potentially presented an opportunity to attack a large problem looming on the 1998 horizon when federal entitlement programs dispense their funds electronically.

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## Section 10

The lack of experience with ATMs and the large proportion of recipients who are “unbanked” presents a formidable challenge for this large scale innovation.

The OCC published an article on the BLTV in its quarterly newsletter to the banking industry. A Drew Team member spoke at an OCC conference on electronic banking in low income communities.

As an outcome of this conference appearance, the Bank of America planned a pilot project to introduce computer based banking to a low income community. The BLTV was a candidate to function as one of the pilot sites. Personnel responsible at the Bank of America apparently left the Bank before funding could be put in place and there is no longer a trace of the project.

### Federal Government Summary

The BLTV attempted to engage 2 umbrella organizations of the federal government and, through them, made an in-person presentation and sent a mailing to over 35 separate federal agencies or departments. Of these, 6 responded with some level of interest (17%) and 15 possible applications were identified. The Video Conference Center would have been involved in 5 of the applications, the Computer Center in 5, the desk-top video conference in 2, 2 involved kiosks and 1 was a circuit rider application. One trial application resulted.

- One of those 6 had withdrawn the kiosk.
- One was promoting a program that did not fit with the BLTV.
- One identified applications but couldn't begin planning because there was clearly no affordable access to the video conferencing that was central to the application.
- Two initiated applications planning but did not complete an executable plan. The reasons there was no further progress include limited resources to implement and bureaucratic inflexibility.
- The one application that occurred was a circuit rider. It could have continued via video conference from San Francisco but did not because of insufficient resources and lack of access to affordable video conferencing.

There were 6 organizations that at least responded to the initial presentation or mailing. The average level of their participation was 4.0. This means that if an organization answered the telephone, it was, on average capable of identifying applications for the BLTV.

While it is very reasonable to assume that innovation requires resources to both plan and implement a new way of doing things, it also can be used as an excuse for not trying to innovate. The OPM

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## Section 10

found a way to provide a low technology application for the BLTV to try. It seems likely that most organizations could have done the same had they been motivated to do so.

### Other Governments

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>Total</u>
CP	0	0	0	1	0	0	1	1	0	0	3
SP	0	1	0	1	0	1	2	1	0	0	6
Total	0	1	0	2	0	1	3	2	0	0	9

#### SCAG – Southern California Rideshare (Level 8)

SCAG recently absorbed the formerly independent Commuter Transportation Services and the new SCAG division is known as Southern California Rideshare (SCR). SCR held a meeting of Employee Transportation Coordinators (ETCs) at the BLTV as part of Rideshare Week. The Community Room was used since 60 ETCs were expected and no video conference was planned. The BLTV hoped to market the Telework Center to the ETCs. Approximately 25 ETCs attended the meeting and it turned out that none made a referral to the Telework Center.

Another application with SCR involved installation of a “transit hotline.” Transit riders frequently requested bus and rail information from BLTV staff and from other businesses located in the Martin Luther King Transit Center. However, transit information such as route maps were not available at the Transit Center nor through the BLTV. A dedicated telephone connection to a transit resource person was established near the end of the demonstration year.

Deployment of the transit hotline was delayed by a debate about whether the best course of action wouldn't be to wait for the Caltrans “Smart Traveler” kiosk that was expected to be installed at the BLTV. SCR saw the transit hotline as offering a duplicative service and was reluctant to install the equipment.

The Drew Team believed that a kiosk and a hotline represent two different channels for transit consumers to use in order to obtain information. Even if there was a large overlap in information available via the different channels, the choice of channel was itself a consumer service. In addition, if usage were tracked, it would be possible to determine consumer channel preferences for different kinds of information. In any case, by December, 1996 the Smart Traveler kiosk had yet to be deployed and so the transit hotline was installed by the MTA in January, 1997.

A third form of cooperation with SCR was planned but failed to materialize. This was the prospect that the SCR could provide current employer/employee data to the Drew Team in order to help

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## Section 10

market the Telework Center specifically and the BLTV generally. Unfortunately, SCR concerns for confidentiality prevented release of the data base.

### City of Compton (Level 7)

In addition to hosting the Telework Center in its Business Assistance Center, and participating on the Board of Advisors and open house planning committee, the City also played the role of service consumer. Led by the City Manager's Office, the City purchased a distance education class from California State University at Dominguez Hills for department heads and senior managers. The class was entitled "New Technologies in the Workplace" and it was developed by CSUDH specifically for the City.

### Caltrans (Level 6)

The Smart Traveler kiosk, developed by Caltrans and funded by various sources including participating local governments, was originally scheduled for installation by the June 1 open house event. The kiosk was eventually delivered sometime after March 1, 1997 and so was not available during the year of operations. For this reason, Caltrans' is listed as a 6 on the ladder of participation – planning was completed but the application was not implemented.

### Compton Branch Library, County of Los Angeles (Level 8)

The Compton Library was very receptive to virtually every suggestion made by the Drew Team regarding possible applications. The planning was completed by the Education First or the Drew Team, but the Library was a strong Community Partner.

There were 3 applications:

- The Library promoted among its constituents and attended the two author's book tours – Walter Mosley and Dave Barry.
- The Head Librarian attended a training session over the desk-top video unit in using interactive video for delivery of library services, originating from San Diego State University.
- Several senior members of the Library staff attended an Education First multi-point video conference that attempted to foster telecollaboration between various libraries in the state.

### Pasadena Public Library (PPL, Level 8)



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## Section 10

The PPL was established by Pacific Bell as a model site for its Education First program. As such, the PPL was a partner for a number of the BLTV's video conferences. Two kinds of relationships occurred.

In the first, the PPL functioned as a Service Partner. This happened with the children's story teller service where the service delivered was actually produced by the PPL.

In the second, the PPL was the physical site for the far end in the video conference but the service was produced by an external Service Partner. The Small Business Development Center and Education First itself are two examples of this relationship.

### Sacramento Public Library (SPL, Level 2)

The Drew Team contacted the Sacramento Public Library specifically to function as a Service Partner. The SPL indicated an interest but no opportunities were pursued by either the Drew Team or the SPL. The SPL did participate in multi-point video conferences such as the Mosley book tour but this is not like functioning as a BLTV Service Partner.

### MTA (Level 7)

The MTA, of course, played a number of extremely important roles in the development and operation of the BLTV. The one that is referred to here is as the provider of a "circuit rider" to the BLTV. On two occasions, MTA representatives staffed an information table at the BLTV. The service was appropriately withdrawn after two trials due to the lack of demand. The BLTV operator could not properly advertise the service without a long run commitment and the MTA could not make a long run commitment unless there was sufficient demand.

## Religious

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	62	6	2	0	0	0	0	0	0	0	70

Religious organizations were important for two reasons. The first was to engage the religious establishment in identifying and developing applications for their respective organizations. Religious organizations also provided opportunities for marketing the BLTV through newsletters, bulletin boards and personal networks.

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## Section 10

Seven key figures among the community's religious leaders were identified and invited to a lunch meeting at the BLTV. The purpose of this meeting was to provide a more personal, small scale introduction to the BLTV and to obtain their help mobilizing the other religious leaders. Four of the 7 were expected but none attended due to last minute emergencies.

Invitations were then sent to over 70 religious organizations (primarily Catholic, Muslim, and Baptist). Eight of the 70 responded but only 2 actually attended, one of whom was already a member of the BLTV. The other was completely unfamiliar with the BLTV and its underlying technologies.

No applications were identified and no further attempt to recruit religious organizations occurred.

### Health Care

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	0	2	0	2	1	0	0	1	0	0	6
SP	0	1	2	1	0	0	0	0	0	0	4
Total	0	3	2	3	1	0	0	1	0	0	10

#### Drew Medical University (Level 8)

Drew University along with the Drew-King Hospital is a leading economic and cultural force in south central Los Angeles. In fact, Drew Economic Development Corporation was spun-off from the University-Hospital complex in order to create jobs and provide other economic benefits to the community.

There is a concentration of information technology at the University-Hospital complex which is staffed by technically sophisticated professionals. For example, Drew independently developed its own ophthalmology telemedicine demonstration project in 1996.

Drew came as close to functioning as an anchor client and dominant Community Partner as any other organization. The Computer Center was leased by Drew to hold private classes a couple of times and one video conference was held. There is every reason to believe that the relationship between the BLTV and Drew Medical University and Drew-King Hospital will continue to grow.

The success of the recruitment and advanced level of participation appears related to 2 factors:

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## Section 10

- Technical sophistication of the University-Hospital complex. Staff there understood their own needs and knew how to use the BLTV to satisfy some of those needs.
- Familiarity between BLTV operations staff, Drew EDC staff, key City of Compton staff, and technology leaders at Drew Medical University. The players operate in the same contact network professionally and often socially, and they interact informally and frequently.

### Community Health Councils (Level 4)

The Community Health Council (CHC) is a county-wide non-profit advocacy network funded, in part, by private agencies such as Blue Cross and the Wellness Foundation. Its general membership is made of grass roots organizations that represent the needs and interests of residents, health care consumers, policy makers, and health care providers from both the public and private sector.

The CHC builds collaborative relationships, gathers and disseminates information, advocates policies that promote community based solutions and access to health care, and supports formation of local health councils.

The CHC is organized into 12 clusters, one of which is the South Central/Watts/Willowbrook area. A central meeting of all clusters is held once a month, usually in Leimert Park, and attended by 30 people or so. The CHC also periodically holds information forums for a local community on a topic of interest.

Two applications were defined:

- Hold a forum on “managed care” at the BLTV in order to introduce community members to the facility (no technology would be involved).
- Hold the monthly meeting as a multi-point video conference.

No applications planning developed, not for lack of interest, but apparently because the application preferred by the CHC exceeded staff resources to organize. The CHC had a strong preference for the multi-point video conference over the community forum. The community forum would have been a modest beginning but relatively easy to arrange. Even with Drew Team assistance, the polycentric meeting would have required the CHC itself to invest more time than it had available.

### State of California Health and Welfare Agency (Level 2)

The Drew Team contacted this agency primarily to identify ongoing telemedicine projects that could be imported into the BLTV. This is consistent with the strategy of finding the most advanced

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## Section 10

organizations in any given applications area. The Drew Team was referred to the Office of Statewide Health Planning and Development.

That Office advised that most telemedicine projects were in rural areas and that urban applications were largely unexplored. The Team was provided with a brief list of broadly defined telemedicine projects in California. On inspection, none appeared relevant and this line of inquiry was dropped.

### National Sickle Cell Education & Counseling Center (Level 4)

National Sickle Cell and Bone Marrow month occurred in September, 1996. An annual meeting of health care officials was planned for late September in the City of Lynwood.

The Drew Team contacted the leadership of the Sickle Cell Education and Counseling Center in order to identify any BLTV applications that might help the program. A video conference following the annual meeting that would permit organizing committees to discuss the results of the meeting with professionals who were unable to attend was proposed. A second option to use the video conference technology to register bone marrow donors was also proposed but not defined.

The organization's leadership delegated the responsibility for planning and implementation to others in the organization but the Drew Team was unable to establish contact with the appropriate people. No events were planned.

### Lynx Worldwide Inc. (Level 3)

Lynx is the developer of a comprehensive health care digital information network. It serves as a one-stop information shop for the five segments of the health care market: patients, providers, payers, government and business. Lynx is housed at USC as part of EC2, the high technology business incubator.

Lynx is a network that is intended to link household consumers to health care information and treatment. The Drew Team believed that a Lynx node at the BLTV and information promoting the service would benefit both the BLTV and Lynx. At the time, Lynx management did not want to invest its scarce resources to join the BLTV demonstration, believing that a community center type operation was not an immediate direction it wanted to explore.

### White Memorial Hospital (Level 3)

The White Memorial Hospital is located northeast of the service area. The Drew Team made a presentation to a Hospital committee early in the development process. The interest expressed was about watching the demonstration unfold and not about directly participating.

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## Section 10

### Culture/Arts

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>Total</u>
CP	0	0	1	0	0	0	0	0	0	0	1
SP	1	0	0	1	0	0	2	1	0	0	5
Total	1	0	1	1	0	0	2	1	0	0	6

Due to a lower priority, arts and cultural organizations were not asked to play a significant role in the demonstration year. Nevertheless, the organizations contacted were generally responsive.

#### Kaos Network (Level 7)

This organization, located in Leimert Part, engages teenagers and young adults in using video communications as an expression of arts and culture. Its executive director is a member of the BLTV Advisory Board. The Kaos Network participated with a booth at the February, 1995 community meeting and was the far side partner in a live, interactive video conference at the open house event.

#### Electronic Café (Level 7)

The Electronic Café has been a pioneer in developing artistic “phenomenon” using live, interactive video conferences. Its founders joined as the far side partner in a live, interactive video conference at the open house event.

#### Monterey Aquarium (Level 1)

The Monterey Aquarium (MA) was referred to the Drew Team by the Education First Program as a potential partner. The MA was planning to host video conferences originating under water with the fish. Repeated phone calls were not returned. This remains a potential application for the children at the Stellar Day Care Center as well as the regular users of the Computer Center.

#### County Museum of Science and Industry (Level 8)

The Museum loaned the BLTV one of its two AIDS Information kiosks for the first year of demonstration operations. The kiosk utilized a video disk and therefore did not use a telephone connection.

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## Section 10

### Commercial

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	4	1	0	1	0	0	3	0	0	0	9
SP	0	0	0	0	1	1	0	1	0	0	3
Total	4	1	0	1	0	0	3	2	0	0	12

#### Belkin Components (Level 2)

This organization is located at the Walnut Business Park, one Metro Blue Line stop south of the BLTV. It was virtually the only organization in the survey of business enterprise to respond. Its personnel director was not interested in the services of the BLTV.

#### Wells Fargo Bank (Level 8)

Wells Fargo provided an automatic teller machine, and offered to provide a lecture series on banking services. The ATM operated throughout the demonstration year and remains in place (it also sells stamps). The lecture series was not produced, in part because other banking seminars were routinely held in the community room, organized by the City of Compton.

#### Bank of America (Levels 5 & 6)

B of A was involved in 2 applications. The first was an ATM, which was planned for the opening event but was not actually installed until after the demonstration year was complete. The step 6 ranking on the Participation Ladder refers to the fact that applications planning was completed but no application resulted during the time frame.

The second application (Level 5) derived from the interest expressed by the U.S. Comptroller of the Currency. The issue was the conversion of entitlement payments to electronic funds transfer as a disbursement mechanism. Bank Of America identified an elaborate application for the BLTV and one or two technology centers elsewhere whereby trials of electronic banking for the “unbanked” and other low income families would be conducted. The planning process, led by the California Reinvestment Commission was not completed for unknown reasons, but the process ended when the lead person left the employment of B of A.

#### Eso Won Books (Level 7)

Eso Won is located in the shopping center adjacent to the BLTV. It catered the Mosley lecture originating at the BLTV and sold autographed books afterward. Eso Won was interested in similar

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## Section 10

events, including hosting one of its own at the BLTV. This should be followed-up in the second year.

### Social Service

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>Total</u>
CP	0	2	1	1	0	0	0	0	0	0	4
SP	0	0	1	0	0	0	0	0	0	0	1
Total	0	2	2	1	0	0	0	0	0	0	5

### Korean Youth and Community Center (KYCC, Level 3)

The Drew Team contacted the KYCC in order to identify video applications between the facilities. The KYCC had only internet video and the BLTV had only video over the public switched network. Without technological compatibility, the discussions were terminated.

### New Horizons Unlimited (Level 4)

New Horizons Unlimited is a service provider and general advocate for physically challenged members of the greater Compton community. The following applications were identified:

- Conduct computer training classes for the disabled community
- Coordinate programs via video conference with organizations located in San Francisco, Oakland and Sacramento such as World Institute on Disabilities, and the State Department of Rehabilitation.
- Conduct an open house at the BLTV specifically for people in the service area with disabilities, as an outreach strategy for New Horizons Unlimited and for the BLTV.

Unfortunately, step 4 on the Ladder was not reached until near the end of the demonstration year. There was not time to develop plans for these applications. This is work in progress that should be continued during the next year.

## Summary

Assume, for the moment, that most institutions in society are in a transition away from a strictly physical presence expressed in bricks and mortar location, to a virtual presence expressed through information technology.

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## Section 10

The BLTV is a physical place that provides access to organizations experimenting with a virtual presence. It is a conveniently located place well served by public transit at which service consumers and service providers can affordably meet to work out new relationships.

The Participation Ladder presents a snapshot of a sample of organizations from Los Angeles County in 1996-97 that are in the process of making that transition to a virtual presence.

The following are a number of observations about the organizations that participated in the demonstration year of the BLTV.

### Community Partner vs Service Partner

One issue is the extent to which there was a difference in willingness and ability to participate between Community Partners located in the service area, and Service Partners located primarily elsewhere in the region.

There was a remarkably similar profile of participation for Community Partners and Service Partners, with the exception that a Community Partner had a slightly greater propensity to implement an application. Some people might assume that organizations from a low income area might be relatively unresponsive to innovation. That this was not the case in the greater Compton area suggests that the community has a number of strengths including innovative organizations and talented people, and an incentive to utilize new resources.

The Community Partner's propensity to innovate was driven by the Children's Services cluster which regularly used the Computer Center. It makes sense that a group of community-based users with proximity to the Project would participate ahead of more bureaucratic organizations located in distant urban centers.

Also, both the Community Partners and the Services Partners included a larger cluster of organizations that resisted participation in the Project.

### Participation Thresholds

In order to simplify and analyze the Participation Ladder, consider that there are three "hot steps" that are important thresholds to making more progress. The first is step 2, taking the time and making the effort to respond. The next is step 4, identifying at least one application. This can be characterized as having a "vision" to guide the organization's participation. The third is step 7, implementing at least one application. For the entire cluster, the number of organizations that implemented at least one application divided by the number of organizations able to identify a possible application provides a measure of the "implementation efficiency" of the cluster. These



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## Section 10

three figures are highlighted for each of the 10 clusters below. The next three paragraphs discuss each of the “hot steps.”

### Hot Steps

Cluster	Step 2 Responsive %	Step 4 Vision %	Step 7 Implementation Efficiency %
Business Support	100	49	41
Education	100	67	12
Children’s Services	100	100	83
Federal Agencies	7	4	20
Other Governments	100	89	75
Religious	11	0	0
Health Care	100	50	20
Culture/Arts	83	67	75
Commercial	75	58	83
Social Services	100	20	0
Total	38	23	48
Total w/o Fed & Rel	95	61	50

### Responsive

In almost every organizational cluster, except the religious and the federal communities, the organizations were completely responsive. The response rate for the Cultural Cluster and the Commercial Businesses were only slightly less than 100%. There were few organizations in the Cultural Cluster and only one failed to respond. In the Commercial Cluster, most non-respondents were involved in the business demand survey conducted near the end of the demonstration year. In these cases, the Drew Team did not have a contact person and apparently did not find the right person in the organization.

The willingness to respond suggests a level of courtesy but also a level of awareness, whether realistic or not, of the potential contribution that information technology could make to the organization.

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## Section 10

### Visions

Excluding the federal and religious communities, 61% of all organizations contacted – almost 2 out of 3 -- were able to identify at least one application at the BLTV. Four clusters exceeded that average.

Children's Services was the best, with every organization able to see how it can use the BLTV, especially the Computer Center. This high ranking is also evidence of how badly these organizations need access to computers.

The next best cluster is Other Governments at 89% or almost 9 out of 10. The leaders were the libraries in Compton and Pasadena. The only organization without an identified application was the Sacramento Public Library which, had the Drew Team made it a priority, would very likely have ended up with an implemented application.

The remaining two clusters, Education and Culture/Arts, each had 2/3 of their members able to identify an application. The Education Cluster was helped by having a well defined network product known as "distance education." It can take various forms but is developing into a definite product line in many institutions. Education organizations also tend to be large, and finding the right person was difficult in a couple of cases.

The Culture/Arts Cluster had only a few members, with only one organization unable to identify an application. That organization subsequently did identify an application and so the Cluster ultimately performed as well as Children's Services.

Four Clusters were below average – three of them just below. Organizations in the Business Support Cluster on the lower steps tended to lack the time to spend, didn't have access to required technology, or, in larger organizations, didn't have a clear contact person.

The barriers to a vision among Health Care organizations included having a mission or a product incompatible with the BLTV, and lacking the time and resources to focus on the possibilities. More Drew Team effort probably could have helped and those organizations should become a priority for next year.

The only organization responding to the survey of commercial businesses simply was not in the market at that time for services available at the BLTV.

### Implementation Efficiency

Three of the highest performing clusters in terms of vision were also the most effective at implementing applications. Due to the focus of their interests on the Computer Center, the easiest

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## Section 10

element of the BLTV to use, the Children's Services Cluster had a very high implementation efficiency. The results reinforce the need of these organizations for computer access.

Applications implementation by the Other Governments Cluster was led by the libraries, the City of Compton's distance education experience, and two in-person applications (a circuit rider and a meeting in the community room).

Culture/Arts were led by 3 very experienced implementers – 2 of them with video experience and 1 with a multi-media kiosk.

The Business Support Cluster was just below average. The most significant barrier to greater participation was lack of access to technology. The 3 leaders were Community Partners that included the Compton and Latino Chambers of Commerce and the Small Business Development Centers.

Education and Health Care Clusters had relatively poor success in implementation, as low as the Federal Cluster in fact. Education faces a number of problems which can be summarized as a product too inflexible and expensive to be easily consumed. The lone success in distance education was produced by the efforts of a member of the BLTV Advisory Board, who quite literally, made it happen. The best success story was the involvement with the Drew Medical University, the largest and most sophisticated medical organization in the sub-region.

### **Barriers To Progress**

In all, there were at least 12 organizations where the lack of access to technology either prevented application identification or implementation. This means that, since 32 organizations did implement an application, about 40% more probably could have with access to technology. As technology declines in prices, as it becomes more a part of organizations' strategy, or as additional Urban TeleVillages are developed, these organizations will advance up the Ladder.

In 6 additional cases the right person could not be found or the contact person changed during the process. These were barriers in larger organizations.

### **Telecommuting Barriers**

As has been recommended elsewhere, a necessary element for acceptable rates of telecommuting is a permanent regional organization dedicated to the mission of advancing network utilization for all purposes, including telecommuting. Short term bursts of recruitment are not effective. Narrow focus on telecommuting is not effective. A well equipped supply of Telework offices that can be used affordably without hassle (such as onerous insurance requirements) is also essential. Help achieving higher rates of participation in telecommuting could be provided by the "mission"

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## Section 10

organizations (MTA, AQMD, SCAG). They could collectively adopt a telecommuting strategy that each would implement with its own employees as well as through the programs that each funds.

### Conclusion

It is hard to reach a qualitative conclusion (good, bad) about the status of organizations on the Participation Ladder since there are not standards by which to judge. Although not a parallel recruitment, the Telework Facilities Exchange of the Institute for Local Self Government between 1992 and 1995 achieved a 28% participation rate among local governments in Southern California (43 out of 154 organizations). The BLTV required more investment by participants than the Facilities Exchange, but the total number of participants in the demonstration period of each program are comparable. The overall participation rates in the BLTV appear better.

The position of each organization on the ladder also suggests something about time and timing. Organizations did not tend to smoothly and regularly work their way up the ladder. Each organization tended to proceed up a step or two at a time. Seldom did a large amount of time pass between steps. Time lapses generally meant that a ceiling of some sort was reached and that conditions had to change in order for further progress to occur.

This is a different sort of behavior than an organization that makes slow steady progress, all on its own. If this were the dominant dynamic, then applications planning need only start the process, get the organization to step 2 and let the process of innovation take off. In this sort of system, the emphasis would be on starting as many organizations as possible so that their internal decision and planning systems would over time take them to higher levels on the ladder.

What appears to have happened in this case is very similar to the experience with the Telework Facilities Exchange. Although the focus there was entirely on telecommuting, the research found that there was a ladder of participation upon which organizations moved sporadically. There were two levels. At the organizational level, energy for participation changed (either up or down) as the contact person changed through turnover or staff rotation, a turnover in direct or senior management occurred, budgets increased or decreased, technology improved, a crisis occurred or was resolved. There were, in other words, windows of opportunities that opened and shut in response to variables out of the Project's control.

One observation is quite clear. The transition to network usage is more advanced with Pacific Bell's Education First Program than would be the case without it. A number of BLTV applications occurred because of the efforts of Education First. Some of the others occurred because of discounts on access equipment and subsidized network services provided by Education First.

Part of Pacific Bell's motivation for Education First is market development and the Participation Ladder has market implications for technology vendors. Organizations that cannot identify

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## Section 10

applications for computers, internet access, or small and large video conferencing probably will not be in the market to purchase those technologies or pay a fee for use in the near future. In this way, the BLTV also plays the economic function of market development.

These findings provide a snapshot which will require a second year of operations at Compton, and practice with other Urban TeleVillages to turn into a more dynamic picture of the network transition in Los Angeles County.

The inventory of participating organizations follows:

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**Section 10****Business Support & Training**

American Women's Economic Devel. Corp.	SP	4
Advanced Education and Training Services	SP	2
Black Business Association	CP	2
Center for Non-Profit Management	SP	2
Compton Chamber of Commerce	CP	7
Digital Conversion Technology Group	CP	5
El Camino Community College	SP	3
Employment Development Dept, State of Calif.	SP	4
Entrepreneur Development Academy	SP	2
Executive Service Corps	SP	2
Inner City Computer Society	CP	9-
Latino Chamber of Commerce	CP	7-
Latino Business Associations	CP	2
LA County EDC/Regl Bus Asst Network	SP	7
LA Regional Technology Alliance	SP	4
LA Trade	SP	2
Los Angeles Convention Center	SP	2
Long Beach Convention Center	SP	2
Miller Brewing Co.	SP	2
(financial support for Latino programs)		
My Own Business, Inc.	CP	4
National Assoc. of Women Business Owners	SP	3
Public Counsel	SP	5
Regional Business Assistance Network	SP	7
Service Corps of Retired Executives	SP	5
Show Coalition	SP	2
Small Business Development Centers:		
Pasadena Office	SP	8
Los Angeles Office	SP	8
Torrance Office	SP	6
Southern California Edison	SP	2
Tomorrow's New Leaders	CP	3
USC Entrepreneurial Institute	SP	3
USC Center for Economic Development	SP	3
Valu Med RJTC	SP	9
Watts Labor Community Action Committee	CP	4
We Can Inc.	SP	2
Worldport LA	SP	4

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## Section 10

### Business Support & Training

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>Total</u>
CP	0	2	1	2	1	0	2	0	1	0	9
SP	0	11	4	4	2	1	1	2	1	0	27
Total	0	13	5	6	3	1	3	2	2	0	35

Responded – 100%

No further than returning call - 37%

Stopped short of identifying applications - 51%

Able to at least identify an application - 49%

Of those who could identify an application, those who implemented - 7 of 17 = 41%

Known cases where inability to find right person, or turnover was main problem - 0

7 known cases where technology was the main problem

Those who responded but couldn't advance due to technology - 7 of 28 = 25%

Those who could identify an application but couldn't implement due to technology - 4 of 10 = 40%

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## Section 10

### Educational

California State University		
Dominguez Hills	SP	7
Long Beach	SP	2
Chico	SP	5
San Diego	SP	5
Compton College	CP	4
Los Angeles Trade Tech	SP	4
Harbor College	SP	3
UCLA Graduate School of Management	SP	2
USC Bus Expansion Network Office	SP	4
DeVrie University	SP	2
Pacific SW Regional Technology in Educ Consort.	SP	4
West Los Angeles College	SP	4

### Education Institutions

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	0	0	0	1	0	0	0	0	0	0	1
SP	0	3	1	4	2	0	1	0	0	0	11
Total	0	3	1	5	2	0	1	0	0	0	12

Responded – 100%

No further than returning call - 25%

Stopped short of identifying applications - 33%

Able to at least identify an application - 67%

Of those who could identify an application, those who implemented - 1 of 8 = 12.5%

Known cases where inability to find right person or turnover was main problem - 2 of 12 = 17%

4 known cases where technology was the main problem

Those who responded but lacked technology - 4 of 12 = 33%



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## Section 10

Those who could identify an application but lacked technology - 3 of 8 = 37.5%

### Children

Pre School:

Stellar Child Development Corporation	CP	7
Boys & Girls Club, Watts-Willowbrook	CP	9
Head Start	CP	5
Church of Compton 7 <sup>th</sup> Day Adventists	CP	9
Ella Fitzgerald Day Care Center	CP	5

School Age:

Champions for Kids	CP	9
Family Resource Center	CP	7
Global School Net Foundation	SP	7
LA County Probation Department	SP	7
Mandela Children's Learning Village	CP	9
Manual Arts High School, Finance Academy	SP	7
Compton High School Video Class	CP	7

### Children

	1	2	3	4	5	6	7	8	9	10	Total
CP	0	0	0	0	2	0	3	0	4	0	9
SP	0	0	0	0	0	0	3	0	0	0	3
Total	0	0	0	0	2	0	6	0	4	0	12

Responded – 100%

No further than returning call - 0%

Stopped short of identifying applications - 0%

Able to at least identify an application - 100%

Of those who could identify an application, those who implemented - 10 of 12 = 83%

Known cases where inability to find right person or turnover was main problem - 1 of 12 = 8%

1 known cases where technology was the main problem but it was transportation technology

Those who responded but lacked technology - 1 of 12 = 8%

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## Section 10

Those who could identify an application but lacked technology - 1 of 12 = 8%

### Federal Agencies

Cooperative Admin Support Unit	SP	4
Federal Executive Board	SP	4
107 separate agencies + those below	SP	1
Veteran's Administration	SP	5
Office of Personnel Management	SP	7
Small Business Administration	SP	1
Housing & Urban Development	SP	3
Internal Revenue Service	SP	1
Immigration and Naturalization Service	SP	1
National Guard	SP	1
Postal Service	SP	2
Office of Comptroller of Currency	SP	4

### Federal Government

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>Total</u>
SP	111	1	1	3	1	0	1	0	0	0	118

Responded – 7%

No further than returning call - 95%

Stopped short of identifying applications - 96%

Able to at least identify an application - 4%

Of those who could identify an application, those who implemented - 1 of 5 = 20%

Known cases where inability to find right person or turnover was main problem - unk or all

0 known cases where technology was the main problem

Those who responded but lacked technology - 0

Those who could identify an application but lacked technology - 0



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## Section 10

### Other Governments

City of Compton	CP	7
Compton Housing Authority	CP	4
Public Libraries		
LA County/Compton Branch	CP	8
Pasadena	SP	8
Sacramento	SP	2
County of Los Angeles		
Office of Education	SP	4
Southern Calif Assoc. of Government	SP	7
So Cal Ride Share		
LACMTA	SP	7
+Caltrans	SP	6

### Other Governments (not federal)

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	0	0	0	1	0	0	1	1	0	0	3
SP	0	1	0	1	0	1	2	1	0	0	6
Total	0	1	0	2	0	1	3	2	0	0	9

Responded – 100%

No further than returning call - 11%

Stopped short of identifying applications - 11%

Able to at least identify an application - 89%

Of those who could identify an application, those who implemented - 6 of 8 = 75%

Known cases where inability to find right person or turnover was main problem - 0

0 known cases where technology was the main problem

Those who responded but lacked technology - 0

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**Section 10**

Those who could identify an application but lacked technology - 0

**Religious**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	62	6	2	0	0	0	0	0	0	0	70

Responded – 11%

No further than returning call - 97%

Stopped short of identifying applications - 100%

Able to at least identify an application - 0%

Of those who could identify an application, those who implemented - 0

Known cases where inability to find right person or turnover was main problem - 0

0 known cases where technology was the main problem

Those who responded but lacked technology - 0

Those who could identify an application but lacked technology - 0

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**Section 10****Health Care**

Community Health Council	CP	4
State Health and Welfare Agency	SP	2
National Sickle Cell Educ & Counseling Center	CP	5
National Black Leadership Initiative on Cancer	CP	4
Lynx Worldwide Inc.	SP	3
Drew Medical University	CP	8
USC Dept. of Radiology	SP	4
Watts Health Foundation	CP	2
St. Francis Medical Center	CP	2
White Memorial Hospital	SP	3

**Health Care**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	0	2	0	2	1	0	0	1	0	0	6
SP	0	1	2	1	0	0	0	0	0	0	4
Total	0	3	2	3	1	0	0	1	0	0	10

Responded – 100%

No further than returning call - 30%

Stopped short of identifying applications - 50%

Able to at least identify an application - 50%

Of those who could identify an application, those who implemented - 1 of 5 = 20%

Known cases where inability to find right person or turnover was main problem - 1 of 10 = 10%

0 known cases where technology was the main problem

Those who responded but lacked technology - 0

Those who could identify an application but lacked technology - 0

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**Section 10****Culture/Arts**

Kaos Network		SP	7
Electronic Café	SP		7
Monterrey Aquarium		SP	1
County Museum of Science and Industry		SP	8
Making History Project, South Carolina		SP	4
Texicali Tamatcayotl Cultural Sovereignty Project		CP	3

**Culture/Arts**

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>Total</u>
CP	0	0	1	0	0	0	0	0	0	0	1
SP	1	0	0	1	0	0	2	1	0	0	5
Total	1	0	1	1	0	0	2	1	0	0	6

Responded – 83%

No further than returning call - 17%

Stopped short of identifying applications - 33%

Able to at least identify an application - 67%

Of those who could identify an application, those who implemented - 3 of 4 = 75%

Known cases where inability to find right person or turnover was main problem - 0

0 known cases where technology was the main problem

Those who responded but lacked technology - 0

Those who could identify an application but lacked technology - 0

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## Section 10

### Commercial

Excel Communications	Client	7
National Tracking System	Client	7
Wells Fargo Bank	SP	8
Bank of America (ATM)	SP	6
Bank of America (Electronic Banking)	SP	5
Eso Won Books	CP	7
KJLH Radio	Client	4
Mercole, Inc.	Client	1
P&R Metals	Client	1
Boulevard Carpets	Client	1
Belkin Components	Client	2
AM Federal Credit Union	Client	1

### Commercial

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	4	1	0	1	0	0	3	0	0	0	9
SP	0	0	0	0	1	1	0	1	0	0	3
Total	4	1	0	1	0	0	3	2	0	0	12

Responded – 75%

No further than returning call - 42%

Stopped short of identifying applications - 42%

Able to at least identify an application - 58%

Of those who could identify an application, those who implemented - 5 of 6 = 83%

Known cases where inability to find right person or turnover was main problem - 2 of 12 = 17%

0 known cases where technology was the main problem

Those who responded but lacked technology - 0



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**Section 10**

Those who could identify an application but lacked technology - 0

**Social Service**

Foster Parent Program	CP	2
Compton Welfare Rights Organization	CP	2
Esperanza Housing	CP	3
New Horizons Unlimited	CP	4
+Korean Youth & Community Center	SP	3

**Social Service**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	0	2	1	1	0	0	0	0	0	0	4
SP	0	0	1	0	0	0	0	0	0	0	1
Total	0	2	2	1	0	0	0	0	0	0	5

Responded – 100%

No further than returning call - 40%

Stopped short of identifying applications - 80%

Able to at least identify an application - 20%

Of those who could identify an application, those who implemented - 0

Known cases where inability to find right person or turnover was main problem - 0

1 known cases where technology was the main problem

Those who responded but lacked technology - 1 of 5 = 20%

Those who could identify an application but lacked technology - 0

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**Section 10****Totals****Numbers - All Organizations**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	66	13	5	8	4	0	9	2	5	0	112
SP	112	17	9	14	6	3	10	5	1	0	177
Total	178	30	14	22	10	3	19	7	6	0	289

**Percentages - All Organizations**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	59	12	4	7	4	0	8	2	4	0	100
SP	63	10	5	8	2	3	6	3	1	0	101
Total	62	10	5	7	3	1	7	2	2	0	99

1. Attempt to contact (no response)	62%
2. Initial contact (phone call or meeting or letter)	10%
3. Additional contact – usually in-person visit	5%
4. Identify possible applications	7%
5. Initiate planning for applications	3%
6. Complete planning for applications	1%
7. Conduct a trial for an application	7%
8. Implement additional applications or trials	2%
9. Develop routine use	2%
10. Adopt or connect to a telematics strategy	0%

Responded – 38%

No further than returning call - 72%

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**Section 10**

Stopped short of identifying applications - 77%

Able to at least identify an application - 23%

Of those who could identify an application, those who implemented -  $32/67 = 48\%$

Known cases where inability to find right person or turnover was main problem - 6

12 known cases where technology was the main problem

Those who responded but lacked technology -  $12 \text{ of } 52 = 23\%$

Those who could identify an application but lacked technology -  $8 \text{ of } 30 = 27\%$

**Numbers Excluding Federal Government & Religious Community**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Total</b>
CP	4	7	3	8	4	0	9	2	5	0	42
SP	1	16	8	11	5	3	9	5	1	0	59
Total & %	5	23	11	19	9	3	18	7	6	0	101

Responded – 95%

No further than returning call - 28%

Stopped short of identifying applications - 39%

Able to at least identify an application - 61%

Of those who could identify an application, those who implemented - 0

Known cases where inability to find right person or turnover was main problem - 0

1 known cases where technology was the main problem

Those who responded but lacked technology -  $1 \text{ of } 5 = 20\%$

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## Section 10

Those who could identify an application but lacked technology - 0

## **BUDGETS FOR THE PROTOTYPE AND LONG RANGE FUNDING OPTIONS**

### **Budget For The Prototype**

The grant to the MTA under the 1993 Call for Projects totaled \$559,000. Drew EDC received 288,995 for planning, development and implementation. This is referred to as the “planning grant.”

The planning grant was allocated to the following activities:

Project planning, management and administration	\$ 25,022
Research This involved research into the local organizational topography and applications running elsewhere; it also included planning and implementing the community meeting; and preparing materials for the recruitment process and conducting recruitment of Community Partners, Employer Partners, Service Partners, and Resource Partners	\$128,904
Station Selection Study	\$ 4,828
Evaluate partner commitments and allocate retained budget This was the step at which decisions were made about the MTA’s residual budget based on the commitments received, especially from Resource Partners	\$ 11,392
Site Preparation	\$ 24,843
Operational assistance This involved providing assistance to the participating Service Partners – in effect, helping them plan applications. Originally, this task was planned to include coordinating the marketing plans of the Service Partners, but it became instead direct low level marketing in lieu marketing by others	\$ 65,606
Final Report	\$ 13,400
Direct expenses (such as photocopy)	\$ 15,000

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**Section11**

Total \$288,995

The MTA retained \$270,005 from the original grant. This amount was allocated in the following manner:

Drew EDC to function as the BLTV Operator for 12 months	\$ 99,703
Space lease – paid to the City of Compton	\$ 18,672
Site improvements	\$ 81,916
Furniture	\$ 14,685
Computer equipment – 3 year lease	\$ 12,542
Video conference equipment (CLI) - 3 year lease	\$ 29,700
Community meeting (catering, travel for speakers)	\$ 8,830
Total	\$266,048

This left an unexpended residual of \$3,956. In addition, the MTA received a grant from Caltrans to pay for a half time contract employee to administer the contract for the MTA.

Drew EDC received \$99,703 to function as the Operator for 12 months. These funds were allocated in the following manner:

Personnel Director full time, part time Operations Manager, contract Curriculum Developer/Trainer	\$ 61,200
Employer liability insurance	\$ 12,780
Utilities and supplies Including telephone, ISDN, security, internet fees, supplies, etc.	\$ 19,200
Drew EDC overhead (at 7%)	\$ 6,523
Total	\$ 99,703

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## Section 11

Around August, 1996, the MTA assigned to the BLTV \$100,000 of a FTA grant originally dedicated to another entity but left unused. This amount was allocated in the following manner:

Community training Used by BLTV Operations for additional staff dedicated to computer training for members and others attending the BLTV.	\$ 46,800
Marketing	\$ 13,200
Community leader training Used by the Drew Team to introduce to the capabilities to a number of community leaders	\$ 12,000
Data collection	\$ 12,000
Project management	\$ 16,000
Total	\$100,000

Assuming that the MTA's administrative costs were covered by the Caltrans grant (of approximately \$40,000), then the BLTV officially cost \$695,043 to plan, develop, equip, and operate for a 12 month period.

This amount excludes all non-charged labor. For example, the MTA installed the LAN and all computer equipment at its own expense, presumably not part of the Caltrans grant. This amount also excludes the value of the donated computers and the City of Compton's expense for Telework Center furniture. A conservative estimate of these expenses would make the total cost at least \$750,000.

There were a number of needs that were not funded. Technology for video exhibition, production and editing; additional computer equipment such as color printer and scanner; and additional staff to train members on that equipment would easily have added another \$50,000 to the total cost. This means that the actual total could have exceeded \$800,000. Of course, the value of lessons learned from the prototype could reduce the development cost. However, the cost of space and improvements could increase to offset those development savings.

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## Section 11

In summary, once the various budgets have been combined, the official costs of the Demonstration Project can be broken down in the following manner. Note, the figures are rounded and so they do not exactly equal the official grand total.

### Combined Budget Summary

Project management and administration: (\$40,000 by Caltrans through the MTA)	\$ 87,500
Planning, development, education, outreach (for 30 months, including direct expenses)	\$243,000
Site improvements and preparation	\$107,000
Space rent	\$ 19,000
Furniture	\$ 15,000
Technology	\$ 42,000
Operations personnel (1 year)	\$108,000
Operator marketing	\$ 13,000
Operator facility expenses (1 year)	\$ 32,000
Data collection and final report	\$ 25,500
Total	\$691,000

This can further be summarized into 4 very broad categories useful for planning future developments:

Project management, data collection, reporting	\$113,000	16%
Planning and development	\$243,000	35%
Facility; improvements, technology, furniture	\$164,000	24%
Operations; rent, marketing, personnel	\$172,000	25%

The Drew Team estimates that, for the BLTV, continuing operational expenses including the same rent levels, marketing budget, and equipment leases will total approximately \$250,000 per year.



This excludes funds for additional development activities which, as argued below, would be best centered in a regional organization.

## **Long Range Funding Needs**

Telecommunications related mobility demonstrations have traditionally been seen as examples of transportation demand management (TDM). Recently, they have occasionally been included under the umbrella of intelligent transportation systems (ITS). These characterizations determine the sources and availability of funds. TDM budgets, for example, compete with bus, rail, and roadway programs (such as retrofitting freeways with high occupancy vehicle lanes). Within TDM budgets, telecommunications demonstrations compete with ride sharing, bicycle stations and so forth.

Furthermore, telecommunications projects typically are held to a standard of self-sustainability that virtually no other mobility strategies or transportation modes are required to meet. For example, a ride sharing agency is not expected to support itself from members paying for a car pool match. Traditional public transit would be unaffordable if it were priced at its actual cost.

In this report, telemobility has been characterized as an alternative strategy for building a livable community which complements bus, rail, and emerging innovations such as smart shuttles. The discussion below presents solutions for funding telemobility demonstrations, including a permanent structural solution that is a political option.

In identifying long range funding options, the central question is; for what exactly is funding needed? There are at least three elements that need funding for a system of Urban TeleVillages to serve a region.

### **1. Network Components – Access and Transmission**

Network access technologies include computers, work stations, inside wiring, video conferencing units, video production units, LANs, servers, audio conferencing equipment, and other similar devices. Network transmission includes the broadband services and switching that connect the TeleVillages to each other and to other locations.

The vision includes non-profit, government and commercial versions of these network components located within walking distance of one another in the TeleVillage Center of the future. The Universal Service provision of the 1996 Telecommunications Act does not come close to providing funding for either the non-commercial or government components of such a system. A County-wide 200

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## Section 11

mile backbone network could be developed in MTA's rights-of-way by a public-private partnership. Funding for the access technologies could be provided by local governments in which a TeleVillage is developed. The Network Technology Trust Fund, discussed below, could be created to fund both the access and the transmission component. Also, transportation investments in automobility could be diverted to these systems.

In the BLTV, the access technologies were paid for by the Project Grant retained by the MTA. The below market rate transmission services were provided by Pacific Bell through its Education First Program.

### 2. Development of Network Utilization

This refers to developing the programs that provide content for the network technologies in the TeleVillage Center. There are two aspects to this. The first is identifying the potential program sponsors among the community based organizations as well as identifying the needs of the community. The second is introducing network applications to Service Partners so that those with programs of significance to the community become able to move up the Participation Ladder.

I have proposed elsewhere that the best way to handle the utilization development function is through a permanent regional organization analogous to (and separate from) a ride sharing agency. This function is best organized at the regional level so that it integrates the same geographic area that is currently integrated by the automobile. Permanence is necessary in order to provide the leadership necessary to sustain the transition to a network strategy by a significant number of institutions and businesses. This will not be a commercially self-supporting function for at least three years but has commercial prospects beyond that.

One funding option is government grants. The problem with this tends to be that many programs fund only a one year demonstration and require self-sustaining funding beyond those 12 months. This is highly unrealistic with telemobility, since it is a long run strategy.

Another option discussed below is support from network vendors, either indirectly through contributions to the Network Technology Trust Fund, or directly through contracts, grants or donations. Network vendors (including the manufacturers of access technologies) stand to benefit from higher levels of network utilization.

Until a regional organization is established, funding for the utilization development function will have to be covered by the operations budget at the project level of each Urban TeleVillage. If the 1997-99 budget for the BLTV does not support both operations and development, there is little hope for development progress in the time period.

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## Section 11

In the BLTV, utilization development was primarily paid for by the Planning Contract but also the FTA Contract.

### 3. The TeleVillage Center – Space and Operations

This refers to the site improvements or physical construction necessary to house the network technologies in bricks and mortar. It also includes the space rent, furniture, utilities, insurance, etc., and the staff to manage and market the facility.

The community member or end user encounters the entire system of network access, network transmission, and urban functions (produced by organizations which have reached Step 7 or better on the Participation Ladder) by visiting the bricks and mortar TeleVillage Center. The vision includes distinct non-profit, government and commercial physical places located within walking distance of one another in the TeleVillage Center of the future. The non-profit part of the TeleVillage Center will not only guarantee that every person has access to broadband networks for mobility purposes, but also will function as an introductory “starter system” for future commercial consumers. This both supports the transition of small and medium sized firms to the cost-effective network strategy, and stimulates the commercial marketplace.

The non-commercial and government parts of a TeleVillage Center will require a funding subsidy:

- In the short term, for all users;
- In the medium term, for all users until usage increases to the point that government and commercial interests create and support their own facilities;
- In the long term, for residents and organizations in the service area who cannot afford commercial services.

In the BLTV, the TeleVillage Center was supported by the Operator contract, the FTA Contract, and the Project Grant retained by the MTA.

The following further explains these positions on the funding needs of the three elements.

It is commonly supposed that if a function is valuable, it will be supported by the market place. While that is true in many situations, there is a long history in the United States of government investment in facilities and services that satisfy uniquely public, non-commercial needs. This includes public education, public libraries, and streets and highways. In fact, all exist alongside private sector versions of the same services. Each has unique historical origins but share the common concerns for

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## Section 11

equal access to resources and stimulation of economic growth. A similar argument can be made for a system of Urban TeleVillages.

Both computing technologies and telecommunications technologies are separately experiencing dramatic increases in capacity and speed and equally dramatic decreases in unit costs. And computing and telecommunications have converged so that each is a part of the other. The resulting high capacity computing network and communicating computer is often referred to as broadband telematics, but the term network technologies has been used in this report to mean the same thing.

These economics of telematics mean that, when combined with the appropriate re-organization and re-design processes, businesses, governments and non-profits are able to:

- reduce the costs of personnel, real estate, inventory, and transportation;
- increase the pace at which they produce goods and services; and
- introduce new, value-added services never before possible.

It is these economics that ensure that virtually every organization in society, public or private, is or soon will be in the process of defining and adopting a network strategy. The transition is a matter of time. Virtually every organization will participate or cease to thrive.

The current state of transition to a network strategy and the pace of progress are quite different for each organization. The ten-step ladder of participation in Section 10 provides a snapshot of this transition in Los Angeles County in 1996-97.

High end, well capitalized, global enterprises such as Price Waterhouse, Federal Express, and Microsoft have embraced a network strategy and already deploy applications for intra-nets, the internet, alternative officing from hoteling to telecommuting, teleconferencing, teleservices, and electronic data interchange with trading partners. Most other organizations, including especially governments, non-profit corporations and small businesses trail in this transition.

Leading edge organizations have their own dedicated staff to develop and manage applications and control the needed technology. The others do not.

In these early days of broadband network technologies, very few governments, businesses or community based non-profits have the level of demand that would justify ownership of the technology. This somewhat reflects the chicken-egg problem – lack of access to low cost alternatives results in conducting business in the traditional way; traditional practices do not create demand for new technologies.

The regional development organization and the network technology core of an Urban TeleVillage break into this cycle by providing low cost access to broadband telematics, plus the technical

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## Section11

assistance and training that is required to effectively use the technologies. The Urban TeleVillage aggregates demand for the network technologies from many users, most of whom would not otherwise pay commercial rates or purchase equipment in order to see if new technologies work with their mission.

Over time, sufficient experience with new technologies will lead some organizations to purchase the pieces that are used frequently, and to access less frequently used pieces at commercial pay-for-use rates. For example, a business might purchase a photo scanner once demand grows to a twice weekly need.

The initial demonstration phase at the BLTV was managed by a non-profit corporation that, because of MTA funding, was able to provide access to network technologies to an array of customers that included individuals, private businesses, governments and other non-profit corporations. Indeed, a non-profit entity such as the SBDC would have waited many years before it could have afforded to experiment with the delivery of its service over a broadband network. Until that happened, the urban function known as small business support would have been location bound, unable to be distributed to functional centers close to constituents.

If the applications development work initiated during the first year continues over the next two years, usage by all sectors could increase so as to fully utilize the existing capacity. Then the decision will be whether to:

1. Expand the facility and continue to offer subsidized service, that is increase usage rather than generate revenue.
2. Create a separate network technology core for the exclusive use of governments, leaving individual consumers, non-profit organizations and commercial interests to use the remaining subsidized capacity.
3. Create a commercial ITC in order to begin the transition to self-sustenance, leaving individual consumers, governments, and non-profit organizations to use the remaining subsidized capacity.

Ultimately, the best endowed local organizations will be served by the third option, a commercial facility in which customers with the resources receive service on-demand. Allocation of resources by the price mechanism benefits the best endowed.

Government interests may be best served through a separate facility that it can schedule according to its own needs for inter- and intra-governmental communications and for public to government information exchanges and transactions. The first threshold will be the point at which total government demand justifies a separate government facility, perhaps managed by a joint powers

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## Section 11

authority. Only in the largest Urban TeleVillages and only after several years will demand grow to justify separate federal, state and county facilities.

Assuming that both commercial and government facility migrations occur, the interests remaining are those of the poorly endowed non-profit organizations and individuals with resources or needs that do not justify commercial prices. A long term subsidy will be required for the network technology core that is dedicated to organizations and individuals with below market demand. Think of this as the *public transit system for the information superhighway*.

This is a form of a universal service for broadband services in a competitive telematics marketplace. As mentioned above, the universal service provisions of the Telecommunications Act of 1996 do not provide an adequate basis for this type of access.

Therefore, the problem in 1997 and for the foreseeable future, is finding the means to sustain the BLTV for the whole community during the transition to broadband telematics, and thereafter for those residents of the service area who cannot afford commercial services.

The options for funding the BLTV and other Urban TeleVillages are discussed next.

### Long Range Funding Options

One of the important qualities of telemobility compared to public transit is that with telemobility the transit agency is not required to pay for most of the cost of the system. Each participating organization pays for most of its cost of innovation as it develops multiple network applications. In addition, a variety of other programs can contribute to various elements of the system, such as economic development programs. Note MTA's practice in the 1997 Call for Projects of funding TeleVillages that are combined with One Stop Job Training Centers being promoted by the State Economic Development Department.

The following are the possibilities for funding various parts of each of the three elements of a system or Urban TeleVillages.

- Government and foundation grants
- Government general fund
- Corporate sponsors
- User fees
- Profit cross-subsidy
- Information Technology Trust Fund
- Investments diverted from automobility

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## **Section 11**

### **Government And Foundation Grants**

#### General Operational Support

Some grants are available for general operations support. That is, the funds pay for progress toward an overall mission. Examples include the TIIAP Grant of the National Telecommunications and Information Administration of the Department of Commerce, and the 1996 Wellness Foundation Grant Program that established a set of computer centers in low income communities. The amounts of money available specifically for network projects tends to be quite small. The NTIA's TIIAP, for example, distributes only about \$20 million per year for the entire nation.

As mentioned, many government grants are not geared to the realities of the adoption process of network innovations. For example, the AB2766 Program of the South Coast Air Quality Management District requires measurable results in 12 months and limits funding to those 12 months. While this makes sense with diesel conversion programs, and shuttle bus service, it is not compatible with the long term network strategy that requires a steady sustained regional effort for three years or more.

#### Special Projects

From time to time, various institutions have priorities that are translated into funding for projects that could be completed through the BLTV. One example is the Bank of America which in 1996 wanted to test electronic banking in low income communities. A grant program was discussed but not executed. In this case, the funds would have supported special outreach and training programs, not general operations. This would facilitate partnerships with other community based organizations on a variety of additional grant applications.

### **Government General Fund**

While this is theoretically possible, it does not appear to be a likely source of long term support. The problem is that governments are at levels are cutting back, not expanding. Library service, for example, has been dramatically reduced in some cities and counties. TeleVillage expenditures, since they are new and without an established constituency, would not fare well in the budget process wherein political priorities are expressed.

However, as government agencies begin their own transition to a network strategy, personnel, real estate and transportation economies will be experienced. Some of these savings could be redirected to the TeleVillage system. Furthermore, redevelopment funds might apply in some cases since an Urban TeleVillage can be used as a stimulus to complementary real estate development. Community Development Block Grant and other special funds could also be applied.

### **Corporate Sponsorship**

Compton and other communities purchase large quantities of goods produced by large multi-national corporations from Coca Cola to Reebok. These organizations could be approached to be good corporate citizens and return some of their profits to the community.

Another approach would be to solicit a technology company to sponsor some or all of the network technology core at the BLTV. IBM or CLI could adopt the BLTV as a technology showcase, providing some level of operational support and a commitment to introduce new technology. As previously mentioned, the network and access technology vendors will directly benefit as more organizations adopt and implement network strategies. It is not unreasonable to expect that such vendors would recognize their self-interest and offer contracts or make grants to some element of the TeleVillage system.

### **User Fees**

#### Individual Consumers

The membership fees developed for the demonstration period raised a small amount of revenue. The fee structure was kept low in order to emphasize usage. The need for revenue vs the need to provide non-commercial access is a policy issue for the future.

#### Organizational Facility Rentals And Affiliations

One of the pleasant surprises of the demonstration year was the interest in the Computer Center for an employee training site. Most organizations tend to lack adequate computer training facilities for their employees. Therefore, the BLTV could generate revenue by renting the Computer Center, or the Video Conference Center once demand increases. The usage vs revenue policy is a question here as well.

Once the BLTV is established as a regular place for doing business, then circuit riders can be charged for office space, and educational institutions can be charged for use of the distance education classroom. This level of acceptance appears to be a few years off.

#### Value-Added Activities

A largely unexplored realm during the demonstration period was the possibility of brokering for a fee or a surcharge the services of Service Partners such as California State University at Dominguez Hills to clients in the service area. In this example, the BLTV could sell a local business a distance education course from CSUDH for their \$2,000 fee plus a \$500 surcharge so that the local



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## **Section11**

business client would pay \$2,500. Marketing and selling advertising in a established newsletter are other examples.

### **Cross Subsidy From Profit-Making Activities**

Assuming that a non-profit corporation were in charge of the information technology core, it could create an additional line of business that had immediate commercial value and profit potential. A photocopy service is a good example. Community based organizations in the service area could collectively become the anchor client for such an enterprise.

A more modest enterprise involves buying a “silent radio” (e.g., messages in motion) system for about \$2,500 and selling advertising on it locally, as well as carrying BLTV information such as membership, class schedule, etc.

Entertainment is another opportunity. Distance education and satellite delivered high definition video could, in the future, share the same physical space in an Urban TeleVillage.

Revenues from linked commercial enterprises could then create an income stream that could be dedicated to the support of the information technology core.

### **Government Authorized Network Technology Trust Fund**

Ultimately, the best solution most likely involves political action. If public transit systems can operate at a deficit, and economic development programs can be publicly funded, and the telecommunications industry can support a Universal Service Fund, then permanent public funding can also be dedicated to some elements of the Urban TeleVillage system. The challenge is to create a politically acceptable framework for collecting and distributing dedicated funds.

The absence of dedicated funding causes most community technology centers to struggle to keep their technology current and to support the educational programs that make the technology useful. A permanent, dedicated source of funding is badly needed across the country for this function, which itself should be subsumed by an Urban TeleVillage.

I have elsewhere proposed that a Network Technology Trust Fund be created at local government and regional levels. Support for the Trust Fund could hypothetically come from a variety of sources that reflect the goals that an Urban TeleVillage supports – mobility, economic development, universal access to information technology, and community/public places. Part of the current problem is the programs of the U.S. DOT, FTA (such as livable communities), NTIA (such as the TIIAP) , Housing and Urban Development (such as Neighborhood Networks), Comptroller of the Currency and others as well as the California EDD, Department of Education and others all have

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## Section 11

programs or goals that involve network technology deployment. Yet each proceeds in isolation from the others.

The Trust Fund could include a modest surcharge (of say 5%, same as a cable tv franchise fee) on the gross revenues of the network industries, plus local land developer exactions (in lieu of transportation exactions), increment of a gasoline tax, and taxes on computer sales or other sources deemed appropriate by local and state policy makers. The key is that the funds would be dedicated to an Network Technology Trust Fund which itself could only be used for specific purposes associated with the elements of the Urban TeleVillage system.

From an economic perspective, Urban TeleVillages and their network services start out as the driver training system for the information superhighway for all but the leading edge organizations, and end up as the public transit system for the information superhighway for all those who cannot afford private access. It moves from an applications incubator for all interested parties to guaranteed social equity in technology access for those who need it.

The “universal service” policy established in the Telecommunications Act of 1996 will not satisfy the range of needs that will be created by the increasing presence of broadband telematics . But the Universal Service Fund (a relatively small amount of funding authorized by the Act and established by the FCC dedicated to public schools and libraries specifically for network transmission service) is another example of a source of funding disconnected from other sources and from real solutions to the problems of our cities.

### **Diverted Automobility Investments**

Governments at all levels annually spend a phenomenal amount of money sustaining automobility. As a result, the continued dominance of automobility has become a self-fulfilling prophecy.

Given the inherent limitations of automobility (expense, pollution, fossil fuel reliance, congestion); the emergence of a cost-effective, affordable alternative path to livable communities; the short-haul transit friendly nature of livable communities; and the new options for private, short haul, non-automotive transportation within and between livable communities, the need for- and the means to create a sustainable alternative to automobility now exist.

The challenge is to find political leaders who will transfer some investments from automobility to telemobility. For example, in Los Angeles County, the 2.6 mile Harbor Freeway Transitway (a second deck on the existing Harbor Freeway dedicated to car pools and bus service) cost \$500 million and was under construction for 7 years. This amount of money and time would have built and operated (for a year or more) 50 Urban TeleVillages, and constructed and operated a 200 mile public-private fiber network to connect them.

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## Section11

A two mile segment of 4<sup>th</sup> Street in the Los Angeles central business district is being retrofit with an automated reverse lane at the cost of \$ 1,700,000 and is planned as a model for reverse lanes in other areas of the County.

Foregoing say 100 miles of automated reverse would accumulate \$170 million dollars for telemobility investments.

Freeway high occupancy vehicle (HOV) lanes cost between \$1 million and \$10 million per mile depending on the extent of reconstruction that is necessary. According to SCAG, the upper end cost is actually \$32 million per lane mile in cases that require reconstruction of bridges, rail over/underpasses or freeway interchanges.

Foregoing 30 miles of HOV construction would provide at least between \$30 million and \$100 million for telemobility investments.

The consumer tax on gasoline produces \$30 billion of government revenue per year. Even an additional penny or two could fund Urban TeleVillages throughout California.

Those are examples of the political options.

## **DEVELOPMENT OPTIONS**

There are different paths by which an Urban TeleVillage can be developed. This Section discusses two topics that are key components of a development path.

### **Ownership Choices: Non-Profit and Municipal Corporation**

As other government agencies and cities fund Urban TeleVillages, ownership choices will continually appear. For example, the non-commercial network technologies of an Urban TeleVillage might be hosted by a public library, school or church. What issues should be considered in assigning ownership?

1. Conflict of Interest. There is a possible conflict of interest when the owner also functions as a heavy user of the facility. There is the prospect that pricing and scheduling decisions will be made by the owner to benefit the owner-as-user, with a possible reduction in service to other organizations and individuals. The technology core must deliver as many different urban functions as possible. For example, there could be a conflict of interest if a large organization such as Drew Medical Center was both the owner and user of the BLTV.
2. Freedom of Speech. In telecommunications networks, there has historically been a structural separation between government and public non-profit control. For example, public access cable production facilities and distribution channels are generally administered separately from municipal government access facilities. This is not a firm rule but common practice, in part because of the historically deep concern in this country to prevent government censorship of public communications. Public libraries have been entrusted to broker access to information, but libraries have not traditionally offered telecommunications services.
3. Funding Diversity. A non-profit generally has access to different funds than a municipal corporation. The best of both worlds might occur when a non-profit is the owner and the City is a paying user, or when a city is the owner and a financially stable non-profit is a user since either case provides an anchor client for the information technology core.
4. Stability. A municipal corporation could commit general fund monies in order to provide the long run stability that the TeleVillage needs. However, this makes the TeleVillage a competitor to other City programs for scarce resources. A conflict might occur when the City's immediate budget priorities no longer support long term mobility goals. On the other hand, most non-profit corporations lack the resources to provide long term stability. This could change if the Network Technology Trust Fund discussed below is eventually created.
5. Skills. Cities are typically better at maintaining a service or organization than in developing one. Any new Urban TeleVillage, will require several years of labor intensive support in order to

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## Section 12

reach its potential. Is the City the best organization to nurture this level of sustained innovation? If so, which department of the City should have responsibility – the library, information services, community development?

6. Legitimacy. The owner and operator should enjoy a good relationship with all segments of the community. Sometimes city hall, a non-profit corporation, a school district or any other entity can have a conflict with certain neighborhoods, religious groups, or racial groups within the service area. The owner should be a legitimate provider of service to the whole community.
7. Know-how. Organizations selected to develop Urban TeleVillages should share the MTA's vision (especially how to pursue the mobility objective) and should have the know-how to implement the vision. This is especially a concern at this time since the concept is new and the definition is not widely known or understood. There may be a tendency for some organizations to believe that information technology and good intentions about trip reduction qualify as an Urban TeleVillage. Recognizing that this might be a problem, the MTA held a workshop in support of the 1997 Call for Projects entitled "How To Develop a TeleVillage" Much more of this effort will be needed before cities or non-profits or any other entity will have the know-how to design and implement an Urban TeleVillage.
8. Experience. No organization has experience developing or operating every element of an Urban TeleVillage. Nevertheless, it might be possible to find an organization to own the facility that has experience operating some public technology program. The failures of publicly funded telework centers in the early 1990s can be traced, in part, to the inexperience of the municipal governments that received the grant and became their developer/operators.
9. Organizational Capacity. Both municipal corporations and non-profit corporations in general have more to do than resources to do it with. Funding agencies should ensure that their grantee has the organizational capacity to dedicate the management and time required to make the project a success.

At this point there is no clear answer regarding ownership and the form of ownership should be treated as a topic of research over the next two years. In other words, in order to provide answers in the future, the MTA needs to closely and objectively observe how these issues play out in each of the Urban TeleVillages that it funds.

### Transition Priorities

Once there are several projects to study, one of the research questions in Urban TeleVillage development will be the priorities of the post-demonstration development phase. In some cases, the original development team may be retained for this extended period. The following articulates the priorities for the transition consistent with the original development path.

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## Section12

The first priority should be continued pursuit of mobility enhancement. At the most general level, the management of an Urban TeleVillage should focus its efforts on expanding the number of urban functions it can demonstrate and that it can make routinely available at the facility. Mobility can be enhanced only through the spatial re-organization of urban functions. If the Urban TeleVillage fails to attract new urban functions while expanding the frequency of those already demonstrated, it will become a community technology center – just another urban function, not a mobility strategy.

This requires that functions that have been successfully demonstrated in year 1 are retained, and where possible, expanded in year 2. For example, the SBDC business seminars could be retained. The program could be expanded into one-on-one counseling over the Pro Share (this will require working with the Torrance SBDC office to solve the technology problems). The contract education classes demonstrated by CSUDH could be offered to other organizations in the service area. Another library story teller for the day care children could be found. BLTV staff could work with the Compton Library in order to continue that organization's participation in the project. A search for employers to authorize telecommuting from the Telework Center could be a priority. Expansion of the support program for small office, home office residents of the service area could also continue.

Community Partners and Service Partners could be recruited to add new functions. Perhaps the best place to start is with the federal community, state government and county government. Delivery of some medical services at the site could also be possible, most likely through the relationship that has been established with the Drew Medical University.

A second objective for the development path involves integrating the urban functions produced through the network technology core with the other urban functions currently found near the site in the retail shopping mall and the civic center. The resulting multi-function center should attract more trips than the technology core by itself. The mix could include physical places and electronic presence, commercial transactions and government and non-profit services. All this together would mean that the area was functioning like a traditional village center.

A third objective for the next two years involves becoming a test bed for innovative, short haul public transportation technologies. Options such as short range electric vehicles, smart shuttles and bicycles should be considered for formal deployment and testing. Such an addition is consistent with the transportation findings of the current study.

A fourth objective is documentation. A substantial level of documentation will be required in order to learn lessons and evaluate the effectiveness of both the concept and the project. For example, a much more rigorous attempt to record non-member visitors, organizations contacted, outcomes of those contacts, events held, attendees at each event, travel mode and distance to the event are some of the considerations. Membership renewals will be of particular interest.

## **LESSONS LEARNED**

Experience gained through implementation means reality has been encountered and lessons have been learned. Dozens of lessons significant to replicating the Project have been learned in this case at every level between concept and detail. The following provides a brief summary of the most significant lessons learned through the Demonstration Project.

### **The Concept Is Feasible**

The most important lesson was that the vision of an Urban TeleVillage as defined in Section 1 could be successfully translated into action for a little more than the budget planned and a little longer than the time expected.

Four goals for the Blue Line TeleVillage were established and the Project made progress toward their satisfaction:

#### Mobility

- Nine additional urban functions were demonstrated at the transit center and one existing function was significantly expanded over its previous level.
- Membership was concentrated in the three adjacent zip codes, creating the physical proximity that characterizes livable communities, and facilitates transportation mode shifts away from automobiles.
- Data available suggest that the mode profile among members traveling to the BLTV reflected high rates of walking and public transit, especially rail, that is consistent with livable communities. Automobile usage was relatively light.

#### Economic Development

- Almost 2,000 people received training in computer skills.
- Expansion of business opportunities was the community's top priority, and almost 22% of the applications implemented came from the Business Support Cluster.
- The Small Business Development Centers were among the most effective users of the BLTV.
- A way to link the local material economy to the cyber economy was demonstrated.

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## Section13

### Access to Technology

- There were over 6,000 visits to the BLTV, almost all of them to use technology in some form. The kiosks were extensively used.
- Network transmission services and technologies to access the network were available at far below market rates.
- Virtually all the Community Partners were relatively small, under-capitalized organizations for whom the BLTV provided resources that would have otherwise been unavailable.

### Sense of Community

- Over 150 community leaders attended a planning meeting to give direction to the Blue Line TeleVillage.
- Eighteen community leaders participated on an Advisory Board that guided the development of the TeleVillage. About half of them became actively involved in the operations phase.
- The BLTV started the process of becoming a community meeting place -- the Compton Chamber of Commerce held a mixer at the BLTV, the Inner City Computer Society regularly holds meetings and training sessions there, Children's Services organizations regularly use the Computer Center, kids gather there after school.

### **Things Don't Work As Planned**

No matter how well designed the plan, implementation reveals realities that require significant adjustments to the original plan. Sometimes adjustments can't be made and an aspect of the Project suffers.

The following are some of the realities encountered and the adjustments made or not made.

- The MTA was to provide network services to the BLTV from its existing fiber network. When this proved infeasible, application was made through the County Library Department to Pacific Bell's Education First Program. This adjustment actually benefited the Project since good quality video and high speed internet access was available on a switched network that promised access to virtually every desirable location. The network services were delivered at a fraction of the cost that the MTA would have faced. The BLTV also benefited from the application development services of Education First. (This does not imply there is no role for an MTA fiber network in the future.)



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## Section13

- Continental Cable refused to provide cable service to the community room in the Transit Center despite having a franchise requirement to do so. The original plan called for both video production and reception capabilities. An entire family of applications were canceled as a result. Continental (now known as Media One) has since provided cable service but production equipment has not been provided.
- The excitement around the Project was expected to translate into equipment donations by vendors. These donations did not materialize and the Project budget had to be used to purchase equipment.
- Unforeseen activities that were also not budgeted were nonetheless completed. This included architectural services required for site improvements, MTA-Drew contract re-negotiation, installation of the LAN and inside telephone wiring, construction management of the site improvements, planning and holding an open house event, and marketing. There were many other cases. In each case, either the MTA, Drew EDC or subcontractor Siembab Planning Associates stepped forward and completed the tasks required. The result was additional costs to the parties mentioned and a Project cost over-run that is undocumented and un-estimated.
- The existing organizations charged with facilitating telecommuting in the region were ineffective. The commitment made by the federal government to telecommuting did not materialize in the Project. Because of administrative delays, the Telework Center did not become available to telecommuters until late in the demonstration year. As a result, the Drew Team shifted the emphasis to using the Telework Center to support local small or home based businesses. This proved to be an effective adaptation -- both local businesses and telecommuters can be supported by the Telework Center in the future.
- Distance education was expected to be an anchor use of the Video Conference Center. The Drew Team expected that colleges would use the BLTV as an off-site location for regular courses. A partnership was planned with Los Angeles Trade Technical College, a leading community college in the sub-region that enrolled many students from the BLTV's service area. Due to lack of adequate telecommunications infrastructure and a distance education culture, LATT was unable to participate at all. Colleges generally are not at the stage where regular courses can be distributed over interactive video. Satellite, broadcast or cable tv tend to be media of choice for regular video courses and the BLTV was not equipped to receive any of those channels (see Continental Cable above). Nevertheless, some experience was gained delivering a contract education course from California State University at Dominguez Hills. Library applications and small business development applications were emphasized. Other than these examples, some of the unused capacity in the Video Conference Center was due to the unrealized plans for distance education.

**Participation Follows a Ladder**

To an outside observer, participation might be something that an organization clearly accomplishes or doesn't. Inside the Project, participation is a process that moves through several stages. Overall, the process can be characterized as a Ladder of Participation with each step defined as a stage in the process. In this way, an organization could participate by making progress toward implementation even if implementation could not occur during the demonstration period. The Ladder allowed reasons for not advancing to another step to be identified, establishing the opportunity to correct them in the future. The Ladder also identifies the work in progress stuck at a step somewhere short of routine use or network strategy adopted.

**Barriers to Participation Can Be Identified**

One model of participation might be that an organization is recruited and once it reaches step 3, it proceeds under its own initiative at a steady pace up the Ladder. If this model were accurate, then only a "sales staff" would be needed to get organizations started, and each organization would reach the top of the Ladder on its own.

The actual model of participation is that most organizations proceed quickly to the most advanced step that they can reach during the current window of opportunity. In order to make further progress, the barriers to their participation must be identified and resolved by external applications developers. The actual response depends on the nature of the barrier. The following were the most significant barriers to organizational participation:

- Lack of access to network technology, especially video conferencing but also internet access.
- Large bureaucracies, which require time and resources to locate the appropriate department and person, and where front line people are not allowed to make commitments for the organization.
- Institutional rules such as those that require attendance verification for certain college courses making them difficult to offer as distance education; and day care rules that prevent drop-in child care while a parent attends a class.
- Timing and time – windows of opportunity for introducing innovation close because of staff turnover, crisis, budget cuts, and changing priorities creating a situation which requires the right timing. The best way to get the timing right is to consistently sustain the recruitment effort over a long period of time.
- Lack of resources necessary for organizations to engage in innovative trials – staff members usually lack experience with network applications and can take on only so many special projects.

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## Section13

- Organizational culture which in some organizations resists change and, in others, at least embraces a willingness to try things differently.

### **Recruitment Needed to Reach Nine Organizations for One to Implement an Application**

The “contact to implement ratio” should vary with service area and over time. It will be interesting to learn what happens during the second year in Compton.

The most sizable portion of the “contact to implement ratio” problem in this case was at steps 1 and 2. Once progress was made to step 4 where an application could be envisioned, the Drew Team could most often resolve the barriers and eventually move the organization to implementation. Lack of participation at the lower steps was an even more difficult matter since, without contact or a basic dialogue, barriers can’t be identified and resolved. Organizations stuck at step 1 or 2 require consistent monitoring and periodic revisiting.

### **Ideal Organizations Can Be Defined**

Future developments can benefit by setting recruitment priorities according to criteria that define the ideal participating organization. Secondary recruitment efforts can go after those organizations that are less than ideal. Of course, what was empirically determined to be ideal in Compton might change over time and service area. However, the definitions of “ideal” are logical.

The best performing Service Partners were small, flexible organizations, with managers empowered to make and keep commitments, and with compact, informal products that could be flexibly adapted to new circumstances, and that had products that could be offered without charge to clients/consumers. The SBDC is an example of what worked and federal agencies are what didn’t work.

The best performing Community Partners were, first a) large, technologically sophisticated organizations who understood their communication needs and how the BLTV could be used to satisfy some of those needs, followed by b) small organizations with constituents who need computer access . Drew Medical University is an example of what worked and local churches are what didn’t work. The Boys and Girls Club and Valu Med are in the second tier of what worked.

In other words, the characteristics of the first priority Community Partner are reasonably opposite from the characteristics of the first priority Service Partner.

### **Some Functions Capture Productivity Benefits More Easily**

Organizational productivity improves when a remote audience in a video conference is added to the in-person local audience. Cases in which a special presentation was made for the remote audience (i.e., there was no local audience) either involved a substantial charge to the remote audience

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## Section13

(distance education class from Cal State Dominguez Hills for the City of Compton) or costs internalized by the service provider (story telling by the Pasadena Public Library).

In contrast, cases in which a second and third remote audience was added to the local audience tended to improve the productivity of the service (author's book tour at the Pasadena Public Library and small business seminars by the SBDC). In those cases, a much larger audience was reached with only the additional charge for the network use.

### **A Marketing Function Was Needed Beyond That Provided By Service Partners and Community Partners**

The original Drew Team work scope for the project assumed that Community Partners and Service Partners would market each application to its own constituency. Four lessons were learned.

- This does not always occur although it occurred more often with Community Partners than with Service Partners.
- When it does occur, it is not always as effective as it should be. Community Partners may lack the resources to extend their marketing, and may not have very adequate marketing channels even for their own programs. Service Partners may not have adequate marketing channels into the specific service area of the BLTV.
- Not all services or events involve a Partner. Public access computing and most computer courses are examples.
- Marketing at the far side in a video conference is often a problem. In the three-point Small Business Development Center seminar originating from the BLTV, the KCET site in Hollywood was difficult to market since it was not clearly in any SBDC service area, and certainly not in the service area of the BLTV.

BLTV Operations attempted to use a monthly calendar as a marketing device. This served well for activities that were regularly scheduled such as computer classes. Video conferences open to the public (such as those by the SBDC) were very seldom included on this calendar, often because the planning was not completed before the calendars for the month were circulated. The Latino Chamber of Commerce strongly recommended advertising in the Spanish language newspaper La Opinion in order to reach Latinos in the service area.

Distance education presented a particular problem. The provider has no on-site presence and no way of measuring demand for its educational products at that location. It is theoretically feasible to tentatively offer a variety of courses contingent upon demand reaching a threshold level by a certain date. Design of such a system was not attempted during the demonstration year.

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## Section13

It appears that the BLTV may require marketing efforts of three types. The first is marketing for each of the separate elements, Computer Center, Video Conference Center, Telework Center and Circuit Riders. The second is marketing for programs that integrate the BLTV such as the Business Development Program. The third is marketing the whole TeleVillage as a destination – presumably integrating the urban functions located in the Compton Civic Center and the adjacent retail center.

### **Telemobility Spreads The Costs**

When the MTA operates a bus line or builds and operates a rail service, it bears virtually all of the costs of producing mobility through that strategy. Individual consumers must absorb the cost of physically getting to the access point for each service.

With telemobility, this Project discovered that every participating organization co-produces with the MTA the mobility function and shares the costs. In fact, the most significant barriers to participation included various forms of these costs.

On one hand, co-production of mobility increases the leverage of transportation dollars. On the other hand, it makes the system's success dependent on actions of organizations beyond MTA's control.

One way to mitigate this down side is for the MTA to coordinate the actions of these unrelated organizations through its plan for deployment of systems that produce telemobility. (such as new Urban TeleVillages and a supporting fiber network). More organizations would be willing to pay the costs of mobility co-production if the overall plan were clear, because these same investments tend to improve the cost-effectiveness of each organization's pursuit of its mission. By limiting the distance required to obtain each urban function, telemobility will also ultimately lower the time and probably the out-of-pocket costs of the consumer's share of the price of mobility.

### **Membership Was Concentrated And Dispersed**

The 60% of the membership that was concentrated in the 3 zip codes adjacent to the Transit Center demonstrated that an Urban TeleVillage could approximate a livable community. The second trend in member location was dispersal of the remainder into 91 zip codes. This suggests that citizens throughout Los Angeles County have an interest in an Urban TeleVillage.

### **Consumer Acceptance Appears To Be Ahead Of, Or At Least Not Behind, Organizational Innovation**

Some organizations are concerned about whether their constituents are ready for a network relationship. These concerns can be heightened when referring to a low income community because of the historically low levels of ownership of information technologies. Institutional anxiety over the introduction of electronic banking to low income populations is an example.

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## Section13

Yet, at the BLTV, there was a strong consumer interest in the Computer Center. The video conferences including distance education, children's story telling, small business seminars and author's book tour were all well attended and well received. The participating individuals generally wanted to continue. The BLTV received an overall approval rating of 9.5 on a scale of 10 on the end users survey.

Organizations that implemented an application were, in general, similarly pleased with the results. However, most organizations did not implement an application and discovered barriers to their full participation. It appears that organizations had more trouble progressing up the Ladder than individual consumers had accepting network mediated products.

### **Computer Access Was In High Demand**

The Computer Center was used to the greatest capacity of any element in the BLTV. Classes in introductory subjects and public access computing were the most popular activities. The drop-in availability of the services are especially convenient for the individual consumer. The other elements of the BLTV require more planning and coordination and often involve organizations more than individual consumers. While the internet does not yet offer a substantial level of urban functions, it will in the future. Therefore, the immediate success of the Computer Center could be characterized as an investment in the future of telemobility by preparing drivers to navigate the information superhighway once it includes more destinations.

### **Pacific Bell Became An Important Resource Partner**

Change in the way things are done does not come easy to organizations, even when the changes are rational, cost-effective, and affordable. Simply selling more units of video conferencing equipment or computer modems will not automatically lead to regional behavior that will enhance mobility, support economic development, provide equitable access to information technology, and reinforce face-to-face community life. External change agents in the form of applications developers are essential for activities that include recruiting organizations, helping them conceive of ways to use the BLTV, and implementing and evaluating those uses.

Pacific Bell's Education First Program is known for its grants of ISDN lines to schools and libraries. What is less well known is the excellent level of applications development that the program provides in addition to the technology. It is not an exaggeration to suggest that there would have been fewer accomplishments during the demonstration period without the Education First Program.

For example, the Pasadena Public Library was an Education First model site and, as such, was consistently available as a far side partner for video conferences, even when the event did not involve library services (e.g., the SBDC meetings involved the meeting room at the Pasadena Public Library). The Education First video bridge was used in every multiple site video conference, and

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## Section13

such events would have been unlikely to occur in that way without it. The Education First applications support team brought many video conference opportunities to the BLTV (although, not all were applicable to the BLTV).

### **A Fiber Network In MTA's Rights-of-Way Could Make Valuable Contributions To A System Of TeleVillages**

The public switched network provided the best service at the lowest cost for the demonstration project. However, the Education First Program will not be permanently available. Therefore, the public switched network should not be counted on to carry 100% of the non-commercial and government traffic into and out of future Urban TeleVillages.

One of the lessons from this Project is that the MTA designed and constructed its fiber networks in a time before uses ancillary to rail operations were considered. Without design changes, even the networks on routes that have yet to be built will not be able to provide service to future Urban TeleVillages located adjacent to Metro Rail stops. At this time, no permanent solution to the problem of low cost network services has been found.

The MTA does have the option of forming a partnership with a private network developer to create a fiber backbone network that will be flexible enough to serve both rail and non-rail objectives. Not only would such a network provide valuable services to TeleVillages, but it could become the basis for a number of additional partnerships. For example, during the Drew Team's search for an internet service provider (ISP) for the BLTV, a leading ISP offered to provide free internet service to the BLTV and any subsequent TeleVillages in exchange for capacity on an MTA fiber network.

## **RECOMMENDATIONS**

Recommendations should be offered in relation to acknowledged objectives. The May 24, 1994 MTA staff report recommending board approval of the Drew EDC contract stated that the project intended to accomplish the following:

1. Use the existing Metrorail fiber optic communications system to deliver the social service information, travel information, government transactions, education and/or training at or near rail transit stations.
2. Support the Rebuild L.A. initiative by targeting the demonstration project along the Blue Line in South Central Los Angeles.
3. Demonstrate, in financial partnership with Caltrans, the mobility impacts of such teleservice delivery systems upon noncommute trip making.
4. Link telecommunications services and MTA joint development, economic development, and land use strategies by demonstrating the benefits of including telecommunications in land use policy and regulations.
5. Under the “project description” section, the staff report also states that the TeleVillage concept is designed to reinforce Metrorail stations as both transportation nodes and as destinations for community resources delivered by telecommunications systems built along MTA rail rights-of-way.

Of these objectives, the second was met by the project in its demonstration year. The first and fifth require MTA’s resolve to develop a fiber optic backbone network in its rights-of-ways and this issue is addressed by the final recommendation in this section. Progress was made during the demonstration year on the third and fourth objectives. However, more than one year of operations will be required to more fully accomplish them. The following recommendations address ways to achieve these objectives.

### **Continue Work-In-Progress**

Ask the City of Compton, as new owner and operator of the BLTV, to complete the work in progress, increase the urban functions offered, and continue the documentation presented in the report. See pages 166 - 170 for more detail. Alternatively, close the books on the 1996-97 Blue Line TeleVillage and open them on an entirely different kind of project – a technology enhanced One Stop Career and Job Training Center. In order to increase the ability of the BLTV to reduce automobile trips and encourage public transit and walking trips, it is recommended that the City of



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## Section14

Compton consider integrating its civic center and retail center with the BLTV so that it could all be marketed as the Compton TeleVillage Center.

### **Demonstrate A System Of TeleVillages**

A system of TeleVillages would improve the economics of development. There are economies of scale in applications development so that several TeleVillages can actually reduce the development cost per TeleVillage. Furthermore, some organizations will be easier to recruit if there are several venues available for their participation. A college or university, for example, would be more attracted by a set of seven distance education class rooms than just one.

A County-wide or regional organization to encourage organizations to progress up the Participation Ladder, parallel to a ride sharing agency, needs to be funded. The Telework Facilities Exchange funded by the SCAQMD between 1992 and 1995 and sponsored by the Institute for Local Self Government was a prototype for this organization, although its focus was on shared facility telework.

Short run funding should cover at least 2 years and preferably 3 years of operations. Neither community acceptance nor organizational participation can reach their potentials in just 12 months.

### **Define, Monitor And Enforce Future TeleVillage Developments**

Design of rail systems and even bus service has evolved over the years through substantial levels of research and development and trial and error. It is, therefore, unrealistic to expect that Urban TeleVillages can be introduced in a few trials without careful nurture over time supported by a consistent research and development program.

To meaningfully conduct trials, parameters should be defined, the process monitored, and the definition enforced. For example, if the spatial re-organization of urban functions is not the defining principle, then any given project may become a technology center that is itself nothing more than a single function travel destination. Failure to define, monitor, and enforce will result in the widespread conclusion that telemobility and Urban TeleVillages “don’t work.” The correct conclusion will be that they haven’t been tried.

The first year of the BLTV generated a substantial list of research questions that can only be answered through practice. What churn occurs when the initial memberships expire? What happens to organizations at each step on the Ladder of Participation in the second year of effort? What are the differences between a non-profit owner and a municipal owner (pages 164 - 166 provide guidelines)? What are the possible relationships between neighborhood communication centers and TeleVillage Centers? What marketing strategy will ultimately prove successful? What measurable outcomes occur as a result of a sustained effort to create economic opportunities? What elements should be expanded? What urban functions are most likely to increase visitation?

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## Section14

What can be done to further encourage access via walking and public transit? What are the costs and benefits from short range transit innovations? How long does it take the local real estate market to use the network access center to become a true TeleVillage?

### **Find A Long Run Funding Solution For TeleVillages**

There is a non-commercial component to each network access center and TeleVillage. If the MTA can provide the seed money to start a TeleVillage (for its first 3 years for example) and can provide broadband network services to it, then it should be possible for other sources of funds to permanently support the non-commercial elements.

It is possible to capitalize on the multiple goals served by a TeleVillage and establish a “Network Technology Trust Fund” that could hypothetically receive funds from ISTE, Proposition C, a future gas tax, land developer fees, a sales tax, economic development grants, the universal telecommunications service fund, spectrum auction percentage, and so forth.

### **Participate – Improve MTA’s Position On The Participation Ladder**

Introduction of a telemobility strategy requires leadership. Leadership is often established by example. In the case of public transit, many MTA employees routinely ride the Metro Rail system to work and for certain trips for-work. The MTA should consider moving each of its departments to increasingly higher steps on the Participation Ladder. This could include any of the following actions:

- Acquire access to an audio bridge, equip all meeting rooms with speaker phones, encourage employees to conduct meetings as audio conferences.
- Establish a video conference center in the Gateway Building for use by MTA, other government agencies, or private businesses. Encourage employees to conduct meetings as video conferences when appropriate. Note that the central business district lacks a video conference hub for government business.
- Use the MTA work force to create an anchor client for the Telework Center in any Urban TeleVillages developed in the County. Even two telecommuters would have made a difference at the BLTV. Institute a “hotelling” approach to the officing function in the Gateway Building. In other words, start experimenting with a physically distributed work force that is integrated through intra-nets and the internet.
- Develop a “circuit rider” capability to create a presence at each TeleVillage.
- At the high end of policy, develop a corporate network strategy.

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## Section 14

- Develop a role for telemobility in the long range SCAG Regional Mobility Plan and in the Livable Communities Element of the MTA's Long Range Plan. Ask SCAG to develop computer models to provide estimates of long range costs and benefits of developing livable communities in this manner at rail stations and major bus intersections.
- See the Metro Net Report for an additional list of possibilities that remain as relevant as they were in 1992.

### **Inform Other Organizations In The County About TeleVillage Plans**

Once the MTA has formalized its position on telemobility and Urban TeleVillages, it will be in a position to inform other organizations in the region about its plans. The benefits from this include the possibility that once these other organizations understand the picture, they will make their own investments in a consistent future. For example, TeleVillages can be developed using redevelopment funds, CDBG funds, and public-private joint ventures. Cities can be catalysts if properly equipped to proceed.

In addition, public and private organizations will be able to proceed with their electronic service delivery plans knowing that there will be places for public access to these services. This will have the effect of adding urban functions to the network.

During the application period for the 1997 Call for Projects, the MTA sponsored a workshop entitled "How to Develop a TeleVillage." This was a start that might best be followed up with presentations on the findings of the BLTV Demonstration Project for interested groups throughout the County. At the least, specific effort will be needed to define an Urban TeleVillage and describe its development process. A manual on methods would help.

### **Facilitate Participation By Influential Organizations**

The MTA can use its position as public mobility provider for the County to convene meetings with influential organizations such as the County of Los Angeles, City of Los Angeles, Los Angeles Unified School District, California State Universities, USC, UCLA, the State of California, key employers and umbrella organizations such as the Federal Executive Board, chambers of commerce, Southern California Association of Governments, trade associations, Building Owners and Managers Association, and the League of California Cities in order to recruit their participation in future Urban TeleVillages.

The MTA could also recruit other "mission oriented" organizations such as the Air Quality Management District and SCAG in order to develop a highly visible joint policy on telecommuting within their organizations, funding for future telecommuting projects, and policy on the

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## Section14

telecommuting behavior of other employers in the region. This could include a policy supporting formation of an organization to conduct applications planning for the region.

### **Find A Long Run Network Solution, Preferably Involving MTA's Rights-Of-Way**

The MTA should revisit its fiber leasing program in light of its initial objectives for the BLTV, its emerging telemobility strategy and its plans for future Urban TeleVillages. For example, it can factor into the fiber leasing program the non-commercial demands for bandwidth, and the potential commercial traffic that could flow to the private partner if some number of Urban TeleVillages were to be developed at Metrorail and Metrolink stations throughout the system.

Failing this, inquiry should begin into options for a long run solution for network services to current and future Urban TeleVillages. In any case, any new fiber networks developed by the MTA should be designed to accommodate uses unrelated to transit operations.