

Current and Future Uses of Broadband in the Peninsula Library System

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Executive Summary

California's education and research communities currently leverage their networking resources under CENIC, the Corporation for Education Network Initiatives in California, a non-profit corporation created in 1997 in order to obtain cost-effective, high-bandwidth networking to support their missions and respond to the needs of their faculty, staff, and students.

Work is underway to secure funding to connect California's public libraries to CENIC as a sixth segment, with the California State Librarian acting as the libraries' interaction point with CENIC. The Peninsula Library System, a consortium of 35 public and community college libraries, will be the first system to connect to CalREN, CENIC's high-speed network, in August of 2013.

This report describes current uses of technology in libraries, identifies the obstacles librarians face as a result of limited bandwidth, and documents ideas librarians have for using expanded broadband capacity to serve their patrons.

Current Broadband Enabled Programs and Services

The libraries of the Peninsula Library System, a consortium of 32 libraries in San Mateo County, are some of the most technologically sophisticated in the state of California. Located in Silicon Valley, a region known for technology innovation, library leaders have actively sought out and implemented programs and services that take advantage of the latest technology.

The typical activities that a library patron wishes to carry out at their library currently include social networking, watching videos, e-mail, job-seeking and online applications, word processing, catalog search, general Internet research, printing, and participating in online courses. In an effort to facilitate these activities, librarians are making significant changes in patron services, and the technology that this requires is becoming increasingly central to library operations. These include:

- Expanding use of wireless
- Increasing use of e-books and e-audiobooks
- The changing nature of reference
- Experiments with maker programs
- Formal and informal instruction in technology applications for patrons
- Technology supported community connections
- Library use of social media
- Administrative efficiencies
- Transforming facilities

Obstacles Created by Limited Bandwidth

Despite the recognized benefits of and increasing patron demand for innovative programs like those in the above categories, the videoconferencing, streaming media, content creation, specialized software, longer sessions on terminals, and unlimited wireless access that these programs require are either not possible due to limited connectivity, or so severely constrained as to render them of extremely limited use.

Future Plans: Broadband Enabled Programs and Services

Librarians in the Peninsula Library System are eager to expand their broadband enabled programs and services once the obstacle of limited connectivity is removed. Below are some of the programs and services that librarians anticipate investigating and implementing once connectivity is expanded from 20 Megabit per second (Mb/s) to 1,000 Mb/s or 1 Gigabit per second (Gb/s) per library as a result of the partnership with CENIC.

- Video game creation and other technology programs for teens
- Cloud hosting
- Reinventing reference
- Videoconferencing for meetings, staff training and public programs
- Collection development: E-books, digital magazines, and digital music
- Supporting individual and group online learning
- Digital content creation
- Supporting the development of small businesses
- Digitize community history
- Enhance library security
- Mobile computer lab

- Expanded computer tutorials
- Expanded equipment and software
- Genealogy research
- Library use of social media

Facilities, Equipment and Sources of Information

As a part of the research for this report, librarians were asked to give detailed information about the facilities, equipment and staff supporting technology in their libraries. The results are presented in the table in Section IX. They were also asked how they learned about innovations in patron services made possible by expanded broadband. These sources of knowledge and inspiration, including periodicals, conference and experts, are summarized on page 10.

Background

About the Peninsula Library System – www.plsinfo.org

The Peninsula Library System (PLS) is a consortium of 35 public and community college libraries working together to provide innovative and cost-effective service to their users. Founded in 1971, the system is funded primarily by member libraries. PLS also receives funding support from the California Library Services Act, the federal Library Services and Technology Act, and local contracts for special services. Residents of San Mateo County can borrow and return books at any local library and can search a joint catalog of member library holdings.

About CENIC – www.cenic.org

California's education and research communities currently leverage their networking resources under CENIC, the Corporation for Education Network Initiatives in California, a non-profit corporation created by the California research and education communities in 1997 in order to obtain cost-effective, high-bandwidth networking to support their missions and respond to the needs of their faculty, staff, and students. CENIC designs, implements, and operates CalREN, the California Research & Education Network, a high-bandwidth, high-capacity Internet network specially designed to meet the unique requirements of these communities, and to which the vast majority of the state's K-20 educational institutions are connected. CalREN consists of a 3,800-mile CENIC-operated backbone, shown at right, to which nearly 10,000 schools and other institutions in all 58 of California's counties connect via leased circuits obtained from telecom carriers or fiber-optic cable. Over ten million Californians use CalREN every day.



There are currently five Charter Associates (CENIC participants, all connected to CalREN): the California K-12 System, California's Community Colleges, the California State University, the University

of California, and Private Universities (Caltech, Stanford, and USC). CENIC also serves non-Charter research and education institutions when this is in the interest of their Charter Associates. A full list of the CENIC Associates can be found at www.cenic.org.

About the Collaboration

Work is underway to secure funding to connect California's public libraries to CENIC as a sixth Associate, with the California State Librarian acting as the libraries' interaction point with CENIC. This would involve adding California's libraries to the fabric of education institutions already connected to CalREN. As a result, libraries would have the capability to collaborate more seamlessly with one another as well as draw on content, expertise, and opportunities from schools, colleges, and universities, extending these capabilities to individual libraries and library patrons statewide and thereby enhancing access to information, research, and credit/non-credit distance learning.

The Peninsula Library System is one of three library systems in California participating in a pilot project to demonstrate both the feasibility and benefits of joining CENIC. By August 2013, the eight main libraries in the Peninsula Library System will increase their connectivity from 20 Mb/s to 1 Gb/s.

This report describes current uses of technology in those libraries, discusses the obstacles their current limited connectivity creates, and documents ways in which librarians intend to use the greatly enhanced broadband capacity as a result of their participation in CENIC to more effectively serve their patrons.

Current Broadband Enabled Programs and Services

The libraries in San Mateo County are some of the most technologically sophisticated in the state of California. Located in Silicon Valley, a region known for technology innovation, library leaders have actively sought out and implemented programs and services that take advantage of the latest technology.

Technology in these libraries is heavily used. For example, the Redwood City Libraries have the highest Internet usage per capita in the country. These libraries have enjoyed a higher bandwidth than most libraries in the state as San Mateo Community College has enabled them to connect to CENIC's CalREN through the College's own connection.

System-wide there are 1,590 computer terminals and an average of 700 wireless users per day. More than 75,000 searches are

conducted on Peninsula Library System terminals annually. Typical patron uses of technology include social networking, watching videos, e-mail, job-seeking and online applications, word processing, catalog search, general Internet research, printing, and participating in online courses. Some exemplary broadband enabled programs and services include:

Expanding Use of Wireless

All libraries have expanded the number of terminals available to the public over the last five years. For example, the San Mateo City Library had 10 terminals when they opened in 1996 and now has 100 terminals. Over the last few years, wireless connectivity is becoming more and more crucial. Increasingly, patrons are bringing in their own devices and using them in the library. As a consequence, the previously prohibitive wait time for library terminals has vanished entirely as people are no longer waiting for terminals at all.

Increasing use of E-books and E-audiobooks

The San Bruno Public Library has had a 100% increase in the use of e-books and e-audiobooks just in the last year, from 2,000 downloads to 4,000 downloads. The Menlo Park Public Library hosted an e-book event sponsored by the Library Commission in which volunteers showed patrons how to use different kinds of e-reading devices.

The Changing Nature of Reference

Librarians in the Peninsula Library System estimate that about 40% of reference questions come from patrons at public computers or their own laptops, seeking assistance in searching the Internet and using software applications such as e-mail. Subscription databases are now the first place librarians turn when answering reference questions.

Experiments with Maker Programs

The Burlingame Public Libraries have started a Maker program on the second Saturday of each month. Activities have included building robots, tie dying, and Japanese arts. Librarians intend to offer more technology-based activities and hope to eventually have a Maker space in the library.

Technology Instruction Programs for Patrons

Increasingly, libraries are offering formal and informal instruction for patrons on uses of technology. For example, The San Mateo County Libraries offer a wide range of classes on topics such as using EBay, Blogging, using Email, Computer/Internet basics,

setting up a Facebook account, using JobScout, and downloading E-books. The San Mateo City Library uses volunteers to assist patrons with technology questions. These volunteers are often teens doing their volunteer hours for school. They recruit every quarter and usually have 6-8 volunteers at a time. The Daly City Public Library offers one-on-one tutoring sessions, by appointment, conducted by library staff.

Technology Supported Community Connections

The Peninsula Libraries offer Discover and Go passes (http://plsinfo.org/discover_go) to their patrons, enabling patrons to print museum passes themselves rather than using traditional physical passes that must be picked up and returned to the library. The Contra Costa Library began this program.

The Community Information Project (CIP) works closely with county non-profit and government-based health and human service agencies to collect and organize information about these agencies, which provide direct services to the public. A directory of community services compiled by CIP can be found at http://cip.plsinfo.org/whats_in_database.htm.

Library Use of Social Media

Most Peninsula Libraries use social media including Facebook, Flickr, YouTube, Twitter, and Pinterest to promote and document their programs and communicate with their patrons.

Administrative Efficiencies

Peninsula Libraries are also making their administrative systems more efficient and effective using technology. For example, the Redwood City Public Library's Project Read program experimented with staff training by buying all staff an iPad. As a result, productivity increased by 50%, and the library was able to eliminate an administrative position. Project Read coordinators now use their iPads for client interviews and reading assessments.

Transforming Facilities

As technology become more important, libraries are redesigning their facilities and reprioritizing their equipment budgets. For an overview of the current facilities and equipment supporting patron use of technology in the libraries, please see the table in Section IX.

Obstacles Created by Limited Bandwidth

Despite the recognized benefits of and increasing patron demand for innovative programs like these, limited connectivity prevents librarians from offering programs and services they perceive would be of value to their patrons. The videoconferencing, streaming media, content creation, specialized software, longer sessions on terminals, and unlimited wireless access these programs require are not possible due to limited connectivity. Even libraries with connectivity that is barely adequate for current needs are increasingly reaching their bandwidth capacity, especially during peak periods of use. All librarians interviewed talked about the various obstacles to patron service created by low bandwidth, and examples are given below.

In 2012, access to the network within PLS libraries was denied 366 times due to too many people logging in at one time.

Consumption of streaming content at Redwood City Library currently causes all other network uses to slow down considerably. The sudden slowdowns caused by such “bursty” use are frustrating to patrons, and the library director and other staff members regularly get complaints. These slowdown due to high usage are especially frustrating in the teen room as teens often use the most bandwidth-intensive applications. The libraries would like to start moving into teaching content creation but this is out of the question given current bandwidth.

The San Mateo City Main Library opened in 2006 with 3 Mb/s but had congestion problems within three months. The library subsequently upgraded to 10 Mb/s, saturated this connection within a year, and then upgraded to 20 Mb/s and have already begun to experience saturation on this connection as well. The library’s branches have 5 Mb/s per location and also experience occasional bandwidth problems that affect back-end operations.

The Burlingame Library recently went from 10 to 20 Mb/s, and yet this doubled capacity is not sufficient as library patrons have become increasingly interested in engaging in bandwidth-intensive activities. Students entering the library in the afternoon frequently play games, watch videos, and stream other content, and pauses due to buffering when patrons consume such media are common. In the afternoon, all 35 public terminals are busy, and patrons frequently bring in their own devices. The library itself has been putting video on its own website but these videos are slow to load. The California State Library Foundation is also coming up with a whole new website that will be very video-intensive and this requires higher bandwidth.

During high use periods in South San Francisco Public Library, the library's network slows or stops entirely. For example on tax day, volunteer tax preparers could not transmit taxes as part of the tax preparation program the library was offering. During Sunday afternoons, when children seek to complete homework assignments, the network connection saturates completely, and homework cannot be completed.

San Mateo County libraries also lack sufficient bandwidth. At peak use times, patrons are unable even to access their e-mail and in some classes, instructors will demonstrate an activity during the class but must then instruct the class not to actually do it because the network will not support it. In a recent class of 20 participants learning to use e-books, the network stopped entirely as people tried to download content simultaneously. Libraries are even getting large-format TVs but will be severely limited in their use. Even conducting PowerPoint presentation is problematic at current bandwidth levels.

It is important to note that in these libraries, as in many others, network speed is only one obstacle. Others include limited and outdated equipment and building infrastructure (i.e. saturated electrical circuits) and insufficiently trained staff. Enhanced connectivity will however aid with all of these.

Future Plans: Broadband Enabled Programs and Services

Librarians in the Peninsula Library System are eager to expand their broadband enabled programs and services once the obstacle of limited connectivity is removed. Below are some of the programs and services that librarians anticipate investigating and implementing once connectivity is expanded from 20 Mb/s to 1 Gb/s per library as a result of the partnership with CENIC.

Redwood City Public Library

- **Video game creation:** the library is situated in one of the main centers for game development and teen patrons are eager to take part in library programs on game development. Companies have even contacted and presenters visited the library to discuss game development programs, but current bandwidth makes movement on any of this momentum impossible. Moving forward on game development programs is high on the library's priority list when their CalREN connection is in place.
- **Literacy:** The library is tasked with becoming a part of the life of at-risk teens and assisting them in improving their educational attainment, and computer literacy is an essential part of overall literacy. With expanded bandwidth, a whole range of literacy activities for teens and others can be designed. Specifically, librarians are eager to expand services for teens in areas such as coding, game design, animation, video production, and photo editing. They would also like to expand their adult computer literacy classes working with Community Union in Los Angeles, a provider of some of their current classes.
- **Cloud hosting:** The library would like to host its software in the cloud.
- **Reinventing reference:** The role of the librarian is changing, and reference questions are primarily answered through technology. As a result, Redwood City librarians would like to eliminate or radically change the traditional service desk model to reflect this. They envision librarians equipped with iPads or notebook computers accessing a dummy desktop and serving people on the floor and at kiosks similar to those in Apple Stores. Librarians would function more like service representatives, no longer sitting and waiting for patrons to approach them.
- **Videoconferencing:** Librarians would like to stream live events of interest to the community. Author talks, conversations with industry professionals in game design, and sessions with experts in a wide range of fields could take place via streaming media. They have discussed a education program for parents

built on videoconferencing and focusing on teen use of social media. Employees from Facebook and Twitter are more than happy to talk to parents and could more easily do so remotely.

San Mateo County Library

- **Web conferencing:** This could be used for staff communication as well as for public programs. For example, an author was recently videoconferenced into a youth detention center served by a branch library, which could serve as a model for many types of programs. Staff members in the library's twelve locations currently use Google Hangout and Megameeting to meet with one another. Expanded bandwidth to support high-quality videoconferencing could save hundreds of hours of staff time by bringing librarians together online.
- **Staff training:** Expanded bandwidth will make possible both in-house staff training as well as more participation in online courses and webinars offered by providers such as Infopeople and the California Library Association. For example, library leaders recently viewed a YouTube video focusing on safety and took part in an online conversation afterward about its applications to library security.
- **Cloud hosting:** The San Mateo County libraries would also like to place its content and software in the cloud, and librarians are actively exploring ways to do so.
- **Collection development:** Constrained by insufficient bandwidth, librarians have limited their collections of e-books, e-audiobooks, digital magazines, and digital music. Expanded bandwidth will allow them to develop these collections much more fully.
- **Online learning (MOOC / Blackboard environment):** Librarians would like to provide a place online for students to take their courses individually and in groups. Khan Academy courses (<http://www.khanacademy.org/>) could also be very popular were bandwidth not an obstacle. Also, more study groups and groups of students taking the same courses could meet in the libraries if they had access to online resources while there.
- **Content creation and Maker programs:** Libraries are inherently educational institutions and can be centers for hands-on learning in their communities, and creating more spaces for hands-on learning – both digital and physical – is a top priority. Currently, Maker Mondays are being offered in several San Mateo County Libraries, and teen film contests and photography workshops are taking place. There are also opportunities for libraries undergoing renovation to put Maker spaces in the libraries, and librarians have developed the concept of an in-house "Tech Shop," including equipment such as 3D printers and replicators available to the public.

San Mateo City Library

- **Digital content creation:** Librarians would like to experiment with patron-created and published content, such as digital storytelling. They would like to encourage people to come to the library and use technology to capture their stories and enhance them with photos and videos. By capturing personal stories, patrons become part of the history of the community housed in the library.
- **Access to higher education:** Once expanded bandwidth is a reality, librarians plan to make the Computer Lab available to local community colleges for class delivery and distance learning.
- **Mobile devices:** Librarians plan to lend laptops, iPads, and other mobile devices for in-library use. They are exploring the possibility of lending e-book readers to support the skyrocketing circulation of e-books. They are also planning to create downloading stations so patrons can download online media content to personal mobile devices in the library.
- **Facilities redesign/collections development plan:** Higher bandwidth and increased use of technology provides the opportunity to reevaluate how collections are developed and space is used in the library. Emerging technologies help to define and shape the changing function of libraries, as do flexibly designed library spaces. Certain collection formats may be replaced by downloading stations, comfortable seating for mobile device users, or group study workspaces.
- **Supporting the development of small businesses:** The library will continue to provide support to the business community by offering high-interest programs and classes, online business resources, and meeting spaces for business development. Patrons are increasingly conducting business in the library, often in small group study rooms that provide private space. This trend is exemplified by the story of a local man who started a technology business working primarily from the library, and who now employs a number of people from the local community.

San Bruno Public Library

- **Distance learning:** Bandwidth will allow libraries to teach people at home, and classes currently offered in conjunction with the Parks and Recreation Department on a range of topics from technology to personal finance to health could be modified for distance learning.
- **Content creation in the library:** Librarians have read about Maker spaces being developed in other libraries and would like to do something similar. They are interested in offering video production, animation, and 3D printing. Librarians are also

eager to work with diverse age groups in the community to create own their own content, for example, writing a children's book with community members, adding animation, art, audio, and graphics, and adding these to the library collection.

- **Videoconferencing:** Librarians have done some experiments with this but their current bandwidth renders videoconferencing extremely impractical. They would like to stream programs of interest to their community, such as TED talks. Popular topics might include astronomy, advances in science and medical research, and current events.
- **Digitizing community history:** The City's 2013 centennial will be an excellent opportunity to make use of expanded bandwidth, such as digitizing and making available historical footage on DVD and historical photos. The local cable TV channel will do the digitization for them.

Menlo Park Public Library

- **Teen technology programming:** Librarians would like to do more for teens using technology, including classes and clubs focusing on animation, making films, and making their own YouTube videos.
- **Library Security:** Library security cameras rely on wireless, and the library would like to expand the use of these cameras in the library to prevent theft.
- **Mobile computer lab:** Once bandwidth is expanded, librarians would like to purchase laptops that could be used in class sessions sponsored by them or by outside groups.

Daly City Public Library

- **Expanded computer tutorials:** Some of the most popular services the library offers are one-on-one-computer tutorials for patrons. Librarians are planning to expand these substantially in the fall so that more patrons are trained to take advantage of expanded bandwidth.
- **Expanded equipment and software:** The library will have flatbed scanners and color printing at all locations and specialized software such as Photoshop.

South San Francisco Public Library

- **Genealogy research and community history:** Librarians hope to subscribe to two new genealogy databases and offer ongoing training on genealogy research. Expanded bandwidth will also allow them to provide digitization services to patrons who seek to digitize family photographs and other memorabilia. In a related vein, the library seeks to further develop their local history collection through patron

participation. Librarians would like to schedule more programs where people can digitize family photos and videos, which the library will display as a part of a local history website. They would also like to capture current images of the community systematically and involve residents in building this online collection. Finally, they have pitched an idea to the CA State Library to purchase stand-alone video booths so that they can capture video made by citizens and host it on the library website. (They have used the Pasadena Library as a model for building local history collections involving community organizations and community members.)

- **Library use of social media:** To connect more effectively with patrons, librarians would like to change the model they current use for program promotion and instead make more use of social media like Facebook, Pinterest, and Flickr. They also plan to document and share past programs – for example, making videos of story times and other public programs and hosting them on their website.
- **Expanded technology classes:** Librarians envision greatly expanding the classes they offer to include more entry-level training for people on e-book use, computer applications related to desktop publishing, getting the most out of your mobile device, and video production. They would also like to create private study rooms equipped with technology to support group projects and groups taking classes together.
- **Streaming media:** Librarians would like to stream media for a variety of public programs and equip the auditorium with the necessary technology.

Burlingame Public Library

- **Group online courses:** Librarians would like to offer small groups the opportunity to take online classes together using one of the small group meeting rooms to be created in the library's upcoming renovation, to be finished in 2015. They will be adding five study rooms, two that can seat 8-10 people and three that can seat 4-6 people. They also intend to expand their own computer and e-book training opportunities.
- **Local history:** A Burlingame librarian has been conducting video interviews of longtime local residents and would like to make these interviews available online and in kiosks. The library is partnering with the local historical society on this project and would like to greatly expand these kinds of activities in the future.
- **Expanded videoconferencing:** After the renovation, the library will have videoconferencing in the media room and in the study rooms. Librarians would like to offer small group videoconferencing with experts/advisors in areas such as

retirement planning, home buying, and health. These rooms can be used for groups who want to access streaming content such as TED talks. Videoconferencing will also enable them to expand staff training opportunities.

Sources of Information on Technology and Libraries Identified by Interviewees

Journals:

- Computers in Libraries, Public Libraries, Library Journal

Conferences:

- Internet Librarian Conference (annual)
- Public Library Association Conference (biennial)
- CA Library Association Conference (annual)
- American Library Association (annual)

Membership Associations:

- Library Information Technology Association, American Library Association (ALA)
- Bay Area Library and Information Network (BayNet)
- CA Library Association (CLA)
- Public Library Association (PLA)

Training Organizations:

- Infopeople
- Web Junction

Foundation Publications:

- Gates Foundation

Listsers:

- Calix – listserv of the California Library Association

Experts on Technology in Libraries Identified by Interviewees

In California

- Sara Houghton, Library Director, San Rafael Public Library. Writes the Librarian in Black blog.
- Cathy Sanford, Deputy County Librarian/Support Services, Contra Costa County Library: They have an effort underway to re-imagine themselves, to look beyond their doors and think about what they contribute to the community. They aspire to create content for and with the community.
- Luis Herrera, City Librarian, San Francisco Public Library. They are creating digital content with patrons. San Francisco has such unique neighborhoods; it is fertile ground for cultural history programs such as digital scrapbooking and local history site development.
- Kathy Sanford, Sunnyvale Libraries. Using interactive tabletops and enhancing story time with early literacy apps such as an online felt boards and other multimedia.
- Joan Fry Williams, Consultant, based in Sacramento.
- Roy Tennant, InfoPeople faculty member

Nationally

- Alison Circle, Columbus Metropolitan Library (Ohio).
- Bill Ptacek, King County Library System (Washington).
- David King, Topeka and Shawnee County (Kansas).
- Jason Hyatt, Imaginon Manager, Charlotte Mecklenburg Library (North Carolina)

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- San Mateo City Library: Ben Ocon, City Librarian; Suzanne Olawski, Deputy City Librarian; Gary Welte, Network Technician
- San Mateo Community College: Frank Vaskelis, Director of Information Technology Services
- San Mateo County Library: Anne-Marie Despain, Director; Michael Lambert, Deputy Director of Library Services; Tom Fortin, Deputy Director of Library Services
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Table 1: Current Facilities and Equipment

	Burlingame	Daly City	Menlo Park	Redwood City	San Bruno	San Mateo City	San Mateo County	South San Francisco
Branches	2	4	2	4	1	3	12	2
# Terminals: Internet access	35	55	25	200	14	275	360+	87
Private Carrels or group study rooms	1	No	No	6	No	9	No	No
Classrooms with terminals	No	No	No	3	No	1– 26 terminals	2	1– 21 terminals
Meeting rooms with terminals	1 – 14 laptops and smartboard	No	1, no terminals	No	1	1, no terminals, Wi-Fi	No	2
Loaner laptops	No	No	No	In process	14	No	Yes,8 locations	No
Scanners	No	1	1	No	No	No	No	2
Video Conferencing	No	No	No	Desktop only	No	Desktop only	No	On 2 disability computers
Public wireless	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes, 2 branches
IPads, digital readers	No, for staff demos	For staff	No	No	No	No	Yes, 2 branches	3, for staff demos
Library use of social media	Yes	No	No	Yes	Yes	Yes	Yes	In process
Current network capacity	20 Mb/s	5 Mb/s	10 Mb/s	20 Mb/s	20 Mb/s	20 Mb/s	5-20 Mb/s	5-20 Mb/s
Technology plan	No, will do as part of renovation	No	No	Part of strategic plan	In strategic plan	Outdated	No	No
Technology support		1 Library Assistant III	1 staff, 30 hrs./week	Para- professional	IT person	1 FTE and 2 per diem	In-house technicians group (2 FTE)	City IT
*Edge initiative Participant?				Yes			Yes	

*The Edge Initiative is a voluntary, assessment program being piloted through the California State Library that includes benchmarks, best practices, tools and resources that support continuous improvement and drive reinvestment toward public technology (<http://www.libraryedge.org>).