1351 3rd Street Promenade
Suite 206
Santa Monica, CA 90401
Tel: 310-260-1220
Fax: 310-260-1921

2000 P Street, NW
Suite 330
Washington, DC 20036
Tel: 202-429-0033
Fax: 202-429-0974

frontdoor@childrenspartnership.org
http://www.childrenspartnership.org

CALIFORNIA COMPETES:
Deploying Technology to Help California Youth Compete in a 21st-Century World

A Three-Point Digital Opportunity Action Plan
Developed by The Children's Partnership

California's nearly 10 million children are growing up in a world that expects them not only to learn skills in traditional subjects like math, science and languages, but also to master superior information and communications technology skills. As California readies itself to be a leader in the global economy, preparing its young workforce is crucial. This Strategy Brief lays out a three-point plan to assure that all young Californians have the technology literacy skills to learn, compete, and participate in building a better future for all of California.

Now is the time to develop an effective statewide policy around technology readiness and youth, so young people can reap these benefits, and California can regain its competitive edge in the global economy.

Why Information and Communications Technology Matters for Youth

- *Health, Academic Achievement, Workforce Preparedness, and Civic Participation.* Recent research by The Children's Partnership found that, when properly applied, Information and Communications Technology (ICT) can improve children's lives in four key areas: health, academic achievement, workforce preparedness, and civic participation.[1] ICT has enabled children and their families to take care of their needs in new and often more effective ways—whether managing chronic medical conditions from home, searching for jobs, continuing their education, or getting medical care regardless of geography.

- *High-Speed Internet.* Broadband, or high-speed Internet, is the infrastructure that delivers many of these services. Furthermore, broadband access in a community draws businesses and the jobs that come with them, enabling towns and cities to retain their educated youth. Research has begun to document the various forms of opportunity that ICT can facilitate for young people, and promising new applications continue to emerge.

Where California Stands Today in Equipping its Young People

- There are *5.8 students for every Internet-connected computer* in California's public schools; in high-poverty schools there are 6.2 students per connected computer (national averages are 4.1 and 4.5, respectively).[2]

- Among the 50 states and the District of Columbia, *California ranks 12th (highest) in percentage of households with a computer*, 11th in percentage of households with Internet access, and 4th in percentage of households with broadband access.[3] (The United States currently ranks 16th in the world in broadband penetration per capita.[4])

- Compared to <u>all</u> California households, *low-income households are nearly 1/2 as likely to have a computer at home*, are 1/2 as likely to use the Internet at home, and are 1/3 as likely to have broadband at home.[5]

Why Now is the Time to Act

- *New Infrastructure is Bypassing Low-Income Communities.* Telephone, cable, technology companies, and municipalities are investing billions of dollars to build out broadband and technology infrastructure in California. But this infrastructure is bypassing many low-income communities due to perceived low profit margins, lack of financial incentives to build in their areas, or low adoption rates among residents.

- *Tomorrow's Access Depends on Today's Policies.* Access to technology-enabled resources for these communities will be determined for years to come by a number of very important public policies that are being developed right now. Chief among these is how and where broadband infrastructure will be developed, who will have access to it, and at what price. Without the universal build-out of broadband in California, many of the ICT-enabled opportunities for youth will never be realized. Similarly, as government and the private sector invest millions of dollars to test out various applications of new technology tools, now is the time to make sure they are deployed in ways that increase children's education, health, job opportunities, and community participation.

CALIFORNIA CAN BE THE SHOWCASE STATE FOR YOUTH AND TECHNOLOGY LITERACY

Building on its tradition as a leader and innovator, California can show the way in preparing youth for our increasingly technology-based world. The rise of Silicon Valley in the 1970s established California as the birthplace of technology innovation. The personal computer industry later established Silicon Valley and California as leaders in the information revolution. California continues to innovate in many arenas. For example, bold initiatives are underway regarding renewable energy sources, stem cell research, and nanotechnology that will serve as models in the U.S. and around the world.

Although California has a rich tradition of investing in its future through its public institutions and private industry, *such a far-sighted investment in technology literacy and youth has yet to be made.* California can become a model in the global economy by applying this tradition of innovative forward thinking to the deployment of technology in ways that benefit our young people and prepare them for success in the 21st Century.

OUTCOMES CALIFORNIA MUST ACHIEVE TO PROVIDE DIGITAL OPPORTUNITY FOR ALL YOUTH: THE VISION

- *Infrastructure*. Broadband infrastructure would be in place in every neighborhood and community institution, including clinics, job training centers, hospitals, schools, libraries, after-school programs, and community-based organizations.
- *Affordability*. High-speed connections would be affordable so all children could have access at home, school, and in the community.
- *Technology Literacy*. Resources would exist to build all young people's ICT knowledge and skills regardless of where they live or their family's income.
- *Model Applications*. California would build effective models demonstrating how everyday technology applications can improve academic achievement, health, job readiness, and civic participation of our youth.

A THREE-POINT PLAN TO ACHIEVE THESE OUTCOMES FOR ALL OF CALIFORNIA'S YOUTH

California can become a leader in testing ICT applications that can benefit youth and deploying these tools so they benefit all of California's children and young adults.

1. FINISH THE JOB OF ASSURING ACCESS TO COMPUTERS AND HIGH-SPEED INTERNET.

- ☑ *Broadband Deployment*. With input from public and private sector leaders, develop a plan for ensuring that all residents have access to high-speed Internet. The plan would make use of low-interest loans, tax credits, and grants (similar to those used in Montana and Michigan) to incentivize private investment build-out of universally available broadband.
- ☑ *Universal Service*. Modernize Universal Service programs so low-income households can get broadband discounts. Similar to current Universal Service programs that subsidize communication services, such as telephone service, a contemporary Universal Service policy would recognize the growth of and migration to a communications system that uses broadband networks. The policy would utilize a broadband subscription pool as a source of revenue to lower the costs of broadband connection services for low-income households.

2. ACCELERATE THE ACQUISITION OF 21ST-CENTURY TECHNOLOGY LITERACY SKILLS AMONG YOUTH.

- ☑ *Technology Literacy*. Teach young people technology literacy skills appropriate for their grade level and test their progress. Ensure that teachers receive training and support on usage and incorporation of technology into their curricula. Create education technology-literacy standards in our K-12 system as is the case in 25 states today so graduates have the essential technology skills to function in the workforce.
- ☑ *After –School & Youth Program*. Equip after-school and other youth programs with the capacity and support to help young people use technology productively. After-school programs serve many students and thus provide an important opportunity to help students acquire technology skills. In addition, these programs use technology to help students complete homework assignments, pass high school exit exams, and prepare for Advanced Placement tests. Yet, many sources of funding for youth exclude technology activities as an eligible service. After-school funding could be used to help programs for youth integrate technology into

their educational, job training, and other activities. Untapped funding sources include the federal 21st Century Community Learning Centers grant program and California's new after-school initiative established by Proposition 49, but their funding criteria need to be modified so that diverse programs are eligible for funding.

☑ *Workforce Training*. Direct a larger percentage of federal workforce training dollars to prepare at-risk youth with marketable technology job skills, such as desktop publishing, graphic design, and video production. These skills are highly valued in the jobs of today and tomorrow—jobs that pay well and allow upward mobility. Evidence also suggests that these kinds of training programs provide career opportunities to at-risk youth who may not excel in traditional academic subjects. An example of a model technology workforce training program is *Pathways to Our Future* (see http://www.cctpg.org/workforce/pathways-report.pdf).

3. MAKE CALIFORNIA THE LEADER IN WISE APPLICATIONS OF TECHNOLOGY IN CHILDREN'S LIVES.

☑ *E-Health*. Develop a California e-Health Agenda that deploys technology to increase access to and improve the quality of health care while lowering costs. Priorities could include:

- E-Enrollment. Use electronic applications to streamline enrollment in children's health insurance programs. One-E-App is one such Web-based system that connects families with a range of health and social service programs.[6]
- Telemedicine. Increase access to health care by extending the reach of appropriately used telemedicine to address barriers such as the inadequate level of reimbursement for telemedicine services through publicly funded programs, insufficient funding streams for start-up and existing programs, and lax enforcement of the California Teleconnect Fund.
- Electronic Medical Records. Develop the capacity of electronic medical records to provide continuity in medical care for families with children who move frequently, are in foster care, or are in the juvenile justice system. Develop standards for interoperability, safeguarding patient privacy, and ownership of records.

☑ *Prepared Parents*. Create resources that equip parents to guide their children in positive uses of technology and to protect them from its dangers. Work with parent organizations to develop outreach and education campaigns that include parent tips on safety, security, and information about laws and regulations that help keep children safe.

☑ *Models of Youth E-Engagement*. Demonstrate how the Web can connect young people with similar interests and get them involved in improving their communities. Establish programs in the state that use the Internet to connect young people to their neighborhoods and municipalities. Develop content on California legislative Web sites that is relevant, culturally appropriate, and accessible to all Californians regardless of disability, language, literacy, or income.

For further information, visit www.contentbank.org and www.techpolicybank.org or contact The Children's Partnership at (310) 260-1220.

•

We would like to extend a special thanks to the California Community Technology Policy Group, a coalition we participate in that advocates for many of the policy ideas found in this plan. Many of these policy ideas were formulated through our collective advocacy efforts and interactions with communities.

[1] The Children's Partnership, Measuring Digital Opportunity for America's Children: Where We Stand and Where We Go From Here, (Santa Monica, CA: The Children's Partnership, June 2005); The Children's Partnership, Impacts of Technology on Outcomes for Youth: A 2005 Review, June 2005.
[2] Market Data Retrieval, "Technology in Education 2004," and unpublished tabulations from MDR's 2003-04 Public School Technology Survey, as reported in Education Week, *Technology Counts 2005, Electronic Transfer: Moving Technology Dollars in New Directions*, Access to Technology, May 2005 (http://www.edweek.org/media/pdf/tc05/35access-t1.pdf). This figure includes only computers that are available for student instruction. High-poverty schools refers to schools in which more than half the students are eligible for the federal free or reduced-price lunch program.
[3] U.S. Census Bureau, *Current Population Survey: Computer and Internet Use 2003*, special tabulation by the U.S. Department of Commerce. Rankings calculated by The Children's Partnership. A ranking of #1 represents the best state; a ranking of #51 represents the worst.
[4] International Telecommunications Union, Economies by Broadband Penetration (http://www.itu.int/ITU-D/ict/statistics/at_glance/top20_broad_2004.html).
[5] U.S. Census Bureau, *Current Population Survey: Computer and Internet Use 2003*, special tabulation by the U.S. Department of Commerce. Calculations by The Children's Partnership.
[6] One-E-App, One-Stop Access to Health Care, 2006 (http://www.oneeapp.org).