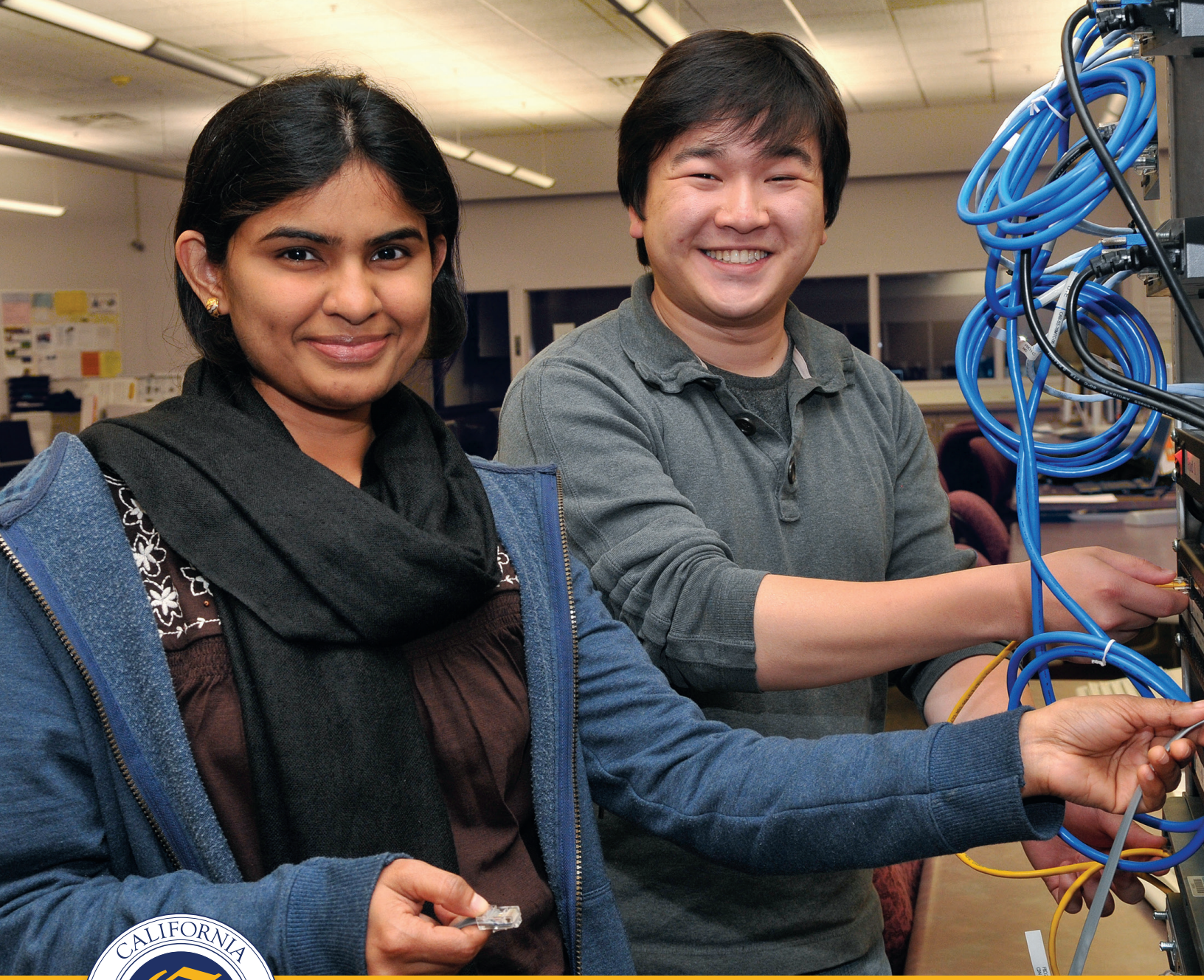

Information Technology students working in the computer lab at Ohlone College

# TELECOMMUNICATIONS AND TECHNOLOGY INFRASTRUCTURE PROGRAM

2013

California Community Colleges Chancellor's Office
Brice W. Harris, Chancellor

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**STATE OF CALIFORNIA** **BRICE W. HARRIS, CHANCELLOR**

**CALIFORNIA COMMUNITY COLLEGES**
**CHANCELLOR'S OFFICE**
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August 26, 2014

The Honorable Edmund G. Brown, Jr.
Governor of California
State Capitol
Sacramento, California 95814

Dear Governor Brown:

I am pleased to present to you the Chancellor's Office report on the Telecommunications, Technology and Infrastructure Program managed by the Technology and Telecommunication Unit. This report meets 2012-13 Budget Act requirements.

Included in this 16th annual report are program highlights, financial charts, and future program direction. This report also summarizes how the program furthers the mission of the California Community Colleges and specifically its commitment to the effective use of technology in education.

If you, or your staff, have any questions, please feel free to contact Erik Skinner, deputy chancellor, at (916) 323-7007 or eskinner@cccco.edu.

Sincerely,

Brice W. Harris
Chancellor

Enclosure

cc: Legislative Analyst Office
Department of Finance

# Telecommunications and Technology Infrastructure Program

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## EXECUTIVE SUMMARY

The California Community Colleges serve more than 2.1 million students and is the largest system of higher education in the nation. The state's 112 colleges provide workforce training, teach basic math and English, and prepare students for transfer to 4-year institutions.

The Chancellor's Office Telecommunications and Technology Infrastructure Program (TTIP), was created by Budget Act language in fiscal year 1996-97 to provide systemwide technical innovations and support and to coordinate activities that maximize the system's investment in technology. In the beginning, TTIP recognized the importance of connecting educational institutions to the emerging Internet community and ultimately connected colleges to the 4CNET backbone. Connectivity was then expanded to video conferencing and satellite networks, enabling colleges to share both data and video communications. Library automation, local telecommunications planning, technology training, and e-conferencing were also supported through TTIP.

In 2001, as the demand for bandwidth increased, 4CNET and the California Community Colleges began merging with the Corporation for Education Network Initiatives in California (CENIC), an optical network formed by the University of California (UC), California State University (CSU), Stanford University, California Institute of Technology, and University of Southern California to provide high speed and high capacity networking.

In 2008, TTIP funding for critical functions such as libraries and TTIP allocations for colleges to maintain local technology and infrastructure was eliminated. The TTIP budget was reduced from approximately $44 million in 2001 to its current level in 2012-13 of $15.3 million. This 65 percent reduction required colleges to finance the technological expenditures that TTIP once supported.

In 2012-13, TTIP continued to make program and budgetary adjustments to address the rising costs of providing Internet connectivity to the California Community Colleges, including circuit and equipment replacement costs. Colleges continued to partially fund backup connections to the Internet, video conferencing services agreements were cancelled, and existing TTIP project budgets were further reduced. Even without additional funding, TTIP continued to provide technology application innovations, technical leadership, and coordinated activities that maximized the system's investment in technology with the expressed goal of improving learning outcomes.

### 2012-13, a Year of Preparation

This 16th annual report highlights up-to-date information on the programs supported through TTIP.To summarize 2012-13, one would describe it as a year of planning and preparation. The systemwide budget cuts of the past few years, reports of impacted classes, staff reductions, and students ill-prepared for college-level work led to the development of the Student Success Program and Governor Brown's Online Education Initiative.

In addition to delivery of existing technology services, TTIP leadership was instrumental in the development of the final proposals for Common Assessment, Education Planning, and Online Education. The 3C Media Solutions and CCC Confer grants continued to provide phone and Internet-based conferencing tools, film, store and stream live conferences, and instructional content in support of the education community.

The Technology Center continued to provide technical assistance and planning, cooperative purchase agreements, and supported new statewide technology pilots and ongoing technology programs, such as CCCApply, a uniform application to college used by 109 of the 112 community colleges. The electronic transcript project, eTranscriptCA, was expanded and more colleges than ever are participating.

In cooperation with CENIC, Internet connectivity speed for some severely underserved colleges was increased. The partnership with CENIC provides high-bandwidth connectivity and enables the system to negotiate a flat rate for service, which is now saving the system as much as $4.1 million annually through the California Teleconnect Fund (CTF).

Through technology, TTIP strives to improve education and educational services and is committed to innovation and student success. Technology continues to change the way educational institutions run their business and educate their students. The Telecommunications, Technology and Infrastructure Program brought high speed broadband to the California Community Colleges.

TTIP funding remained steady this year at $15.3 million. TTIP worked with CENIC, the California Public Utilities Commission (CPUC), and the CTF to reduce Internet costs for all colleges in the system and worked diligently to seek out technology-related grants.

In 2012-13, TTIP will continue working to implement strategies to deal with long-term, lower technology funding levels. In this vein, one of the principal goals of the Tech IV Plan, created in 2010, is to leverage and build upon our investment in existing projects, reduce costs, and develop innovative solutions to support the educational communities of the future.

## METHODOLOGY

The Chancellor's Office Telecommunications and Technology Unit is continuously engaged with grant teams and personnel throughout the state. In addition to reviewing biannual updates, the Technology Unit staff attends regular project meetings and participates in impromptu discussions and face-to-face events with the teams. The staff also collaborates on current technology issues with advisory committees from the system's colleges.

Data used in this report was submitted by the director of each grant project. Additional project details can be found at the following URL and then by selecting the individual grant:

http://extranet.cccco.edu/Divisions/TechResearchInfoSys/Telecom/GrantInformation.aspx

### TTIP Background

The Chancellor's Office Technology, Research and Information Systems divisiongoverns TTIP, which is guided by provisions of the Tech IV Plan. The Tech IV Planbuilds upon the work established in Tech I, II, and III.

Tech IV programs have the following objectives:

- Protect the state's prior technology investment;
- Expand and improve student services; and,
- Utilize current technology to leverage the existing infrastructure.

Funding for some TTIP projects comes from the Chancellor's Office. Since 1996-97, the Chancellor's Office has funded six systemwide technology projects, all with a competitive grant process. These projects are listed on the next page.

## SUMMARY OF CHANCELLOR'S OFFICE TTIP FUNDED PROGRAMS

The Chancellor's Office recognizes that technology is an increasingly integrative and essential part of many services and programs in the college system. The

following seven projects are funded with TTIP dollars and are highlighted in this year's report:

1) **The Technology Center,** which incorporates the following programs:

   - CCC Systemwide Technology Platform
   - CCCApply
   - Open CCCApply
   - OpenCCC Identity Federation
   - eTranscript California
   - California Community College Information Security Center
   - CENIC
   - Information Security Center (ISO)

2) **The California Partnership for the Achievement of Student Success** (Cal-PASS-Plus)

3) **3C Media Solutions**

4) **EduStream**

5) **CCC Confer**

6) **@ONE**

7) **California Virtual Campus**, which incorporates the following programs:

   - ePortfolio California
   - CCC/MyEdu Degree Planning
   - CCC-CETC (California Educational Technology Collaborative) programs

To maximize resources and services for technology projects throughout the California community colleges, The California Educational Technology Collaborative, was formed. Collaborative members are the project directors from:

Technology Center – Butte College
Cal-PASS – San Joaquin Delta Community College District
3C Media Solutions – Palomar College
@ONE – Palomar College and Mt. San Jacinto College
California Virtual Campus – Butte College
CCC Confer – Palomar College
EduStream – San Bernardino Community College District

## THE TECHNOLOGY CENTER

The California Community Colleges Technology Center (CCCTC) received funding from a $3 million Chancellor's Office grant with the Butte-Glenn Community College District. The CCCTC is hosted on the Butte College campus and facilitates and coordinates technology projects. The CCCTC staff disburses funds, manages contracts, and identifies resources for external funding.

### Technology Center Initiatives

**Systemwide Technology Platform**

*Federated Identity* enables access to participating intersegmental systems, government agencies, and vendors through a single user name and password, known as the OpenCCC project.

*Service Oriented Architecture* enables colleges to access and use parts of existing program code with in their applications and enables new features without a complete system upgrade.

*Enterprise Portals* allows colleges to integrate services into their websites and Student Services Portal to link statewide services.

*Elastic Cloud Infrastructure* supports high user demand without building new data centers.

*Business Intelligence* to facilitate analysis of student pathways, outcomes, transfer, and institutional performance for continuous improvement.

**CCCApply and OpenCCCApply**

Systemwide Online Admission Application provides colleges and students with a common Web-based application for college.

**eTranscript California**

Intersegmental Internet-based system for requesting, sending, downloading, and viewing academic transcripts.

**CENIC Contract Management**

TTIP partners with CENIC to leverage cost-effective network resources to provide Internet connectivity for colleges.

**Listserv Services, Web-Hosting**

Manages community college listserves and hosts websites for statewide projects CCCApply, eTranscript California, and CCC Clearninghouse. Combined there are a total of more than 69,000 subscriptions and 162 lists that deliver on average more than 300,000 messages per month.

**Help Desk Services**

Negotiates discounted help desk support services for colleges.

**Information Security**

Identify the security needs and solutions for the community colleges.

**Technical Community Support**

CCCTechEdge, a technology email newsletter/ website Systemwide Architecture Committee Governance Telecommunications & Technology Advisory Committee

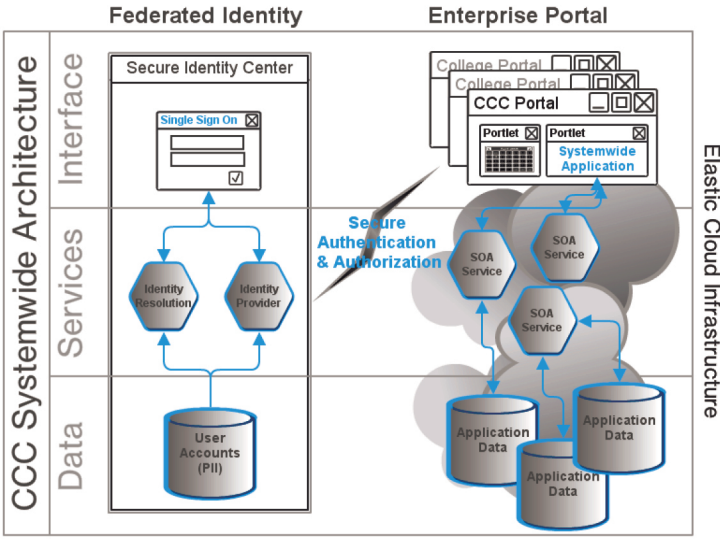
## California Community College Systemwide Technology Platform

The California Community Colleges Technology Center is developing a CCC Systemwide Technology Platform standard that will allow the system to build new Web 2.0 applications that work together, provide sharable services to the colleges, and incorporate legacy functionality to enable transition to the next generation.

The technical infrastructure of the California Community Colleges and the larger system of education in California is comprised of numerous databases and technical applications. These systems are not networked and lack common standards and data structures that enable automated connectivity and data sharing. The California Community College Systemwide Technology Platform will provide the technical framework and guidelines for existing and future statewide technology projects.

In 2012-13, the new Systemwide Technology Platform and federated account system to support a new common application to college, OpenCCCApply, were fully operational. The new federated account system (OpenCCC) is the primary account system for OpenCCCApply. Both systems were developed to leverage Service Oriented Architecture (SOA), Enterprise Portal Technology, and Elastic Cloud Infrastructure to scale to the millions of students accessing the systems every year. This work forms the basis for all future California Community Colleges technology development.

This graphic diagrams the CCC Technology Platform and shows the relationship between the components. The Systemwide Technology Platform is composed of the following technologies:




**Federated Identity**

- Enables a common login for student and staff across applications and institutions while increasing security and privacy.
- The greatest potential benefit for the Chancellor's Office may be in transferring student account data to CSU or UC.
- CSU and UC have Federated Identity initiatives based on the InCommonFederation.
- InCommon includes more than 200 higher education institutions, governmentagencies, and vendors.

**Service-Oriented Architecture**

- Deconstructs isolated systemwide applications into their component services and connects them using secure Internet communications. This enables component services to be reused by college or vendor applications and combined into composite applications.

**Enterprise Portals**

- There is a growing trend of colleges moving to Web portal interfaces for students.

- Systemwide applications will be provided as portlets so colleges can easily provide additional services and functionality for students.
- In addition, a student services portal would tie together statewide applications with a common introductory page.

**Elastic Cloud Infrastructure**

- Elastic cloud platforms move the computing power behind deployed applications.
- The platform is monitored and will scale up or down depending on demand.
- The dynamic system has made it possible to efficiently support the annual cyclic student demand on student services applications without having to build a large data center to handle peak loads.
- This efficiency will result in lower costs to the colleges.

**Business Intelligence**

- To facilitate analysis of student pathways, out comes, transfer, and institutional performance for continuous improvement, there is a need to bring together various disparate data sourced from the existing applications within our system and tie it together into usable structures that can be easily researched and presented to end users in a usable format for immediate and future decision making purposes. Elastic cloud platforms move the computing power behind deployed applications.

## Striving to Improve Educational Services and Student Success

The Technology Center strives to improve education and educational services and is committed to innovation and student success.

The Technology Center serves students and fosters student success by establishing the technical platform that supports the initiatives set forth by the Student Success Taskforce (SSTF) and ultimately SB1456, the Student Success Act of 2012.

- SSTF Recommendation 2.3
  - Community colleges will develop and use centralized and integrated technology, which can be accessed through campus or district web portals, to better guide students in their educational process.

The Technology Platform developed by the Technology Center provides solutions designed for and made available to all colleges in the California Community Colleges system.

The Federated Identify Project addresses a reality within the California Community Colleges: Students are increasingly mobile and attend multiple institutions to achieve their educational goals, even attending multiple institutions in the same semester or quarter. This pattern of attendance makes tracking and providing services to students within the community colleges extremely difficult because each college can assign a different identifier for the same student. The Federated Identity Project established a single identifier for a student and effectively makes the student a student of the California Community Colleges system and expands the Chancellor's Office ability to provide centralized and commonly available services to help guide a student through the educational process.

The Services Oriented Architecture and Enterprise Portal Projects will increase the service offerings that colleges can make available to students by lowering the design, development and implementation costs associated with new service offerings. With continuous input from local community college experts, services and applications will only need to be designed and developed once, at the state level, and will be available for use at all colleges. Since most colleges have very limited information technology (IT) staff (some have 1-2 staff in support of an entire campus), a centrally developed application increases the offerings to students who attend campuses with limited IT resources and helps to reduce inequalities within the system, in addition to creating a "common look and feel" across all California community colleges. A "common look and feel" allows a student to focus on exploring and planning their education versus learning to navigate a variety of technical applications.

The Elastic Cloud Infrastructure of the Technology Platform provides a flexible system that responds to fluctuating usage cycles to provide students with a stable and responsive technical experience. Finally, the Business Intelligence Project will serve as the

data mining tool for students to explore program and transfer requirements, plan a degree and request, and/or receive information related to student services and support.

## Systemwide Online Admission Application - CCCApply

CCCApply is a Web-based student application process available to all community colleges and is funded through the Technology Center Grant at Butte College. The site (www.cccapply.org) provides comparative descriptions of the colleges and their programs in an efficient, automated program. To date, 103 colleges subscribe to CCCApply.

| Fiscal Year | Student Applications |
|---|---|
| July 2007-June 2008 | 1,169,555 |
| July 2008 – June 2009 | 1,596,578 |
| July 2009 – June 2010 | 1,794,147 |
| July 2010 – June 2011 | 2,180,000 |
| July 2011 – June 2012 | 1,925,407 |
| July 2012 – June 2013 | 1,785,183* |
| *CCCApply + OpenCCCApply Applications | |

## OpenCCCApply

The existing application to college (CCCApply) is now over 11 years old. The legacy technology and vendor hosting environment present issues with student experience, cost, security, and service to the colleges. In response, the Technology Center initiated the OpenCCCApply project.

OpenCCCApply features a Web 2.0 open source application to colleges built on the California Community College Systemwide Technology Platform. OpenCCCApply had 48,167 applications submitted from July 2012 to June 2013 from seven community colleges. As of June 2014, 58 colleges will be live on OpenCCCApply.

This state-of-the-art, highly secure system will feature:

- A streamlined application to college, including Spanish language help and a Board of Governor's fee waiver;
- Business Intelligence tools for college reporting; and,
- Integration of the OpenCCC federated systemwide account offering students one login account for all participating California Community Colleges.

**Once fully implemented, OpenCCCApply is projected to save the colleges more than $600,000 each year through cost savings in hosting, open source licensing, and support.**

## OpenCCC – Identity Federation

OpenCCC is the California Community Colleges' Federated Identity Initiative.

OpenCCC allows students and staff access to Web-based IT applications across colleges and within the California Community Colleges system via a single login account. The initiative eliminates the need to manage a multitude of accounts and passwords, and reduces opportunities for accounts to be compromised. Central to linking systemwide and college data through OpenCCC is the application of a systemwide identifier (CCCID).

**Help Desk**
Currently 92 percent of all support calls for CCCApply are account recovery related issues. This number is expected to drop significantly with the application of the OpenCCC federated account.

**Community Based Support Platform**
A community based support platform is in place where staff and students can ask questions, see similar questions and answers, report problems, share an idea, or give praise. As students self-serve to find answers to questions this type of community platform should increase student satisfaction and drive down support costs as a knowledge base of frequently asked questions and answers are built.

## eTranscript California

The Chancellor's Office has established a statewide Internet-based system for requesting, transmitting, downloading, and viewing academic transcripts. This system is referred to as "eTranscript California" and was formerly known as "CCCTran" (http://www.eTran-

scriptCA.org). The numbers of current live participants and those implementing are:

| | |
|---|---|
| **California Community Colleges** | **55 of 112** |
| **California State University** | **21 of 23** |
| **University of California** | **4** |
| (UCOP reviewing option for segment contract) | |
| **Private universities** | **4** |

With the addition this year of the University of California system and the Los Angeles Community College District, 84 institutions across California participate in the network and enjoy benefits and significant cost savings of up to $10 per transcript inherent in electronic transcripts.

SB 1056, legislation backed by the eTranscript California Intersegmental Steering Committee and proposed by the California Community Colleges Chancellor's Office, was signed into law in 2011, and required the California Community Colleges Chancellor's Office to implement a procedure to facilitate the electronic transmission and receipt of electronic transcripts. This initiative would result in significant savings for the system as approximately half of all community college transcripts are sent to other community colleges.

The California Community Colleges Chancellor's Office received $500,000 in one-time funds from the California Assembly to support the implementation of electronic transcripts and was bolstered by the Telecommunication and Technology Infrastructure Program by an additional $106,000.

**In response, the California Community College Electronic Transcript Mini-Grant Program was implemented.**

The program promoted the usage of the California Transcript Standard for transmission of California-specific data such as General Ed, IGETC, and Advanced Degrees for Transfer. A community college could implement the program through the eTranscript California network or a third-party vendor, as long as the California standard is adopted. The eTranscript California staff worked closely with vendors to promote the standard within their systems for the college's mini-grant projects.

The mini-grant offered $5,000 to accomplish any one of three options for colleges that are brand new to e-transcripts or are furthering their implementations:

1. Send and receive transcripts
2. Automatically send transcripts based on an electronic request
3. Receive transcripts into campus systems such as Education Planners, Degree Audit, Student Information System, etc.

Colleges could apply to complete projects for more than one option. To receive grant funds, the projects must have been completed by June 30, 2013. The deadline for a mini-grant application was Dec. 31, 2012.

The program moved 48 colleges toward a new implementation of electronic transcripts and/or prompted colleges to enhance existing functionality. The totals below are unduplicated since a college could be awarded up to three mini-grants.

The successful Electronic Transcript Mini-Grant Program funded:

- 50 colleges to send and receive electronic transcripts;
- 37 colleges to integrate with campus student information systems; and
- 35 colleges to respond to electronic transcript requests.

eTranscript California highlights include:

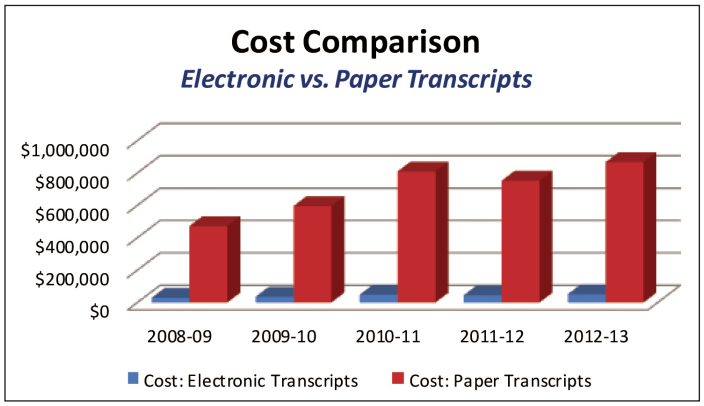
- Reduced per transcript processing costs from as much as $10 to 50 cents;
- Reduced staff workload--500 transcripts automatically process in 15 minutes; and,
- High school electronic transcript capability in production.

**Participation in Electronic Transcripts Shows Overall Increase**

| | Transcripts Delivered | Institutions |
|---|---|---|
| 2012-13 | 101,925 | 84 |
| 2011-12 | 88,396 | 82 |
| 2010-11 | 95,172 | 74 |
| 2009-10 | 69,973 | 57 |
| 2008-09 | 55,472 | 51 |

## Estimated costs savings to the Californian Educational System in 2012-13

Paper transcripts cost between $7 to $10 to send, whereas an electronic transcript costs 50 cents. In 2012-13, the colleges sent 203,848 electronic transcripts. If these transcripts were sent in paper format, the cost to the system would have been over $866,000 compared to $51,000 for electronic transcripts.




## Corporation for Education Network Initiatives in California (CENIC)

TTIP funds a portion of initiatives for California's education and research communities. TTIP leverages resources to obtain the most cost-effective networking. Partnering with CENIC to use the California Research and Education Network (CalREN), a high bandwidth, high capacity Internet network that consists of 3,000 miles of CENIC-owned and managed fiber, has resulted in millions of dollars in savings for the community colleges. This strategy supports TTIP missions and answers the growing needs of faculty, staff, and students.

CENIC designs, implements, and operates CalREN specifically to meet the unique requirements of the education and research communities.

## CENIC provides:

- Centralized funding for no local cost Internet connection at all colleges;
- $2 million in savings on core network backbone costs through the CTF program because of CENIC's initiative with the CPUC;
- Connection at all colleges and districts to the CalREN for data, Internet access, and video;
- An additional $4.4 million savings on colleges' circuit/connectivity costs through CTF, a 50 percent discount due to CENIC backing the CCC;
- Economies of scale and peering (where two or more networks exchange traffic between each other's customers freely, and for mutual benefits) continue to assist in improving connectivity rates that save $112,500 per year; and,
- Connection at 16+ approved off-site centers to CalREN.

CENIC has continued to provide very reliable and high performing networking to the California Community Colleges, with decreasing or fairly flat fees. If each college acquired Internet access independently they would gain a burden of workload at substantially increased administrative costs simply in monitoring and making payments for connectivity. Based on several analyses that have been conducted, the costs of using the CENIC CalREN network are substantially less than those that would be incurred by colleges for the same level of connectivity and bandwidth obtained via other means. This is due to the fact that CENIC is uniquely positioned to leverage education community-owned networking infrastructures and resources, as well as intersegmental aggregation of demand across the education community in California, to maximize cost-savings opportunities for California Community Colleges.

Additionally, some of the services offered by CENIC cannot be duplicated or provided with equivalent performance via other means. For example, CENIC connects its network directly to a variety of major sites of high interest to community colleges, such as Google, Amazon, and Microsoft. These direct network connections enhance the ability of colleges to use desirable and cost-effective services such as Google email, Amazon cloud services, etc. Other Internet providers could offer connectivity to these sites, but not with the same reliability and high quality network performance as CENIC's. Moreover, CENIC's private network supports cost-effective emerging technologies such as Voice-Over-Internet Protocol, a new offering of CENIC, which is unable to be supported as effectively over alternative Internet connectivity approaches. Lastly, CENIC's expert staff frequently review connection routes and offer suggestions for reconfiguration that save the college and system even more. Individual colleges probably

would not have this expertise and a for-profit Internet provider would not readily assist in reducing their own profits to the benefit of the colleges.

**CENIC: Increased Bandwidth and Circuit Upgrades**

The CENIC partnership keeps the colleges connected to the Internet and is funded through a grant with Butte College's Technology Center. CCCTC staff manages and disburses funds to CENIC. A total of $7,876,000 was funded in 2012-13 to provide connectivity for colleges, districts, and centers.

Bandwidth upgrades to high priority sites, such as districts serving multiple campuses, were completed in 2009 and provided greater bandwidth delivery from one connection. Upgrades were expanded to the remaining colleges on Dec. 1, 2008 when the California Community Colleges became eligible for California Teleconnect Fund discounts. These discounts were initiated by CENIC with support from the CPUC. The cost savings realized -- approximately a 50 percent discount -- provided resources for these additional circuit upgrades through 2010-11.

As mentioned, due to CENIC's understanding and efforts on behalf of the California Community Colleges the cost for Internet connectivity has remained stable while bandwidth has increased dramatically. In fiscal year 2006-07 costs were $3.8 million for DS-3 circuits at most of the college/district sites; a few rural sites were still operating on T-1 circuits. During 2011-12 the California Community Colleges spent only $448,000 more than in 2006-07 and 91 percent of the 119 sites and 16 centers now have connectivity via a GigE circuit. The addition of these gigabit circuits has enabled more than 50 percent of the sites to preserve their DS-3 as secondary diverse circuit and/or a back-up circuit for peak usage.

**CENIC: Increasing Connectivity Options**

CENIC and private sector partner CVIN (The Central Valley Independent Network LLC) created the Central Valley Next Generation Broadband Infrastructure Project, which was awarded $46.6 million in federal government stimulus funds. Additionally, CVIN LLC committed a $13.2 million match and the CPUC will provide $6.6 million. This project will increase the availability of broadband networking infrastructure for 18 counties within the Central Valley and will result in a profound reduction in costs to the California Community Colleges. Again, CENIC is leveraging resources that neither the Chancellor's Office nor the colleges have at their disposal.

This fiber-optic project will result in significant savings as college and district sites reconfigure so that as many as 30 circuits will connect directly to the CalREN network for an annual savings of more than $400,000.

**CENIC: Diverse Circuits – Budget Impact**

Diverse circuits, also known as redundant or backup circuits, provide colleges and districts with an alternate path to the Internet should the primary connection fail.

Cuts in TTIP funding during 2009-10 and 2010-11 and lack of funding restoration in 2011-12 forced the Chancellor's Office to seek assistance from the California Community Colleges and districts in covering the cost of these vital secondary circuits. Twenty-five percent of those sites have been forced to cancel their secondary circuits for lack of funds.

**Status:**
The 2012-13 Budget did not restore TTIP funding and some sites are not receiving central funding, bandwidth needs are increasing and second circuits, where they exist, are grossly inadequate for full failover.

The list below represents areas of concern for TTIP and the colleges:

- 15 of 112 California community college campuses do not have a centrally funded backup connection to the internet.
- 12 of 112 colleges have a saturated primary connection. Meaning that there is more Internet traffic moving through the circuit than the circuit can support. Historical trends show that traffic will not decrease and instead will continue to grow exponentially.
- 64 of 112 colleges have a saturated backup connection.
- 63 of 77 approved off-site centers do not have a centrally funded primary or a backup connection to the Internet.

## Library Automation and Electronic Information Resources

In prior years, TTIP provided the California Community Colleges with financial assistance through the TTIP allocation process. In 2009-10, the library community suffered severe cutbacks and TTIP allocations to libraries were eliminated.

In an effort to support the libraries, TTIP offered a leadership grant to help sustain the community while library leadership developed a new approach to supplying content. The library leadership grant team proposed the central purchase and statewide adoption of a library content database. The team estimated a cost savings of 50 percent if the content database was purchased and adopted centrally versus at the individual college level.

Even in the presence of severe cutbacks in TTIP funding, TTIP recognized the importance of library content to community college accreditation and opted to make budgetary cutbacks in other areas of the program. The library leadership grant team issued a Request for Proposal and in early 2012, selected EBSCO Industries, Inc. as the statewide community college library content provider. By moving to a centralized contract, the system collectively has saved more than $3 million. TTIP continues to support the libraries through this agreement.

## Information Security Center (ISO)

The Information Security Center will establish plans to coordinate, prioritize, and oversee the overall policies goals and procedures for the information security functions of the California Community Colleges Technology Center.

The ISO will work to ensure information security efforts systemwide are coordinated and in compliance with reducing overall security risks and are under explicit management control. The Security Center is also responsible for establishing and maintaining a framework to ensure that information security strategies are aligned with the Chancellor's Office objectives and are consistent with applicable laws and regulations.

The CCC Technology Center launched the CCC Information Security Center (http://coccsecrurity gcenter.org) in March 2013. The website provides information security facts and informs community colleges of free information security services provided by the Technology Center.

The first major focus was creating an information security standard for inclusion in the Colleges Board Policy that would allow implementation of an information security program. The Information Security Advisory Committee (SAC) was created and members recruited from 25 community colleges. The committee is expected to create the policies and procedures needed to implement the information security standard created with SAC. The committee will also create white papers for implementation of information security standards to communicate emerging security threats, get product demonstrations, make product recommendations, and create a peer information security review group.

## California Partnership for the Achievement of Student Success, Cal-PASS Plus

The California Partnership for the Achievement of Student Success (Cal-PASS) is supported through a $1.14 million grant with the San Joaquin Delta Community College District. The project began in 1998 to enable the collection, analysis, and sharing of student data in order to track performance and improve success from elementary school through university. Cal-PASS provides a critical service to the California educational system since the state lacks a single repository for student data. Without a single repository, research and analysis is nearly impossible.

In 2011-12, the grant was rebid and awarded through the competitive grant process to the San Joaquin Delta Community College District, at which time the project's name was changed to reflect expanded K-12 and workforce partnerships. The project is now referred to as "Cal-PASS Plus." Fiscal year 2012-13 marks the first year of the Cal-PASS Plus grant at the San Joaquin Delta Community College District.

## Cal-PASS Services:

- Bring together Pre-K through 12, community college, university, and business leaders to identify common goals and language, and solutions for improving academic outcomes and creating a successful pathway to postsecondary education and living wage jobs;

- Develop and provide an expanded view of students using the Education to Workforce Pipeline;
- Connect K-12, community college, and university students and faculty using a large- scale student transcript level data system;
- Analyze K-16 student performance data through systematic research projects, data reviews, and interactive analysis tools; and,
- Assemble educators to analyze K-16 student data and make alignments and adjustments in curriculum and pedagogy across the educational segments based upon performance data.

The transition to San Joaquin Delta Community College was a critical activity for 2012-13. All data was successfully transferred to the new system and a new data platform was launched for users. The new data platform enhanced the user experience and provides data in user relevant formats, i.e. graphical high level charts for administrators to granular data for researchers.

The system and initiatives are managed through a partnership among the following leaders and organizations: San Joaquin Delta College, Educational Results Partnership (a 501(c)(3) non-profit), and the San Joaquin County Office of Education.

## Data Sharing Agreements

In 2012-13, the project focused on the development of new memorandums of understanding (MOUs). Data is shared between partner institutions based upon pre-defined rules and agreements. The historical MOUs proved to be less than adequate as the project attempts to track an increasingly mobile student population from education to workforce. The project successfully developed and promoted new MOUs across the community colleges. The new MOUs allow data sharing between all K-12 and higher education institutions participating in Cal-PASS Plus.The Cal-PASS Plus repository of student records exceeds 525 million.

**Participating Institutions with MOU/Data Sharing Agreements**

| Institution Type | Number of MOU's | Percentage of Institutions | Percent Increase from Prior Year |
|---|---|---|---|
| K-12 School Districts | 477 | 46% | 273% |
| California Community Colleges | 112 | 100% | Full participation |
| California State University | 18 | 78% | 63% |
| University of California | 8 | 90% | 100% |
| **Total** | **615** | **52%** | **141%** |
| | | | |
| Private/Independent* | 8 | 8% | n/a |

*Private/Independent is a new segment per the direction of the advisory board.
This segment will grow in the future.

**Percent of Participating Institutions with Data from Prior Year**

| Institution Type | Number of MOU's | Percentage of Institutions |
|---|---|---|
| K-12 School Districts | 128 | 27% |
| California Community Colleges | 112 | 100% |
| California State University | 11 | 49% |
| University of California | 4 | 44% |
| **Total** | **255** | **42%** |
| | | |
| Private/Independent* | 0 | 0% |

| Database Records | | | | | | |
|---|---|---|---|---|---|---|
| **Organization** | **Student Records** | **Course Records** | **Award Records** | **Star Records** | **CAHSEE Records** | **Total Records** |
| K-12 | 21,839,372 | 185,972,231 | 2,856,300 | 19,577,135 | 3,038,150 | 233,283,188 |
| Community College | 72,240,582 | 175,389,525 | 2,025,288 | | | 249,655,395 |
| University | 8,523,464 | 33,113,429 | 786,350 | | | 42,423,243 |
| **Total** | **102,603,418** | **394,475,185** | **5,667,938** | **19,577,135** | **3,038,150** | **525,361,826** |

Finally, the project restructured the concept of the Professional Learning Councils (PLCs), which are groups of local educators who come together to discuss curricular alignment issues. These councils have been morphed into larger Regional Learning Councils (RLCs), with a similar focus but with more structure and ownership of the process at the regional level. The project is working to instruct and empower local educational communities to access, understand and utilize the data for effective change.

In 2013, Cal-PASS Plus launched a series of discussions to inform and engage the educational community. The "Overcoming Barriers to College Success through Actionable Data and Collaboration" series focused the discussion in three ways:

- Improving education to workforce transitions
- Increasing college completion by reducing remediation
- Creating shared pathways to college and career readiness

The series was followed by two statewide data summits to further encourage participation in Cal-PASS Plus by demonstrating tools, sharing practices, facilitating discussion, and partner engagement.

Providing big picture analysis for the user community remains an ongoing goal for the project. In 2012-13, the project identified educational gaps, backward mappings, and best practice reports and information to educators. For more information related to Cal-PASS Plus, go to www.calpassplus.org.

## 3C Media Solutions

3C Media Solutions (www.3CMediaSolutions.org) began in 1999 as CCCSAT, a satellite system for broadcasting distance education, instructional and professional development programs to the California Community Colleges. The unit was renamed 3C Media Solutions in 2007 to reflect an expanded vision of multimedia services and support for the California Community Colleges system. In 2008, 3C Media Solutions partnered with EduStream in response to the growing need for storage and on-demand video streaming. 3C Media Solutions and EduStream along with CCC Confer and @One Training are supported through a $3.28 million grant to the Palomar Community College District.

## 3C Media Solutions Services:

**Video Production**
Capture, edit, caption and index

**Conference Support**
Capture, edit and distributed for virtual viewing

**Podcasting for Educators**
Storage and distribution of educational materials

**Student Film and Video**
Festival Support

**Support student filmmakers**,
showcase student work

**Educational YouTube**
Upload and share educational materials free of advertisements

| Demand for 3C Media Services in 2012-13 | | | | | |
|---|---|---|---|---|---|
| **Services** | **2009-10** | **2010-11** | **2011-12** | **2012-13** | **% Growth** |
| Conference Presentations/Lectures Captured and Distributed | 120 | 182 | 318 | 950 | 199% |
| Videos Added | 123 | 277 | 510 | 794 | 56% |
| Educational YouTube Views | 7500 | 40,000 | 93,308 | 162,610 | 74% |
| 3CRSS Podcasters | 141 | 193 | 207 | 209 | 1% |
| YouTube Subscribers | 12 | 126 | 232 | 20,278 | 8,640% |

## Video Conferencing

3C Media Solutions is working with the Chancellor's Office to identify a viable alternative to the K-20 Video Conferencing Solution for the community colleges that was cancelled in 2011-12 due to budget cuts.

## Video Production

3C Media Solutions provides all video production services, including video creation, editing and distribution. Media and video, in particular, are in a period of profound transition. Technology has rendered many of the processes of media creation, distribution, and consumption faster and less costly than ever before, making it easier for both faculty and students to produce their own videos.

**Demand in Higher Education**
A number of studies—those of the Pew Charitable Trusts Internet and American Life Project (http://www.pewInternet.org/reports.asp) foremost among them – document that a range of high quality, high value audiovisual material is being digitized and made available online for use in higher education as a result of unprecedented demand from educators.

Instructors are increasingly recording the following to support and/or enhance course curriculum:

- Lectures
- Tutorials
- Laboratory exercises
- "How-to-Videos"
- Field interviews
- Case studies

As a result, there is an abundance of digital content that must be stored and indexed (digitally labeled to enable users to search and find content) in order to be made available and accessible by classrooms and larger audiences.

## Educational YouTube

3C Media Solutions also maintains an educational YouTube channel. Content from any college or organization in the system – regardless of length – can be uploaded and shared with anyone, anywhere. This single port-of-entry saves users the need to search in multiple places to find desired content or videos. To date, there have been more than 93,000 viewers on the project's YouTube channel.

3C Media specializes in providing services to the educational community; as a result, colleges receive the benefits of private sector services without the limitations, costs, and advertising that are common when purchasing technology commodities.

## Conference Support

In addition to its YouTube services, 3C Media Solutions provides multimedia conference support for organizations wishing to make conference presentations and events available to members unable to attend face-to-face or to those who wish to review past events. Conference sessions are captured in high quality, edited and captioned video, and made available for Web viewing, often with opportunities for interaction with the presenters.

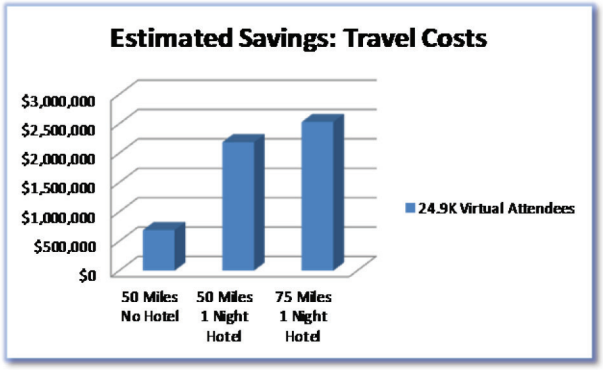
Examples of 3C Media Solutions conference support:

- American Association of Colleges and Universities
- Basic Skills Initiative
- Butte Sustainability Conference
- California Career Technical Education
- California Teachers of English to Speakers of Other Languages
- California Community Colleges Real Estate Center
- California Distance Learning Health Network
- California Virtual Campus
- CENIC
- Chief Information Systems Officers Association
- Earth Sciences Information Partners
- EdSource
- eTranscript California
- National Public Health Information Coalition
- North County Higher Education Alliance
- Online Teaching Conference
- The Research and Planning Group
- MPICT :Mid-Pacific Information Comm. Tech.
- FACCC: Veterans
- Town Halls, Student Success Task Force
- CARL: Creativ

**In 2012-13, more than 15,000 (up from 5,000 in 2011-12) people attended conferences virtually, potentially saving millions of dollars in travel expenses.**

**As colleges were forced to cut travel budgets, 3C Media Solutions connected members of the educational community.**

## EduStream




EduStream (www.EduStream.org) was envisioned by the San Bernardino Community College District as a way to provide quality online educational media for faculty and staff to use in their online courses. EduStream is a digital repository providing each California community college with 100 gigabits of free storage space and partners with content vendors to provide high quality, American Disability Act compliant educational media for the benefit of faculty, staff, and students.

Faculty and staff link educational media into their course management systems which students can view during the online course. Learning objects provide a more interactive learning experience and increased academic rigor. In 2008, EduStream partnered with 3C Media Solutions to provide storage and streaming support to the entire California Community Colleges system.

## EduStream Services:

**Streaming Media**
Broadcasting media (video, audio, etc.) over the Internet. No download or wait-time for user.

**Digital Repository**
100 gigabytes of free storage.
100GB equals roughly…40, 1-hour-long videos.

**Access to Content**
Partnerships give educators access to 6,400 proprietary educational videos for their courses.

**Digital Content and Learning Management System(LMS) Integration**
Faculty can include digital content in an LMS, like Blackboard or Moodle, to help explain concepts to students in online courses.

**Live Streaming Channels**
24x7 live event streaming for the member institution.

**Online Tutoring Program, pilot**
Students can receive live help from faculty.

EduStream membership consists of educational institutions from across the United States, including 104 of the 112 California community colleges.

| Demand for EduStream Content in 2012-13 | | | | |
|---|---|---|---|---|
| | | 2010-11 | 2011-12 | 2012-13 |
| CCC | Faculty | 29,314 | 29,030 | 17,963 |
| | Students | 81,548 | 152,288 | 461,929 |
| Non-CCC | Factulty | 23,631 | 23,631 | 7,652 |
| | Students | 10,537 | 77,457 | 45,008 |
| Total | | 145,030 | 282,406 | 532,552 |

**Online Education**
Streaming media has enabled distance education to become more interactive and accessible than was previously possible. Faculty has access to a wider variety of educational tools and students are now able to take online courses at times and places suitable for them as long as there is an Internet connection. EduStream recently acquired a 10 gigabit connection (along with the San Bernardino Community College District as a whole) enabling EduStream to stream content and HD levels. The availability of streaming media services enables faculty to:

- Include digital educational materials in their online courses;
- Create, store and stream digital content;
- Seamlessly link content to any learning management system such as Blackboard and Moodle; and,
- Enhance the explanation of concepts through downloadable handouts, video clips, and receive student feedbacks through mediums like live chats and emails.

## Streaming Media Services

EduStream provides the optimal environment for higher education by providing educational institutions with unlimited streaming and bandwidth usage in an advertising-free environment. Streaming distributes media over the Internet compared to other forms of broadcasting such as television.

## Access to Educational Content

Through EduStream's relationship with Dallas Tele-Learning and Ambrose Video, members receive access to 6,400-plus pre-licensed, full-length videos, and clips for use in their online courses that are compliant with the Americans with Disabilities Act. The proprietary video content is professionally produced and academically vetted to ensure its educational value. The video-on-demand service allows faculty and staff to link any digital media to their Learning Management System or website of choice and the media is streamed directly to the student through EduStream's infrastructure.

**Event Streaming**
Dedicated live streaming channels are available 24 hours a day, seven days a week to member institutions to stream their live events. In collaboration with partners at 3C Media and @ONE, EduStream has participated in live webcasting events such as the Online Teachers Conference (OTC) and the CCC Real Estate Educators Conference. Additional community college live streaming events include:

- College programing and announcements
- Live online tutoring sessions
- Monthly college board meetings
- Sporting events
- Live class sessions
- Martin Luther King Jr. Day celebrations
- Live conferences
- College President's welcome speech for faculty

## EduStream and 3CMedia Solutions, a Partnership

Recognizing the synergies of the two projects, 3C Media Solutions and EduStream formed a partnership in 2008. 3C Media provided conference support, video production and RSS feed support, whereas EduStream provided large media storage and Internet streaming capabilities. The two projects continue to provide unique services as well as collaborate on complementary functions that support

the California Community Colleges' need to create, store, and access high quality educational video and media.

## Systemwide E-conferencing, CCC Confer

CCC Confer provides no cost, systemwide audio and electronic Internet-based conferencing services to all college staff and faculty. The $3.5 million e-conferencing grant awarded to Palomar College in 2001 funded the development of a comprehensive, coordinated e-conferencing tool to complement the decentralized infrastructure of the California Community Colleges system. Initially supporting meetings, the success of CCC Confer eventually prompted a separate grant to encourage and expand the use of e-conferencing technologies in the classroom.

## CCC Confer Services:

**Audio-Visual Virtual Meetings**
Meet&Confer meetings allow large and small groups to quickly setup a conference call bridge and an Internet site to engage in discussions, share documents, presentations, and video.

**Audio Meetings**
Call Confer meetings allow large and small groups to quickly setup a conference call bridge and engage in discussions and meetings.

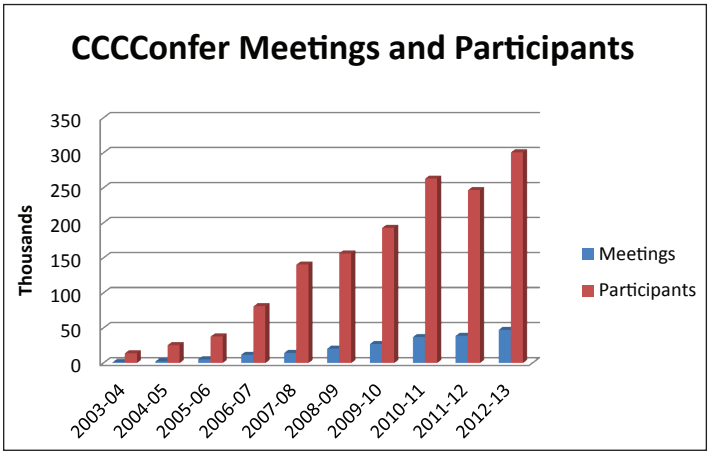
**Online Class Delivery**
Instructors deliver lectures, assess student learning, and solicit responses and feedback from students all online.

**Instructor Office Hours**
Students can meet with instructors in a virtual setting to ask questions and further learning

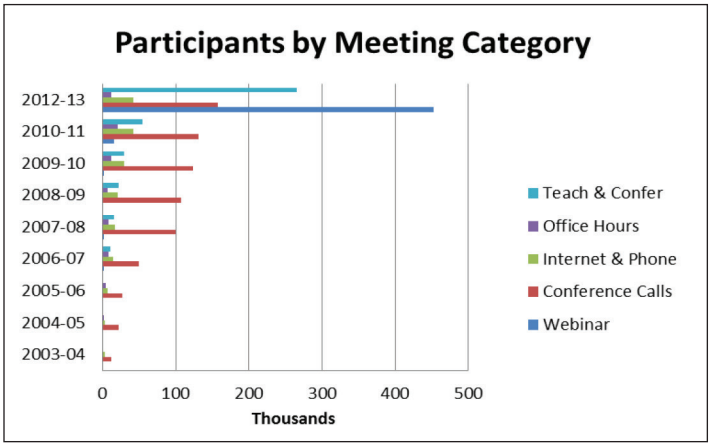
**Archiving**
Meetings and classes are recorded and saved for viewing at any time or location over the Internet. More than 560 archived sessions viewed per month.

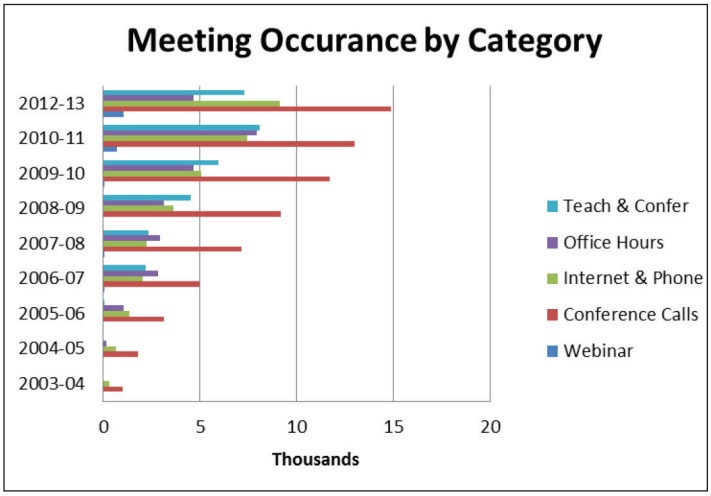
**Device Accessibility**
Students, faculty and administrators can be connected on fixed or mobile devices.

## Demand for E-conferencing Services Continues to Increase




## E-conferencing Trends in the California Community College System




**Since 2003-04, virtual meetings have increased from 8,513 to 47,596.**

**Participants in virtual meetings have soared from 247,001 to 300,900.**

**Note:** 2012-13 usage is assumed to be higher since these statistics do not reflect the use of CCC Confer from course management systems (e.g., Blackboard, Moodle, Etudes) or from direct links, both of which have become popular options among the users. The project will be using statistics collected from its vendor (Blackboard Collaborate) in future reports to provide a more accurate reflection of usage. Blackboard Collaborate reports that, for the last five years, there has been 569 percent growth in CCC Confer participants, 637 percent growth in sessions, and a 956 percent increase in recordings.

In 2012-13, conference calls (Call&Confer) and meetings utilizing both the Internet and call features (Meet&Confer) increased. Call&Confers increased 14 percent and Meet&Confers showed a 23 percent increase. Webinar volume increased dramatically by 47 percent due to including this option on the meeting request screen in late-2009. Office Hours declined by 40 percent and Teach and Confer Meetings decreased by 9 percent.

The decrease in Office Hours and Teach and Confer meetings counts are attributed to many users entering the CCC Confer application via other mechanisms such as the course management systems. An additional 43,779 Office Hours and Teach and Confer meetings can be attributed to accessing CCC Confer through local course management systems.

## E-conferencing Impacts on the CCC System

Providing the California Community Colleges with an e-conferencing system produces an estimated cost savings by reducing travel-related expenses, but more importantly, more community college faculty, students, staff, and administrators are connected to one another and to the broader education community.

The following chart shows the number of people (students, faculty, staff, and administrators) in 2012-13 able to participate in no-cost virtual classes, meetings and informational sessions. Without the option of virtual attendance, many participants would have been excluded due to cost and distance factors.

| Meeting Category | # of Participants |
|---|---|
| Conference Call and Call/Internet | 300,900 |
| Webinar's | 452,079 |
| Teach and Confer | 265,254 |
| Office Hours | 11,297 |

**E-conferencing strives to eliminate barriers to participation and learning.**

The benefits of this technology include:

- Minimized travel expense, since meetings and classes are conducted over the Internet;
- Time savings, since participants do not have to go anywhere, set up any rooms or equipment;
- Training and professional development can be extended from small groups and locations to large groups in several locations, and recorded for future dissemination;
- Timely and efficient personal contact between instructors and students, administrators and constituents, organizational leaders, and members;
- Removal of geographical limitations to the information flow of large organizations, ensuring that all individuals are on the same page and able to strategize, act, and react faster; and,
- Toll-free telephone calls and free captioning to accommodate differently-abled participants.

## Systemwide Technology Training for Faculty and Staff (@ONE)

Striving to improve instruction through technology, @One offers free or low-cost ($100 maximum) training for faculty and staff of the colleges, thereby providing colleges with a substantial cost savings for high quality professional development. Instructors provide face-to-face training, online and self-paced courses, webinars, accessible archives, and downloadable materials. @One (http://www.onefortraining.org/) provides training and technology information.

## Professional Development Services

**Online Courses**

Training delivered in a virtual setting to participants over the Internet. Courses are four weeks long.

**Trainer's Bureau**

Customized face-to-face training offered at a college

and delivered to a large group of faculty or staff by @One approved trainers.

**Online Teaching Certification Program**
Certification curriculum pattern aligned with the International Association for K-12 Online Learning standards for instructors of distance education.

**Online Teaching Conference**
Intersegmental conference focused on curriculum, pedagogy and technology to improve online instruction and learning.

The In-Person Institute and Desktop Seminars portion of Professional Development Services were temporarily suspended due to budget cuts. Desktop seminars were still available, but new offerings were suspended.

Trainings fall into five general areas and are designed in various skill-level tracks to address the needs of faculty and staff:

- Fundamental technology skills: Microsoft Excel, Word
- Technology-enhanced instruction: Developing Effective Online Assessments
- Multimedia: Building Online Community with Social Media
- Online teaching and learning: Teaching with Moodle, Blackboard
- Technical training: Creating Accessible Online Courses

## Trends in Professional Development Offerings and Participation

@One experienced declines in desktop seminars and In-Person Institutes whereas online courses and Trainer's Bureau sessions showed increased participation. The Online Teaching Certification Program and conference participation demonstrated the educational communities continued need and interest in acquiring skills related to online teaching and learning.

## Budget Cuts Impact Offerings and Participation

Cuts in TTIP funding during 2009-10 and 2010-11 forced the Chancellor's Office to reduce funding for the @One program, which subsequently triggered a reduction in staff and course offerings. In addition to

| Training Sessions | | | | | | |
|---|---|---|---|---|---|---|
| **Category** | **2008-09** | **2009-10** | **2010-11** | **2011-12** | **2012-13** | **% Growth** |
| Desktop Seminars | 55 | 60 | 45 | 9 | 24 | 166% |
| Online Courses | 23 | 25 | 34 | 30 | 25 | -17% |
| In-Person Institute | 22 | 10 | 4 | 0 | 0 | n/a |
| Trainer's Bureau Sessions | 7 | 4 | 22 | 9 | 17 | 89% |

| Participants by Training Category | | | | | | |
|---|---|---|---|---|---|---|
| **Category** | **2008-09** | **2009-10** | **2010-11** | **2011-12** | **2012-13** | **% Growth** |
| Desktop Seminars | 3853 | 2925 | 1634 | 788 | 1994 | 153% |
| Online Courses | 510 | 550 | 911 | 845 | 508 | -40% |
| In-Person Institute | 365 | 157 | 64 | 0 | 0 | n/a |
| Trainer's Bureau Sessions | 135 | 91 | 409 | 125 | 306 | 145% |
| Online Teaching Certificate | n/a | n/a | 274 | 236 | 546 | 131% |
| *OTC: In-Person | 242 | 268 | 306 | 276 | 406 | 47% |
| *OTC: Online | 298 | 520 | 663 | 313 | 279 | -11% |

*OTC, Online Teaching Conference

the budget cuts for @One, the colleges also were reducing budgets for professional development and travel. The lack of travel funds made it difficult for faculty and staff to attend @One's In-Person Institutes. As a result, @One tested a new In-Person Institute model and located the Institute in a multi-college district which enabled participants to commute to the training. Only a single In-Person Institute was offered in 2010-11 based on this model. The new model was successful but with only a single institute offering, it produced a 60 percent reduction in attendance in 2010-11. Ultimately, with no restoration of funds in 2011-12, the In-Person Institutes were temporarily suspended.

## Systemwide Technology Training for Faculty and Staff (@ONE)

In addition, budget constraints reduced desktop seminars in 2010-11 representing a 400 percent reduction in the number of seminars and a more than 40 percent reduction in participants. However, the numbers do not reflect the access to our archived seminars that are available on demand.

## Demand for Training Services

Requests for training from California Community Colleges faculty and staff led @One to realize that the demand for training was as great as it always had been (if not greater because local colleges had largely lost their own staff development professionals). The demand for the @One Trainers' Bureau grew considerably in 2012-13, because colleges could afford ($700 for one day or up to $2,100 for three days) to have an @One trainer come to the college and train a large group of faculty and staff. TTIP was able to provide funding in support of identifying and coordinating the one-hour desktop seminars and participation increased but funding is still insufficient to support the longer online courses.

It should also be noted that the numbers reported in the tables represent participants taught by @One facilitators. @One also provides its curriculum to colleges and districts at no charge so that colleges can train faculty and staff locally. The availability of reusable @One curricula saves the colleges and districts money needed to develop training curriculum as well as ensure that they are getting a quality instructional experience. @One's use of the Creative Commons for its materials is a significant systemwide benefit. Creative Commons is a non-profit organization that enables the legal sharing and usage of creative works, such as a curriculum.

The Online Courses and the Certification Program showed considerable growth that reflected the demand for quality online instruction. Likewise, the Online Teaching Conference provides a unique development opportunity for experienced online instructors to share their expertise and learn from other experienced instructors. The conference is the only development activity for experienced instructors to network and learn. Most of the other activities are aimed at new or recent online instructors.

The demand for @One services is greater than it has ever been, due to the prevalence of technology in all aspects of teaching. Further, with the emphasis of Accreditation on Student Learning Outcomes and a greater scrutiny on online course quality, the Certification Program is providing a mission critical service that individual colleges cannot deliver.

## Thousands Saved in Professional Development

@One provides the California Community Colleges with substantial cost savings when compared to the cost of training provided by a non-@One institution. The following chart compares the cost of an average @One Online and In-Person training session to the average cost a private consultant training session based upon actual participation in @One offerings. In addition, the cost of Online Teaching Certification course sequence and practicum is provided.


*Online cost estimates based on an average cost of $50 per @One course and an average cost of $100 for a non-@One course.
*In-Person cost estimates based upon an average of $600 per @One course and an average of $1200 for a non-@One course.
*Certification cost estimates based upon a cost of $500 for @One and $2000 for non-@One institutions

**In 2012-13 @One provided professional development at a reduced cost with an estimated savings of…**

**$120,100 for Online Trainings**
**$183,600 for In-Person Trainings**
**$819,000 for Online Teaching Certification**

**Savings would have been greater but participation fell due to a lack of course offerings and in-person institutes.**

## California Virtual Campus

The California Virtual Campus (CVC) is a statewide community college system program to create comprehensive instructional support for faculty and students. It addresses development of content and delivery of online and hybrid instruction. The principle goals are to support the California Community Colleges in online course offerings, e-learning and/or distance education. It is funded through a $1.39 million grant in partnership with Butte College.

The CVC program made successful progress during the first three quarters of the 2010-11 fiscal year in pilot activities, statewide services and infrastructure services provided to California Community Colleges and partners in intersegmental efforts supported as authorized by legislation passed regarding the CVC (SB 1437).

In the fourth quarter, grant funding was reduced 10 percent and further reductions resulted in the elimination of CVC staff. Despite funding challenges, CVC addressed many of the goals authorized or mandated by SB 1437.

The following activities are in direct support of SB 1437:

**Support faculty access to professional development training focused on online course development.**

Dissemination of best practices in online teaching through participation in statewide and national conferences.

**Increase availability of learning objects for online courses.**

Partnered with the Multimedia Educational Resource for Learning and Online Teaching (MERLOT) to increase quantity and quality of peer-reviewed learning objects.

**Providing services for faculty and online students**

Developed a self-service matriculation portal for distance education students. It is also available via mobile devices.

Implemented the CVC Online Course Catalog enabling students to locate distance education course offerings throughout the system.

Continued the Online Degree Planner Project

Continued the ePortfolio Project

**Facilitating collaboration and joint effort relating to the use of technology and Internet connectivity**

Community Based Online Learning Project to provide high speed Internet access to low-income neighborhoods.

K-20 California Educational Technology Collaborative to facilitate use of technology resources to support teaching and learning.

The Chancellor's Office has responded to the direction of this bill by:

- Disseminating best practices in online teaching through active participation in program committees and planning efforts for multiple statewide and national conferences including the Online Teaching Conference (OTC), the Sloan 4rd Annual Emerging Technologies for Online Learning Conference and the WCET organization.

  As funding reductions resulted in the elimination of CVC staff by the end of the fiscal year support participation stopped.

- Partnering with MERLOT, a free and open online community of resources designed primarily for faculty, staff, and students of higher education from around the world to share their learning materials and pedagogy.

- Creating a one-stop, self-service portal for distance education students, with a dashboard featuring a flexible and adaptable suite of online student matriculation services to serve as the front-end interface. The portal contains a new College Directory Service providing profiles for each of the colleges, existing tools for career exploration (California Career Resources Network), infor-

mation about financial aid, information concerning transfer, access to student services on the ePortfolio California site, and large systemwide services such as CCCApply and ASSIST.

- ePortfolio allows participating students to demonstrate attainment of academic learning objectives, skills, and knowledge that relate to career interests, and completion of prerequisites for participation in courses or training programs
  - Website redesign and updated daily content
  - Average 2,300 hits per month on ePortfolio website
  - Weekly newsletter received by 266 faculty and staff
  - ePortfolio California Team and PESC (Post secondary Electronic Standards Council)

- CVC and the California Community Colleges Technology Center (CCCTC) continued to partner with CSU in the development of a software prototype for an application that would improve avail able online planning. The program's working title was "California Online Program Planner."
  - Budget cuts at CSU and CCC caused CVC to change course and develop a partnership with MyEdu to deliver an online degree planner and associated student services to the colleges as a pilot program at no cost. Marketing efforts were put into effect and by the end of the reporting period, several colleges have expressed interest.

- Community-Based Online Learning project (CBOL) is a multi-year project, focused on providing access to high speed networking and computers and ensuring access to adequate technical and operational support for community-based organizations in low-income neighborhoods. The grant directly funds a maximum of $100,000 to cover the costs of setting up and managing Internet connectivity.

**2012-13 Update**

- In August and September of 2013, CVC staff completed a comprehensive update of the distance education catalog bringing all course program and school listings current. The effort resulted in a new count of approximately 20,000 online courses and 1,347 online degree granting programs from 167 schools of higher education. The information used to update the catalog was gathered from available public information sources and through access to information from CVC partner organizations.
- The paths to education success steps and links are available from the CVC website. They include recommended steps for success in the distance education environment and links to the following CCC or affiliate resources: California Career Zone, California Career Center, www.icanaffordcollege.com, California Student Aid Commission, CCCApply, MyEdu, ePortfolio California, and ASSIST.
- In the second half of fiscal year 2013 membership in the ePortfolio California community (www.eportfolioca.org) grew by 55 percent over the same period the previous year by way of a strong website presence.
- The ePortfolio California listserv grew from 1,376 members on Jan. 1, 2013 to 1,404 members as of June 30, 2013.
- In the first half of fiscal year 2013, ePortfolio California continued to follow the progress and participate in the development of interoperability standards for academic electronic portfolios currently being conducted and overseen by the Postsecondary Electronic Standards Council.
- The CCC Technology Center continued in the role of supporting colleges participating in Presidium Help Desk by subsidizing the annual administration fee through an agreement with the Foundation for CCC (FCCC). Timely payments were made to FCCC for the 15 colleges on board.
- A financial and programmatic project evaluation of CBOL was conducted and completed during the second half of the fiscal year 2011-12. At the start of the 2012-13 grant year actual project costs to date were found to exceed the $100,000 SB 1437 mandate by over $134,635. That finding, in addition to continuing budgetary restraints led to the conclusion that the CBOL project was no longer financially viable. A letter from Chancellor Jack Scott to state Senator Alex Padilla on Aug. 7, 2012 laid out the data analysis leading to the conclusion that CBOL should be shut down. As of June 30, 2013 the CBOL project had been completely shut down. As stipulated by SB 1437, the CCC Technology Center contracted with MurphyTateLC to develop and submit an independent evaluation of CBOL to the CPUC. It was submitted to the CPUC and the CCC Chancellor's Office June of 2013.

## FINANCIAL CHART

The Chancellor's Office provided $15.3 million through the TTIP budget to provide Internet connectivity and fund statewide technology projects. Funding for technology infrastructure and training at the college level was eliminated in 2007-08 and library funding was eliminated in 2009-10. The table below shows TTIP funding over the previous seven fiscal years.

## EMERGING CONCEPTS

In the spirit of continuous improvement, the Chancellor's Office Telecommunications, Technology and Infrastructure Program is looking to the following areas where technology could enhance the educational experience and generate efficiencies. Each area is defined and highlighted below:

Centralized Testing and Assessment (CCCAssess): a centralized assessment test delivery system and data warehouse for the California Community Colleges. Centrally selected assessment instruments will be delivered via the Internet and test scores, along with additional assessment data, will be stored in the data warehouse. It allows for a reduction in testing instrument costs, improves test portability and provides comparable data to improve predictors of student success.

2011-12 Update: AB 743 and SB 1456 were signed into law and both have language supporting the development of a common and centralized assessment test for the California Community Colleges but both pieces of legislation require ongoing funding.

2012-13 Update: AB 743 and SB 1456 received funding in the 2012-13 budget. TTIP leadership was instrumental in developing the grant proposal for this effort as well as the education planning work outlined in SB 1456.

**TTIP funding over the previous seven fiscal years**

| Year | Funded Amount | Percent Change from previous year | Comments |
|---|---|---|---|
| 2001-02 | $44,300,000 | 58 | Continuation of prior year's services. |
| 2002-03 | $18,500,000 | <139> | Videoconferencing upgrade; Phase 1 of connectivity upgrade (T-1 to DS-3); all local technology initiatives and technology training monies eliminated. |
| 2003-04 | $22,050,000 | 16 | 4Cnet merges into CENIC; DS-3 connectivity upgrade continues; dedicated video T-1 is eliminated and moved onto CENIC. |
| 2004-05 | $23,397,000 | 6 | Completion of Internet & video upgrades; addition of California Virtual Campus line item into TTIP. |
| 2005-06 | $24,397,000 | 4 | CCCApply introduced international applications and a BOG Fee Waiver; 300 percent increase in CCC Confer usage; completion of CVC program transition. |
| 2006-07 | $26,397,000 | 8 | 10 year anniversary of TTIP program; CCC-Tran goes live after beta-test phase; Cal-PASS expansion with additional funding; @ONE and CCC Confer increase usage by faculty and staff. |
| 2007-08 | $26,197,000 | 0 | Same budget as previous year. Began adding the official off-site centers to CalREN. Increased bandwidth for colleges maxing out on current connection. Began the K-20 CETC. |
| 2008-09 | $26,197,000 | 0 | Same budget as previous year. |
| 2009-10 | $15,290,000 | <42> | Additional one-time Federal Stimulus Fund payment of $1,595,811. |
| 2010-11 | $15,290,000 | 0 | Actual reduction of 9.45 percent from prior year due to the lack of additional stimulus funding. |
| 2011-12 | $15,290,000 | 0 | Same budget as previous year. |
| 2012-13 | $15,290,000 | 0 | Same budget as previous year. |

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