



The Standard

News and Commentary on Technology & Standards in Education

February/March 2011

www.PESC.org

Postsecondary Electronic Standards Council

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The Standard, the online newsletter published monthly by PESC – the Postsecondary Electronic Standards Council covers news and events that impact technology, standards and data systems across the education landscape. For more information, contact us at info@PESC.org.

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COMMON XML & COMMON IP WORKGROUPS LAUNCH IN COLLABORATIVE PARTNERSHIP BETWEEN PESC, SIF & IMS



PESC & FSA Expand XML Registry & Repository to PK20 with CEDS Adoption

The Board of Directors of PESC, in collaborative partnership with the SIF Association and IMS Global Learning Consortium, is pleased to announce the formation of a *Common XML Architecture and Data Modeling for Education Standards Workgroup* and a *Common Intellectual Property (IP) Policy for Education Standards Workgroup*. In recent meetings all three

associations agreed to investigate and collaborate on PK20 initiatives that provide clarity to the education community and that eliminate barriers. *(cont'd on p. 2)*

13TH ANNUAL PESC

MEMBERSHIP MEETING

Please be advised that the 13th Annual PESC Membership Meeting will be held on Tuesday April 26, 2011 at 5:15pm at the Westin Copley Place in Boston MA during the Spring 2011 Data Summit. Membership meetings are open to all PESC Members and Affiliates, and with prior notification, other interested parties. We look forward to seeing you in April in Boston!

13th Annual PESC Membership Meeting

Tuesday April 26, 2011
5:15pm – 6:15pm
Westin Copley Place
10 Huntington Avenue
Boston MA 02116

EDUNIFY

Want to see the EdUnify registry or simply receive an email when major updates are made? **SIGN UP** now on EdUnify. It only takes a few minutes and you will be connected to the latest, most innovative community initiative happening.

By signing up for an account, you can:

- Submit your own services
- Annotate (describe, tag etc) and curate your services as well as any other services in the catalogue
- Rate services
- "Favorite" the services you like or use the most
- Contact other members of the catalogue as well as service providers (coming soon)

<https://www.edunify.pesc.org/signup>



Collaborating for the Greater Common Good of Student Achievement

Expanded to April 28!

ARCHITECTS OF EDUCATION DATA

PESCC

SPRING 2011 DATA SUMMIT

APRIL 26 - 28, 2011

BOSTON

WESTIN COPLEY SQUARE

Data Summits focus on community development, implementation, integration, and exchange of data and data standards. Access, data quality, overall connectivity, and political factors that drive information systems and interoperability are also discussed.

All Summit meetings and events are open to all registered attendees. Transparent collaboration, engaging discussions, awareness of technical resources and best practices, identification of emerging technologies, new business contacts, and tips from experts of leading community organizations can be expected.

Register today!



Sessions at the **Spring 2011 Data Summit** will be held on the following efforts and topics:

Development Efforts

- ✦ Academic ePortfolio
- ✦ Common Education Data Standards (CEDS)
- ✦ Education Record User Group
- ✦ EdUnify
- ✦ Electronic Authentication/Authorization (EA2)

Boards & Committees

- ✦ Change Control Board
- ✦ Seal of Approval Board
- ✦ Technical Advisory Board

General Topics

- ✦ NCES National Forum on Education Statistics
- ✦ EdFACTS
- ✦ State Longitudinal Data Systems (SLDS) Grants
- ✦ IPEDS – Integrated Postsecondary Education Data System
- ✦ Data Quality Campaign (DQC)
- ✦ National Education Technology Plan
- ✦ Federal Student Aid (FSA) of the US Department of Education
- ✦ SIF Association
- ✦ IMS Global Learning Consortium

In continuing its mission of transparent, community-based collaboration, the Spring 2011 Data Summit is held in partnership with the AACRAO SPEEDE Committee, with the Common Education Data Standards (CEDS) Initiative and Consortium, and the Data Quality Campaign (DQC). The Spring 2011 Data Summit includes PESCC's 13th Annual Membership Meeting and Annual Spring Reception.

Expanded to April 28!

PESC

ARCHITECTS OF EDUCATION DATA
SPRING 2011 DATA SUMMIT
APRIL 26 - 28, 2011
BOSTON
WESTIN COPLEY SQUARE

REGISTRATION FORM

Sessions at the **Spring 2011 Data Summit** will be held on the following efforts and topics. Please indicate which sessions you will most likely attend (please check all that apply):

Development Efforts

- Academic ePortfolio
- Common Education Data Standards (CEDs)
- Education Record User Group
- EdUnify
- Electronic Authentication/Electronic Authorization (EA2)

Board & Committees

- Change Control Board
- Seal of Approval Board
- Technical Advisory Board

Discussion Topics

- NCEs National Forum on Education Statistics
- EdFACTS
- State Longitudinal Data Systems (SLDS) Grants
- Data Quality Campaign
- National Education Technology Plan
- Federal Student Aid (FSA), US Department of Education

SPRING 2011 DATA SUMMIT

YES, register me for the Spring 2011 Data Summit.

PESC
Member
\$345

NON
Member
\$595

Organization Name

Contact Person and Title

Street Address

City, State and Zip

Phone

Email Address

Payment Amount

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Washington, DC 20036
Fax: 202-261-6517
PESC's tax ID# is 52-2179499

Contact the hotel directly for reservations:

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10 Huntington Avenue
Boston MA 02116
866.716.8121

\$189 per night single/double in "PESC" Group.
Cut-off date for hotel group rate is March 28, 2011.

Dress code is business casual.

Online registration for all events is available at www.PESC.org.

Please contact Jennifer Kim, PESC's Membership Services Director, for more information, sponsorship opportunities, & special arrangements: 202.261.6514, Jennifer.Kim@PESC.org.

COMMON XML & COMMON IP WORKGROUPS LAUNCH

(cont'd from p. 1)

In a similar effort PESC and the Office of Federal Student Aid (FSA) of the U.S. Department of Education are seeking input on the role of the XML Registry & Repository for the Education Community as its perspective expands to PK20 with PESC's adoption of Common Education Data Standards (CEDs). While administered by FSA for the education community, the Registry & Repository is governed by PESC and houses all of PESC's approved standards.

"The Registry & Repository is a tremendous resource," states Michael D. Sessa, PESC's President & CEO.

"While access is free and open to the general public as all PESC approved standards are, the development and approval process followed by community workgroups is highly analytical and rigorous, yet collaborative and transparent," Sessa continues.

Both the *Common XML Architecture and Data Modeling for Education Standards Workgroup* and a *Common Intellectual Property (IP) Policy for Education Standards Workgroup* will launch on Thursday morning April 28, 2011 at PESC's Spring 2011 Data Summit in Boston. The addition of these new workgroups expands the Summit and folks should ensure they consider these workgroups when registering or making travel arrangements. The discussion on the XML Registry & Repository takes place on Wednesday April 27, 2011. All information related to the Spring 2011 Data Summit, along with registration and a recent draft of the agenda, is available at <http://www.PESC.org>.

ABOUT THE XML REGISTRY AND REPOSITORY FOR THE EDUCATION COMMUNITY¹

The XML Registry and Repository for the Education Community is a web-based application written in Java running on IBM Websphere 5.1. It uses Jakarta Struts and JSP's for the user presentation. The object relational data binding is Torque, and the database is Oracle 9i located at the Virtual Data Center (VDC). The XML Registry and Repository for the Education Community conforms to ebXML Registry and Repository 2.5 specifications. More than the application itself though, the XML Registry and Repository for the Education Community is a story of collaboration of government working in partnership with community based-standard organizations, of building it once and using it many times thus maximizing opportunities for all stakeholders, and of best practices.

In 2001, several standards organizations gathered together to work with FSA to work on an idea called the Common Record – one

schema that streamlined data packet submission between schools and FSA. Over time, the scope of this effort expanded to creating an XML higher education taxonomy. The XML Registry and Repository for the Education Community is a central location where now eleven years worth of collaborative work is stored and available to anyone who is interested in XML higher education meta-data.

The XML Registry and Repository for the Education Community was a deliverable from the XML Framework 2.0 Initiative. FSA recognized that internally, an application would be needed to store XML meta-data so that this information could be used by future XML development efforts to encourage standardized and high quality schemas. When it became obvious that the community-based standard organizations would also need a meta-data repository, it seemed a natural step for FSA to share and donate its XML meta-data repository to PESC for community and school use. Owen Ambur, co-chair of the federal XML.gov organization, stated the following about the XML Registry and Repository for the Education Community, "FSA's registry has the best, most usable interface I have seen in any registry service yet."

¹From a 2005 PESC announcement when FSA received PESC's 2005 Best Practices Award for Innovation.

PESC ON EDUCAUSE LIVE!

<http://educease.adobeconnect.com/p23649219/>

In October 2010, PESC President & CEO Michael D. Sessa was interviewed on Educause LIVE! On this interview Michael discussed PESC, its strategy for providing solutions to the education community, and upcoming events and initiatives. The entire interview is posted and available for listening at your convenience either through the Educause link provided above or the PESC homepage at <http://www.PESC.org>.

WHY THE OBAMA ADMINISTRATION WANTS A DARPA FOR EDUCATION

By Marc Parry

The Big Brains at Darpa have dreamed up some pretty cool stuff over the years: GPS, mind-controlled robotic arms, the Internet.

So could education benefit from its own version of the Pentagon-led research agency?

The Obama administration thinks the answer is yes. Its proposed 2012 budget includes \$90-million to kick off the effort, conceived as a way to support development of cutting-edge educational technologies.

Why the need for a new agency? Education research and development is “underinvested,” argues James H. Shelton III, assistant deputy secretary for innovation and improvement in the U.S. Education Department. A new agency—its name would be “Advanced Research Projects Agency-Education”—would have more flexibility to identify specific problems and direct efforts to solve them, he says. Plus, it would be able to attract top outside talent to work on these projects.

Mr. Shelton offered few specifics on what projects the new agency would support, but he did suggest that education officials want to build on work that’s already been done by other agencies. He pointed to Darpa’s work on digital tutors as one example.

One of the big problems that has not yet been solved, Mr. Shelton says, is this: “How do you actually enable teachers to personalize instruction for students and access the resources that best match the needs and interests of those students?”

A more immediate problem might be finding the cash to pay for this agency. As *Science* wrote, the idea is “certain to inflame Congressional Republicans trying to pare down the size of the federal government, especially its education programs.” And *Education Week* pointed out that another Darpa spinoff housed in the U.S. Department of Energy went unfunded until 2009, even though it was authorized in 2007.

NEW WEBSITE TO AID SCHOOL LEADERS IN MAKING CRITICAL DECISIONS

The National School Boards Association’s (NSBA) Center for Public Education has launched a new website, www.data-first.org, designed to guide school board members, administrators, and the public on how to find out important facts about their schools—in real, everyday situations.

The website, which is part of a larger project funded by a grant from the Bill & Melinda Gates Foundation, was designed to explain how different types of education data can help school boards produce real improvement in schools. The data can be used to empower school board members and others to use solid evidence and facts to make tough decisions.

<http://www.learningfirst.org/new-website-aid-school-leaders-making-critical-decisions-0>

> COMPLETE OUR EDUNIFY SURVEY ON WEB SERVICES AT WWW.PESC.ORG.



US DEPARTMENT OF LABOR AWARDS MORE THAN \$12 MILLION FOR 13 STATES TO BUILD WORKFORCE DATABASES

Grants to improve analysis of workforce program impacts

The U.S. Department of Labor announced \$12.2 million to 13 states through the Workforce Data Quality Initiative. These funds will enable states to build or expand longitudinal databases of workforce data that also link to education data. States will use these longitudinal databases to conduct research and analysis aimed at pinpointing the effectiveness of employment and training programs to better inform workforce system customers.

"These grants are an important part of the administration's efforts to increase the availability and use of high-quality data," said Secretary of Labor Hilda L. Solis. "By developing and improving databases, states will help those seeking training make better informed decisions, all while more clearly demonstrating the link between employment and education in the long-term success of workers."

States will achieve multiple goals during the three-year grant period. Among these are developing or improving state workforce longitudinal data systems with individual-level information; enabling workforce data to be matched with education data to create longitudinal data systems; improving the quality and breadth of the data in the workforce data systems; using longitudinal data to provide useful information about program

DATA SYSTEMS ONLY DO WHAT YOU ASK THEM TO DO.



WHAT ARE YOU ASKING YOURS TO DO?

SOLUTIONS ARE AVAILABLE.
NOW IS THE TIME. PESC IS THE PLACE.
FOR THE COMMUNITY. BY THE COMMUNITY.

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UNLOCKING THE POWER OF DATA



HALLMARKS

OF INTEROPERABLE DATA SYSTEMS

PESC APPROVED STANDARDS

High quality data requires consistent and transparent standards development, alignment, approval & maintenance.

PESC is the only standards-setting body in education with open, proven, community-based processes that collaborates across sectors & communities of interest.

STANDARD IDENTIFIERS & CODE SETS

Standard unique identifiers & code sets ensure data integrity and allow for the tracking of various needs across systems, programs, years and states.

If not standardized, unique identifiers & codes sets still require some level of mapping in order to be interoperable.

QUALITY CONTROL MEASURES

Data originates from many disparate sources. In most cases groups of data are used together to calculate more data.

Informed data-driven decision-making relies on the right and most accurate data.

Minimizing data mapping & manual intervention increases data quality & cost efficiencies.

BUSINESS-TO-BUSINESS COMPATIBILITY

Technical interoperability, meaning standardized system-to-system synchronization of data, must be accompanied by business interoperability.

Business interoperability, synchronization of users & business partners around standardization requires 'co-opetition' for the greater common good of student achievement.

CONTROLLED ACCESS & SECURITY

For systems to be truly useful and meet the needs of many users, providers must ensure continuous, uninterrupted access but only to those that are legally & lawfully authorized for certain access.

Providers must have stringent guidelines for access & security so that safety & privacy of data are protected.

COMPREHENSIVE MANAGEMENT SUPPORT

In order for systems to meet full potential, all parties involved must support the overall purpose and mission of a specific system.

In-depth policies and procedures, internal & external training, change management, dedicated governance & commitment to continuous improvement must be coordinated in order to achieve success.

FLEXIBILITY & SCALABILITY

In today's world of constant change, political, social, environmental & technical variables are constantly shifting.

The only way to account for the future is to build with flexibility, with scalability and support best practices like PESC Approved Standards which guarantee return on investment and the ability to 'plug and play.'

ACTIVATING INTEROPERABILITY ACROSS PK20 EDUCATION

"IN CALIFORNIA'S COMMUNITY COLLEGES, WE'RE IMPLEMENTING THE PESC XML POSTSECONDARY TRANSCRIPT. IT WILL SAVE US TIME & MOST IMPORTANTLY RESOURCES & MONEY. WE ARE LOOKING FOR ONE WAY TO PROCESS TRANSCRIPTS & THIS WILL BE IT."

CATHERINE MCKENZIE
PROJECT DIRECTOR, CHANCELLOR'S OFFICE
CALIFORNIA COMMUNITY COLLEGE SYSTEM

"SYSTEMS MUST BE DESIGNED TO MEET THE STANDARDS AND GUIDELINES OF NCES...INCLUDING THE SCHEMAS OF PESC."

GRANT RFA FOR STATEWIDE LONGITUDINAL DATA SYSTEMS
AMERICAN RECOVERY & REINVESTMENT ACT (ARRA) OF
2009

EMBRACE COMMON STANDARDS AND DATA SYSTEMS SO WE CAN KNOW WHERE WE STAND AND HOW TO MOVE FORWARD."

BILL GATES
CHAIR, BILL & MELINDA GATES FOUNDATION

FOR UP-TO-DATE INFORMATION ON NEW DEVELOPMENT EFFORTS, CURRENT MEETINGS & EVENTS, AND HOW TO JOIN PESC, VISIT WWW.PESC.ORG OR CALL +1.202.261.6516.

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operations; analyzing the performance of education and training programs; and providing user-friendly information to consumers to help them select the training and education programs that best suit their needs.

Funding will be used by 11 states to expand and improve linkages between education and employment in existing longitudinal databases. These include Florida, Iowa, Maine, Maryland, Massachusetts, Missouri, North Dakota, Ohio, South Carolina, Texas and Virginia. Two additional states, Louisiana and Minnesota, will develop and implement new systems.

This grant opportunity stems from the administration's focus on access to high-quality data and is a sister initiative to the U.S. Department of Education's Statewide Longitudinal Data Systems project that is designed build longitudinal education databases.

To view more information on the Workforce Data Quality Initiative grantees, visit http://www.doleta.gov/pdf/WDQI_abstracts_draft_2.pdf.

Workforce Data Quality Initiative Grant Awards

State	Agency	Award Amount (USD)
Florida	Florida Agency for Workforce Innovation	1,000,000
Iowa	Iowa Workforce Development	1,000,000
Louisiana	Louisiana Workforce Commission	999,863
Maine	Maine Department of Labor	1,000,000
Maryland	State of Maryland Department of Labor, Licensing and Regulation	1,000,000
Massachusetts	Massachusetts Department of Workforce Development	1,000,000
Minnesota	Minnesota Department of Employment and Economic Development	1,000,000
Missouri	Missouri Department of Economic Development	890,000

North Dakota	Job Service North Dakota	1,000,000
Ohio	Ohio Department of Job and Family Services	1,000,000
South Carolina	South Carolina Department of Employment and Workforce	289,417
Texas	Texas Workforce Commission	997,014
Virginia	Virginia Community College System	1,000,000

PESC LEADERSHIP TEAM

PESC's cornerstone principle, transparent and direct community participation, is never more apparent when the entire list of PESC's leadership team is viewed. We thank all representatives and organizations that help lead the PESC Community:

BOARD OF DIRECTORS

- Chair** William Hollowsky, SunGard Higher Education
- Vice Chair** Francisco Valines, Florida International University
- Treasurer** David Moldoff, AcademyOne
- Secretary** Rick Skeel, University of Oklahoma, representing AACRAO
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 Matthew Coombs, San Joaquin Delta College District, representing the Quali Foundation
 Doug Falk, National Student Clearinghouse
 Russell Judd, Great Lakes Educational Loan Services, representing NASLA
 Michael Sessa, PESC
 Andrew Wood, Oracle Corporation

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E-Authentication/E-Authorization (EA2) Co-Chairs

Charlie Leonhardt, Georgetown University

Arnie Miles, Georgetown University

EdUnify Co-Chairs

Stephen Wheat, Emory University

Jim Wager, SCRIP-SAFE International

NOMINATIONS TO OPEN FOR PESC

BOARD OF DIRECTORS

Please be advised that nominations to serve on the PESC Board of Directors will open on Wednesday March 16, 2011. Representatives from PESC member organizations (with membership status in good standing) are eligible for nomination and election. A form to submit nominations is available and posted on the PESC website at

http://www.PESC.org/interior.php?page_id=93.

Please complete the form, attach a brief BIO of the nominee, and return both to PESC by close of business on Friday April 1, 2011:

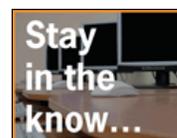
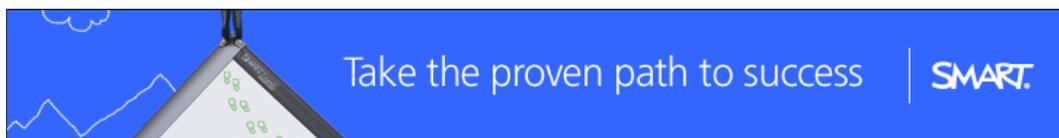
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1250 Connecticut Avenue NW
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Washington DC 20036
Fax: 202-261-6517
Email: Michael.Sessa@PESC.org

A Board Manual is also available which outlines the Roles and Responsibilities of the Board of Directors and Individual Board Members. The term of service is 2 years starting on July 1, 2011 and terminating on June 30, 2013. The schedule for nominations and elections:

<u>Nominations Open:</u>	March 16, 2011
<u>Nominations Close:</u>	April 1, 2011
<u>Proxy Ballot Issue:</u>	April 6, 2011
<u>Proxy Ballot Return:</u>	April 20, 2011
<u>Elections:</u>	April 26, 2011
	At 13th Annual Membership Meeting
	Westin Copley Place
	10 Huntington Place
	Boston MA 02116

PESC SPRING 2011 DATA SUMMIT

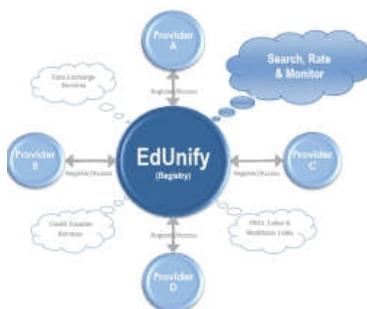
PESC is pleased to announce its **Spring 2011 Data Summit** for April 26-27, 2011 in Boston MA at the Westin Copley Square. With a theme, "Architects of



CONVERGE ARTICLES EVENTS AWARDS JOBS PAPERS GRANTS SUBSCRIBE

EdUnify Cultivates a Culture of Sharing Web Services

By Tanya Roscorla
ON NOVEMBER 1, 2010 [POLICY](#)



The first phase of EdUnify includes a registry for Web services, websites and Web applications. Later phases will connect higher education data and systems to pre-K through 12th grade and labor data systems. [Image close-up](#)

Web services are the wave of the future, said Michael Sessa, CEO of the Postsecondary Electronic Standards Council.

Web services are not websites or Web applications. But they are application programming interfaces — a way for programs and systems to access data from other programs and systems, said Stephen Wheat, chief IT architect at Emory University in Atlanta.

And because more organizations are moving services to the cloud, outsourcing them and finding ways to cut costs in this economy, an environment where Web services can flourish has been created.

To grab data from another system, an application needs a Web service description. The description shows the operations an application can perform when it talks to another one. That way, other people know what to ask for when they collaborate. And with firewalls and other network control devices in place, no one should be afraid to share the definitions.

In the case of a banking Web service, an application can see that the service pays bills, makes deposits and completes other standard transactions. The description doesn't allow everyone to access the data. They have to contact the owner of the service and say, "I'd like to use data for this purpose, will you grant us access to the service?"

But in the world of Web services, everything was scattered and disarrayed, said Arnie Miles, a middleware architect and adjunct assistant professor of computer science at Georgetown University. No one could manage the Web services they developed and used. And everyone used different standards that didn't talk to each other.

"There was no oversight, and because of that, you couldn't build upon the efforts of your peers, whether they be local or across the world," Miles said. "You didn't know who was doing what, what was successful and what wasn't, what was available and what wasn't."

Until now.

In October, the council launched a beta version of the [EdUnify Service-Oriented Architecture Governance Framework](#). EdUnify will make publishing, finding, organizing and combining Web services much easier for schools and universities, said Miles, who worked on a development team for EdUnify. And it will also help create a culture of sharing Web services through a common standard.

Stop developing the same Web services

By sharing Web services, universities respond to student needs much quicker, Sessa said. And they also save months of development time, human resources and money.

"What we're really trying to do is encourage the community to stop developing the same things over and over again," Sessa said.

Most universities are already sharing research and business data, said Wheat, who helped lead EdUnify.

"Data's moving anyway," he said. "The question is, 'How can we do that more effectively with these Web services?'"

When students want to transfer to another college, they have to manually enter their coursework into their new college's system.

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But with academic history Web services, they don't have to.

In South Carolina, universities and technical colleges started working together to help students complete their degrees. Through Web services they created and published in EdUnify, an authorized application can pull in students' academic history. Then the institution figures out which courses transfer and which degree programs they could get into.

"If you're really looking to where this technology is all going, you very quickly get to the point where we should share all Web services."

But not everyone wants to start sharing, Sessa said. People will say "standards are great — as long as you use mine."

Start developing standards that cross K-12 and higher ed

No one has developed a standard like EdUnify before because everyone's tied up in their own sales, he said. By sharing Web services and following the same standards, companies think that they'll lose their competitive advantage.

But that's not true.

While companies think they're built on data, they're actually built on service and price. With the leadership of a neutral third party like the council, they can share their data and maintain a competitive advantage.

"Unfortunately we don't always live in a sharing world," Sessa said, "so we are trying to trail blaze here with a new paradigm, but everybody agrees that it's needed."

So far, more than [25 vendors, universities, states and nonprofit organizations support EdUnify](#).

The way companies make money tomorrow could be new, better and different, Miles said. For example, three companies create proprietary methods to share student transcripts and sell their service to universities. The proprietary methods cause each company to become an island. And as islands, they're limited in value because they can't talk to universities on different islands easily.

If the companies in this hypothetical example standardize on a method, then suddenly the islands can talk. Is the first company going to lose more business, or will business be worth more because the number of universities it can share with has tripled?

If sharing becomes the standard that universities expect, anyone who doesn't share won't get the business. And that's a viable business model.

With the standards that the council creates, developers can understand how to work together and take advantage of technology, Miles said.

"In this era of vastly increased communications, standardization is going to be of upmost importance, or we are going to fail to get the most out of the potential that the hardware brings to the table, that the technology brings to the table," Miles said.

And that standardization has to bridge from pre-kindergarten to college. Down the road, EdUnify will connect higher education data and systems to pre-K through 12th grade as well as workforce data systems.

"It is imperative that we not just work in islands of K-12 and higher ed," Miles said. "It is imperative that the standards cross that boundary line; it really has to be K-20 or pre-K through 20. This is imperative, and it's not just in Web services, but it's in everything."

Resources:

[EdUnify Task Force](#)

[EdUnify registry](#)

[What is service-oriented architecture?](#)

You may use or reference this story with attribution and a link to <http://www.convergemag.com/policy/edunify-webservices.html>

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Education Data" this Summit brings together the major stakeholders that drive development and usage of data standards. Data Summits focus on community development, implementation, integration, and exchange of data and data standards. Access, data quality, overall connectivity, and political factors that drive information systems and interoperability are also discussed. PESC thanks GOLD Sponsors: **KNEXT, Oracle, Smart Catalog, and USA Funds**; SILVER Sponsor: **SunGard Higher Education**; and BRONZE Sponsors: **Decision Academic, Pearson and SIF Association**.

All Summit meetings and events are open to all registered attendees. Transparent collaboration, engaging discussions, awareness of technical resources and best practices, identification of emerging technologies, new business contacts, and tips from experts of leading community organizations can be expected.

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Sessions at the Spring 2011 Data Summit will be held on the following efforts and topics:

Development Efforts

- Academic ePortfolio
- Common Education Data Standards (CEDS)
- Education Record User Group
- EdUnify
- Electronic Authentication/Authorization (EA2)

Boards & Committees

- Change Control Board
- Seal of Approval Board
- Technical Advisory Board

General Topics

- NCES National Forum on Education Statistics
- EdFACTS
- State Longitudinal Data Systems (SLDS) Grants
- Data Quality Campaign (DQC)
- National Education Technology Plan
- Federal Student Aid (FSA) of the US Department of Education
- SIF Association
- IMS Global Learning Consortium

PESC is also hosting its 13th Annual Spring Membership Meeting and Annual Spring Reception.

Contact the hotel directly for reservations:
Westin Copley Place

10 Huntington Avenue
Boston MA 02116
866.716.8121

\$ 189/per night single/double in "PESC" Group.
Cut-off date is Monday March 28, 2011.
Dress code is business casual.

PESC Spring 2011 Data Summit

Tuesday April 26 – Wednesday April 27, 2011

**Westin Copley Place
10 Huntington Avenue
Boston MA 02116
866.716.8121**

Group Rate: \$209

Group Name: PESC

Hotel Cut-Off: Monday March 28, 2011

Please contact Jennifer Kim, PESC's Membership Services Director, for more information, sponsorship opportunities, and special arrangements at 202.261.6514 or at Jennifer.Kim@PESC.org.

EDUNIFY SURVEY ON WEB SERVICES & SERVICE ORIENTED ARCHITECTURE (SOA)

The survey is online and available at <http://www.PESC.org>.

While the survey starts with simple questions like "are you using Web Services?" and "where are your Web Services registered?", it may be more technical than anticipated...so if you are not the correct person for this survey, please forward it on to your technical staff.

Please complete all surveys by March 31, 2011. All results will be compiled and reported back to the PESC community through PESC's newsletter THE STANDARD.

Summary of Meetings and Conference Calls of the AACRAO SPEEDE Committee Months of January and February 2011

This is an update for interested members of the AACRAO membership about the ongoing activities of the Standardization of Postsecondary Education Electronic Data Exchange (SPEEDE) Committee of the American Association of Collegiate Registrars and Admissions Officers (AACRAO). AACRAO SPEEDE is a committee that is more active year round than many of the other AACRAO standing committees. The AACRAO SPEEDE committee reports to the AACRAO Vice President for Information Technology (Group VI), Jeff von Munkwitz-Smith.

Face to Face Meetings Held: None.

AACRAO SPEEDE Committee conference calls held (with number of participants): 1/6/11 (8), 1/20/11 (9), 1/27/11 (7), 2/3/11 (6), 2/10/11 (8), and 2/17/11 (8). Average call participation for the six calls was eight.

AACRAO SPEEDE Committee Changes: Jim Bouse has been nominated as the new AACRAO VP for Information Technology to serve a 3 year term upon his election at the annual meeting in March in Seattle. The current VP, Jeff von Munkwitz-Smith has been nominated to be the next President-Elect of AACRAO.

Upon Jim's election, the AACRAO SPEEDE Committee will be entertaining applications to serve on the Committee for the next two years.

Robin Greene has been selected to replace Jim Bouse as the vice-chair of the AACRAO SPEEDE Committee, pending Jim's election as AACRAO VP.

Doug Holmes, from the Ontario Universities Application Services, has been appointed by the Association of Registrars of the Universities and Colleges of Canada (ARUCC), to replace Barry Billing as the ARUCC representative to the AACRAO SPEEDE Committee in July 2011.

January and February 2011 Report from AACRAO SPEEDE Committee

Activities Related to PESC: AACRAO is a founding member and an active supporter of, and participant in the Postsecondary Electronic Standards Council. PESC is the standards setting organization for the electronic exchange of student records in higher education in North America.

- Rick Skeel represents AACRAO on the PESC Board of Directors. Rick was also appointed to the Technical Work Group (TWG), a part of the Common Data Standards Task Force organized by the US Department of Education's National Center for Education Statistics (NCES).
- Tuan Anh Do and Tom Stewart serve on the Change Control Board (CCB).
- Tuan Anh Do also serves on the Technical Advisory Board.

XML Registry and Repository: This is the registry of XML data elements approved by PESC and maintained by the US Department of Education's Financial Student Aid area. It is on the web at www.FSAXmlRegistry.ED.gov. PESC is now in the process of bringing it up to date, but many of the approved XML data elements are included and are correct.

Common Education Data Standards: The US Department of Education's National Center for Education Statistics (NCES) is in the process of reviewing the existing definitions of common data elements used by NCES, PESC and SIF and attempting to standardize the definitions and data formats of those data elements currently used by the three groups. The SIF Association deals with data standards in the K12 world. The AACRAO SPEEDE Committee, as active members of PESC, is working on this project.

January and February 2011 Report from AACRAO SPEEDE Committee

Approved PESC XML Standards of Interest to AACRAO Members Include:		
Schema	Version	Date Approved
College Transcript	1.0	May 2004
	1.1	October 2007
	1.2	January 2010
High School Transcript	1.0	June 2006
	1.1	January 2010
Transcript Acknowledgment	1.0	July 2007
Batch Submission	1.0	July 2007
Request for Student Transcript	1.0	October 2007
Response to a Request for Student Transcript	1.0	October 2007
Application for Admission	1.0	August 2009
Education Test Score Reporting	1.0	August 2009
IPEDS Graduation Rates	1.0	March 2010
IPEDS Fall Enrollment	1.0	August 2009
IPEDS 12 Month Enrollment and Completions	1.0	January 2011
PDF Attachments	1.0	January 2011

January and February 2011 Report from AACRAO SPEEDE Committee

It is recommended that all users update to the latest version of each schema. All users who have updated to the latest version can accept all documents created with all earlier versions as long as the first digit of the Version is the same. All users of an earlier version can also receive documents created in later versions as long as the first digit of the Version is the same, **provided that no data were included that use the new data elements, or new values of old data elements.**

PESC Workgroups of Interest to AACRAO Members include:

Standardization of PDF Education Documents: A workgroup was formed to deal with the issue of standardization of PDF documents and their electronic transmission. Jim Bouse of the AACRAO SPEEDE Committee was a co-chair this group, along with Chris Kaschmitter from Avow Systems. The Workgroup has completed its work and the standard is now approved.

XML Functional Acknowledgment of XML Instance Documents: Another workgroup was formed to create the XML equivalent of the EDI TS997. Rob Moore from Edustructures/Pearson and Monterey Sims from the AACRAO SPEEDE Committee are the co-chairs of this workgroup.

Academic Progress (formerly Degree Audit): This workgroup became inactive and is now in the process of becoming active again. New participants, whose school or company are members of PESC, are welcome.

Recruitment and Enrollment: This group is creating an XML schema for use in transmitting recruiting info to interested and participating schools. After a brief period of inactivity, it plans to resume its conference calls and it also welcomes new participants whose school or company are members of PESC.

EdUnifySM: This group was launched to automate electronic lookup, reporting and exchange, PK12 and workforce linkages, and transfer of credit.

Academic e-Portfolio: This workgroup will resume its regular conference calls and welcomes participation from anyone whose school or company holds membership in PESC.

January and February 2011 Report from AACRAO SPEEDE Committee

Education Record User Group (ERUG) for Approved XML and EDI Transcript Standards: PESCS formed a user group that deals with maintenance of all of the approved XML schemas in the student records area, as well as all of the ANSI ASC X12 EDI Standards for the admissions and student records area.

Tuan Anh Do of the AACRAO SPEEDE Committee currently co-chairs the User Group, with Bob Hewett from Pearson (formerly the National Transcript Center). Participants, whose schools or companies are members of PESCS, are welcome to join ERUG.

Recent discussions include:

Allowing the course grade to be repeatable for an academic course on the XML student transcript and include the type of grade that is being included.

Providing more information about immunizations, primarily for the high school XML transcript.

Updating all the XML Transcript Schemas and the Application for Admission to a new version to take advantage of the updates approved in the past year.

ERUG currently holds hourly conference calls on Tuesdays at noon Eastern Time whenever there are agenda items to discuss.

Current Activities of the AACRAO SPEEDE Committee:

AACRAO Meeting March 13-16, 2011 in Seattle: The AACRAO SPEEDE Committee has been approved to present seven program sessions at the annual meeting.

Electronic Exchanges of Student Transcripts Webinar: The AACRAO SPEEDE Committee presented a webinar for 59 members of Pacific AACRAO on February 24.

New AACRAO SPEEDE Email: AACRAO has just made available a new email distribution address: speede@aacrao.org. Anyone wishing to ask a question or to make a comment about anything dealing with the electronic exchange of student records can now send an email message to speede@aacrao.org and it will automatically be sent to all members of the AACRAO SPEEDE Committee. The Committee promises to respond quickly with an acknowledgment and then shortly thereafter with a more thorough response, if needed.

January and February 2011 Report from AACRAO SPEEDE Committee

Crosswalks for EDI Transaction Sets to PESC XML Schemas, and vice-versa: Most schools that are just beginning to implement the electronic data exchange of postsecondary student transcripts are expected to implement the PESC XML format. However, almost all of the current exchanges via the University of Texas SPEEDE Server are using the ANSI ASC X12 EDI format. To allow new users access to the established EDI exchanges, and to allow established EDI users to exchange with the new XML users, crosswalk rules are being developed from one format to the other.

These rules were developed by the AACRAO SPEEDE Committee and approved by the PESC ERUG and have now been posted (or soon will be posted) with the associated XML schemas on the PESC.org web site. Those approved to date are

Document	From Version	To Version	Date Approved
College Transcript	PESC XML Version 1.0	EDI TS130 V 4010	March 2007
	EDI TS130 Version 4010	PESC XML V 1.0	March 2007
	PESC XML Version 1.1	EDI TS130 V 4010	November 2010
	PESC XML Version 1.2	EDI TS130 V 4010	November 2010
High School Transcript	PESC XML Version 1.0	EDI TS130 V 4010	July 2010
	PESC XML Version 1.1	EDI TS130 V 4010	September 2010
Transcript Acknowledgment	PESC XML Version 1.0	EDI TS131 V 4010	July 2010
	EDI TS131 Version 4010	PESC XML V 1.0	July 2010
Transcript Request	EDI TS146 Version 4010	PESC XML V 1.0	November 2009
	PESC XML Version 1.0	EDI TS146 V 4010	November 2009

Work is in progress for these sets of crosswalk rules:

High School Transcript - EDI TS 130 Version 4010 to PESC Version 1.0;

(Negative) Response to a Request for a Student Transcript - XML Version 1.0 to EDI TS 147 (and vice versa);

College Transcript - EDI TS 130 Version 4010 to XML Versions 1.1 and 1.2 to EDI TS 130 Version 4010.

January and February 2011 Report from AACRAO SPEEDE Committee

The translation program from the XML College Transcript Version 1.0 to the TS 130 EDI Transcript has been completed for the University of Texas Internet SPEEDE Server and is now being tested with a group of pilot schools. This will allow schools using the Texas Server to receive EDI College Transcripts from schools who are sending XML College Transcripts Version 1.0.

State and Province Electronic Transmission Initiatives and Mandates: The AACRAO SPEEDE Committee now updates, every two or three months, a spreadsheet of the activities, mandates and initiatives of which we are aware in each US State and Canadian Province. We encourage you to review the spreadsheet to insure it is up to date for your state or province.

We know there is a great deal of activity among AACRAO members in the secure exchange of PDF Student Transcripts. Since a large portion of these PDF documents do not go to postsecondary schools, we need you to report this PDF activity so it can be included in this document on the AACRAO web site.

Please send updates and corrections to stewartj@aol.com. It is now posted on the SPEEDE page on the AACRAO web site at <http://www.aacrao.org/speede/statestat.cfm>

State EDI, XML, and PDF Contacts: The AACRAO SPEEDE Committee also recently updated the contacts list. It is now posted on the AACRAO web site at <http://www.aacrao.org/speede/statecont.cfm> . Please send updates and corrections to csmith@iastate.edu .

January and February 2011 Report from AACRAO SPEEDE Committee

University of Texas at Austin SPEEDE Internet Server: Shelby Stanfield, University Registrar at UT Austin has provided us with the following information about the use of the Server. Cumulative 12 month stats are as of the end of February 2011:

Description	Last Year	This Year	Percent Change
Number of TS130 Transcripts for January	112,170	112,954	1%
Number of TS130 Transcripts for past 12 months	1,116,115	1,017,509	-9%
Number of TS131 Transcript Acknowledgments for January	96,185	111,261	16%
Number of TS131 Transcript Acknowledgments for past 12 months	942,624	1,018,834	8%
Number of TS189 Applications for Admission for January	138,615	161,754	17%
Number of TS189 Applications for Admission for past 12 months	1,143,688	1,330,839	16%
Number of Total Transactions for January **	451,723	452,249	0%
Number of Total Transactions for past 12 months **	4,434,317	4,125,109	-7%
Number of TS130 Sending Schools in January***	173	154	-11%
Average Number of TS130 Sending Schools per month for past 12 months ***	171	161	-6%
Number of TS130 Receiving Schools in January ***	300	282	-9%
Average Number of TS130 Receiving Schools per month for past 12 months ***	296	277	-6%

** Total Transactions include TS130 Transcripts, TS131 Acknowledgments, TS997 Functional Acknowledgments, TS 189 Applications for Admission, and TS138 Test Scores.

*** In addition to this number of schools, there are other entities that distribute transcripts through the Server on behalf of multiple schools, such as Docufide, Florida K-12, Florida Postsecondary, Pearson, Texas Education Agency, Triand, and Xap Corporation.

January and February 2011 Report from AACRAO SPEEDE Committee

UT Austin SPEEDE Server Milestone: In January 2011, the Server processed its 25 millionth total electronic document since it began serving the AACRAO Community in 1996.

Other Electronic Transmission Activity Not Using the Texas Server: North Carolina sends electronic high school transcripts within the statewide college access web portal, CFNC.org. Within this NC network, there are 454 high schools and 110 colleges and universities. For the months of January & February, a total of 27,988 electronic high school transcripts were securely delivered. The breakdown is as follows: TS130 - 22,567; and XML - 7,221.

Other states and provinces that exchange XML or EDI transcripts without the use of the Texas Server include Florida, Maryland, Ohio, New Jersey, Alberta and Ontario.

And several vendors exchange many electronic high school and/or college transcripts using their own networks. These include Pearson (National Transcript Center), Docufide, and ConnectEDU and the several vendors who distribute PDF transcripts.

Translation Software: Once the Texas Internet SPEEDE Server has thoroughly tested the translation software to convert PESC XML Version 1.0 College Transcripts to EDI TS130 transcripts, the next translation product they are considering offering is the conversion of the EDI TS131 Transcript Acknowledgment to the PESC XML Transcript Acknowledgment Version 1.0.

Future Meetings: The following are future events at which the AACRAO SPEEDE Committee is planning to participate:

AACRAO Annual Meeting March 13-16, 2011 (Sunday through Wednesday) in Seattle, Washington at the Washington State Convention and Trade Center.

PESC Spring Data Summit April 26-28, 2011 (Tuesday through Thursday) at the Westin Copley Square in Boston, MA.

AACRAO Technology Conference July 10-12, 2011 (Sunday through Tuesday) at the Grand Sierra Hotel in Reno, NV.

January and February 2011 Report from AACRAO SPEEDE Committee

AACRAO SPEEDE Committee Members for 2010-2011:

W. Matt Bemis	Associate Registrar, <i>University of Southern California</i>	wbemis@usc.edu
Barry Billing	Senior Business Analyst, <i>Ontario Colleges Application Services</i> , and representative to the AACRAO SPEEDE committee from the Association of Registrars of the Universities and Colleges of Canada (ARUCC)	billing@ocas.ca
James M. "Jim" Bouse, <i>Vice-Chair</i>	Associate Registrar for Technology, <i>University of Oregon</i>	jbouse@uoregon.edu
Tuan Anh Do, <i>Chair</i>	Assistant Director, Systems Support Group, Undergraduate Admissions, <i>San Francisco State University (CA)</i>	doey@sfsu.edu
Robin S. Greene, <i>Vice-Chair Elect</i>	Senior Associate Director of Technology and Internet Services, College Foundation of North Carolina, <i>University of North Carolina General Administration</i>	greeners@northcarolina.edu
Monterey E. Sims, <i>Conferences Program Coordinator</i>	Director of Operations/University Services Document Processing <i>University of Phoenix (AZ)</i>	monterey.sims@phoenix.edu
Rick Skeel	Director of Academic Records, <i>University of Oklahoma</i>	rskeel@ou.edu
Clare Smith-Larson	SPEEDE/Project EASIER Coordinator, <i>Iowa State University</i>	cssmith@iastate.edu
John T. "Tom" Stewart	Retired College Registrar, <i>Miami Dade College (FL)</i>	stewartj@aol.com
Tim Tashjian	Associate Director, Student Information Systems, Office of the Registrar, <i>University of Texas at Austin</i>	tim.tashjian@austin.utexas.edu

And that's the update for the past two months from the AACRAO SPEEDE Committee.

Embargoed Release – Wednesday, February 16 – 12:00 PM ET

Contact: Rachel.Zaentz@widmeyer.com, 202.667.0901

In-Depth Analysis: States Collect Quality Education Data But Not Supporting Data Use to Improve Student Achievement

Washington, DC, February 16, 2011 – The Data Quality Campaign’s (DQC) sixth annual state analysis, *Data for Action 2010*, reveals that states have made unprecedented progress collecting longitudinal information but have not taken action to ensure data are used to improve student achievement.

When the DQC launched in 2005, no state had all [10 Essential Elements of Statewide Longitudinal Data Systems](#). Now, 24 states report they have implemented all 10 Essential Elements, and [every state has committed](#) to implement them by September 2011. States that implement the 10 Essential Elements have the necessary information to understand what works in education and can allocate scarce resources accordingly to improve student achievement.

“I have long been a believer in the power of data to drive sound decisions,” said U.S. Secretary of Education Arne Duncan. “Data gives us the roadmap to reform. It tells us where we are, where we need to go, and who is most at-risk. That cycle of continuous improvement cannot work unless states have good data and are willing to use it. This information strengthens accountability and transparency, and empowers families to make informed choices,” Duncan continued.

In spite of this progress, the elements that lag behind are also those that are most critical to current policy discussions. [Seventeen states](#) cannot link teacher and student data, [15 states](#) do not collect course-taking information, and [11 states](#) report the inability to link K-12 and postsecondary data. These states cannot inform critical policy questions about teacher effectiveness and college and career readiness despite the growing demand for answers.

The results show that the barriers to implementing the 10 Essential Elements are not technical but instead require leadership and political will. This is evidenced by [Idaho’s](#) dramatic growth from three to 10 Essential Elements in just one year.

“I am proud of the progress Idaho has made in a short amount of time. Last year, we were the last state in the nation to implement a longitudinal data system. Now, we are on par with some of the most advanced systems across the United States,” Idaho Superintendent of Public Instruction and Council of Chief State School Officers President-Elect Tom Luna said. “In Idaho, we now will have current, accurate data to make better-informed decisions at all levels and to give classroom teachers the data they need to guide instruction every day.”

In addition to tracking state progress toward implementing the 10 Essential Elements, the DQC also tracks the [10 State Actions to Ensure Effective Data Use](#). No state has taken all 10 State Actions, so the rich data that states now collect are not strategically linked. Stakeholders do not have appropriate

access to these data while protecting privacy, and they do not have the capacity to use data to improve student achievement. For example, although states have made some progress linking student and teacher data, only two states automatically share this information with educator preparation institutions, limiting their ability to improve programs and ensure all educators are prepared to be effective in the classroom.

“For the first time, half of the country can answer almost any critical question confronting policymakers, and every state is poised to have this capacity by September. There are no more excuses,” said Aimee Guidera, executive director of the Data Quality Campaign. “We are at a critical juncture in education, and state policymakers must take action to ensure data are not only collected but used by education stakeholders to improve student achievement.”

To support this culture change, the state analysis identifies [five key priorities](#) that states must implement to leverage current investments and ensure data are used:

- Fulfill the 50-state commitment to implement the 10 Essential Elements by September 2011.
- Link K–12 with early childhood, postsecondary and workforce data to answer critical policy questions.
- Provide teachers, students and parents with access to longitudinal student-level data.
- Share data about teacher impact on student achievement with educator preparation institutions.
- Enact statewide preservice policies, including certification and licensure, and program approval, to build educator capacity to use data.

The DQC’s state analysis comes at a time when states have made unprecedented progress but are also facing dramatic budget cuts. In spite of this pressure, state policymakers remain committed to supporting data use to improve student achievement.

“It has long been a guiding principle of the O’Malley-Brown Administration that the things that get measured are the things that get done,” said Governor O’Malley, the DQC’s 2010 State Policymaker of the Year. “We owe it to our students, parents, teachers and administrators to uphold the highest standards of accountability and transparency, and that starts with establishing quality education data systems to ensure Maryland students graduate high school prepared for college and highly skilled careers.”

In addition to releasing *Data for Action 2010: DQC’s State Analysis*, the DQC also recognized exemplary leaders who are changing the culture around data use through the [Award Recognition Program](#):

- State Policymaker: Maryland Governor Martin O’Malley for his efforts to lead stakeholders in building robust statewide data systems that span early childhood to the workforce and protect data privacy, helping to ensure students graduate college and career ready.
- State Data Leader: Georgia Department of Education’s Chief Information Officer Bob Swiggum for developing an integrated, cost-effective statewide education data system that allows teachers and principals to easily access and use data to make informed education decisions.
- District Data Leader: Denver Public Schools’ Director of Assessment Technology and Accountability Jason Martinez for providing educators with access to data to empower their decisionmaking.

For more information on the Data Quality Campaign and the Award Recognition Program, please visit our website at: <http://www.dataqualitycampaign.org/>.

Interviews with representatives from the Data Quality Campaign and the award winners can be arranged by contacting Rachel Zaentz at rachel.zaentz@widmeyer.com or 202.667.0901.

Related event: On March 10, 2011, DQC, in partnership with the Early Childhood Data Collaborative, will release the inaugural state analysis of coordinated state early care and education data systems. To register for this event or attain more information, visit: <http://dataqualitycampaign.org/events/details/286>.

###

The Data Quality Campaign (DQC) is a national, collaborative effort to encourage and support state policymakers to improve the availability and use of high-quality education data to improve student achievement. The campaign provides tools and resources that will help states implement and use longitudinal data systems, while providing a national forum for reducing duplication of effort and promoting greater coordination and consensus among the organizations focused on improving data quality, access and use.

The [Bill & Melinda Gates Foundation](#) is DQC's founding funder; additional support has been provided by the [Casey Family Programs](#), the [Lumina Foundation for Education](#), the [Michael & Susan Dell Foundation](#), and [The Pew Charitable Trusts](#).

Connect with the DQC on [Facebook](#) and [@EdDataCampaign](#)
Get news direct from the DQC via RSS: <http://www.dataqualitycampaign.org/about/rss>

PACRAO Review

Enhanced Electronic Transcript: The Electronic Portfolio for Learning and Achievement

By Reid Kallman, Associate Registrar and
Celeste Fowles Nguyen, Associate Registrar
Stanford University
December 1, 2010

Our Challenge: Accountability, Portability, Sustainability

If we in the Registrar and Admissions professions were to create a transcript from scratch today, what would it look like?

The world has changed considerably since the origins of our current standard paper transcript. Accreditation agencies now require institutions to demonstrate learning outcomes. Assessment expectations have spread from K-12 into higher education, as government, taxpayers, and parents demand evidence of the value of higher education. Graduate admissions committees compare international students completing the three-year Bologna degrees with domestic students enrolled in traditional four-year degrees. The limited information on the transcript is often not enough, and those admission committees often require additional evidence of an applicant's education. With the prevalence of grade inflation and general education requirements, transcripts look increasingly similar. They do not distinguish students nor reflect learning and achievement. Millennial students expect transcripts on demand to be sent anywhere in the world instantly. These are only a few of the many new demands on the student transcript.

The Registrar profession has evolved with technology, from paper to phone to online registration. But through all these changes, the content of the transcript has remained stable. Now is time for the transcript to evolve. We must ask ourselves, how do we best serve our students with all the technological and social changes in our world? How can we demonstrate learning outcomes and the

value gained during a student's college years? How do we leverage technology to make transcripts dynamic reflections of learning?

At Stanford, we envision meeting these demands through an enhanced, secure, linkable PDF transcript, which we call the electronic portfolio (ePortfolio) for learning and achievement.

In addition to the demands of accountability, the ePortfolio must demonstrate secure portability of student data. Currently, student data can be sent securely and efficiently through the Postsecondary Electronic Standards Council ([PESC](#)) standards of EDI and XML. These data streams are sent from one institution to another through a central server using common data standards. Alternatively, electronic transcripts can be sent through the international PDF standard. The certified PDF transcript provides a similar look and feel of the paper transcript, including the school seal and colors. It is sent as a certified, secure, and tamper evident document. Recipients see where the transcript originated, and the digital signature informs them if the electronic PDF has been tampered with. Stanford currently provides a certified electronic PDF transcript (eTranscript) option for students. In order to meet constituent needs, our next step is to embed XML in the transcript so that electronic data is included in the PDF. Transfer articulation, for instance, can incorporate directly into another student information system from a PDF embedded with XML.

Sustainability is another important consideration for an enhanced transcript. Transcript data is born digitally, so it no longer makes sense to print, package, and mail paper transcripts so that the receiving institution can manually enter the data into their student information system. An electronic portfolio provides cost savings and environmentally sustainable practices compared to the current paper process. But sustainability also refers to safe, long term storage of student data. Secure electronic data storage allows us to maintain student data in perpetuity. Accountability, portability, and sustainability all factor into the new enhanced transcript.

Expanding the Transcript

The Stanford University Registrar's Office processed over 30,000 transcript requests in the 2009-10 academic year. Since the introduction of the eTranscript option at Stanford, students have increasingly requested eTranscripts. Over a third of the 2009-10 transcripts requests were for eTranscripts. Currently students request transcripts through the self-service portal; soon Stanford will also offer an electronic transcript request option through the iStanford mobile application (see Figure 1).

Figure 1: Mobile transcript ordering through iStanford



In order to make the current transcript more relevant for students, Stanford expanded the official transcript to include more details about students' academic experiences. Full course titles replaced abbreviated, hard-to-understand titles. Instructor names were added to showcase the faculty teaching the courses. Additionally, the dissertation milestone appears when doctoral students apply to graduate; the milestone includes the title of the dissertation and the status of "in progress" or "completed," with the completion date. These are the first steps Stanford has taken to expand official transcripts.

ePortfolio for Learning and Achievement

After enhancing the transcript, Stanford will expand the eTranscript into the ePortfolio for learning and achievement. This is a 3-5 year phase of the eTranscript expansion.

The initial focus of this project includes customizing the PeopleSoft transcript engine with a “bolt-on” application to allow for more flexibility. This “bolt-on” delivers custom transcript setup pages, allowing multiple transcript templates instead of the two PeopleSoft-delivered templates. The new setup panel allows more control over additional data elements to be displayed on the various transcript templates. The final phase of this transcript project will standardize our official transcripts in XML format using PESC standards, with the ability to hyperlink from transcript elements to digitally stored data. The transcript delivery options will include PDF and XML. Additionally, XML will be embedded into the header of digitally signed and certified PDF transcripts. The enhanced transcript will showcase the complete student learning experience by including artifacts of learning in the ePortfolio (see Figure 2).

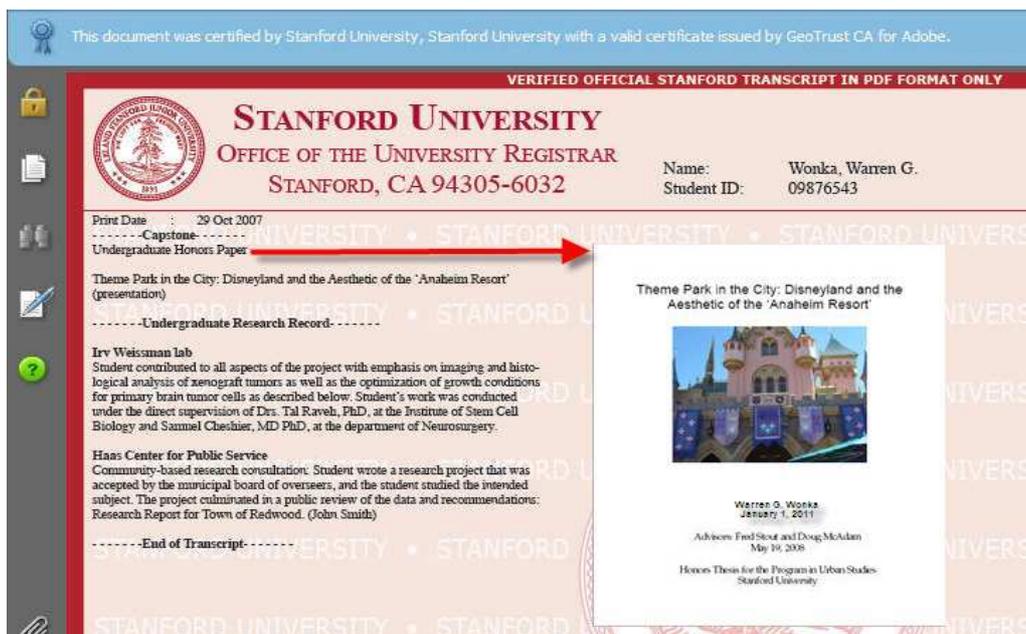


Figure 2: The ePortfolio for learning and achievement provides access to student papers.

In the ePortfolio, hyperlinks are embedded from the data elements on the eTranscript, allowing official transcripts to meet the needs of numerous constituents for additional information about the academic record. The student can provide the intended recipient of the electronic transcript with learning artifacts, such as an honor thesis or dissertation. In the ePortfolio, an undergraduate honors paper, as well as an accompanying PowerPoint presentation, is available through a simple click. Readers

can access details about a student's lab research or community service by opening links on the transcript. This enhanced eTranscript can provide transfer credit or admissions evaluators with online course descriptions and syllabi by linking course titles directly to online course catalog descriptions.

The ePortfolio distinguishes a student's academic experience by providing enhanced information about grading. For example, clicking the course title opens the course syllabus with an expanded course description (see Figure 3). When a transcript evaluator clicks a grade, they can view the grading distribution to facilitate better understanding of how a student performed in comparison with others in the course.

The screenshot displays the Stanford University Office of the University Registrar's ePortfolio interface. At the top, it identifies the student as Warren G. Wonka, Student ID: 09876543. The interface is divided into several sections:

- Header:** Stanford University logo and contact information (Stanford, CA 94305-6032).
- Student Information:** Name: Wonka, Warren G.; Student ID: 09876543.
- Registrar Information:** Thomas C. Black, University Registrar.
- Academic Record Summary:**
 - Print Date: 29 Oct 2007
 - Academic Program: Undergraduate Matriculated
 - Program: Undergraduate Matriculated
 - 25 Sep 2006: Undeclared Undergraduate Major
 - Active in Program
 - Transfer Credit: Applied Toward Undergraduate Matriculated Program
 - Quarter Units Posted: 6.00
 - Total Quarter Units Posted: 6.00
 - Advanced Placement Test Credit: Applied Toward Undergraduate Matriculated Program
 - 2006-2007 Autumn:
 - Advanced Placement Chemistry: 4.00
 - Advanced Placement Mathematics: Calculus AB: 5.00
 - Total Quarter Units Posted: 9.00
 - Allowable AP/transfer credit subject to restrictions.
- 2006-2007 Autumn Transcript Table:**

Subject #	Title	Att	Eru	Grd
CHEM 31X	CHEMICAL PRINCIPLES	4.00	4.00	B-
IHUM 63	FREEDOM, EQUALITY, DIFFERENCE	5.00	5.00	A
MATH 41	CALCULUS	6.00	6.00	B+
ME 389	BIOENGINEER & BIODESIGN FORUM	1.00	1.00	S
- Course Description (linked from CHEM 31X):**
 - Chemistry 31X Autumn 2006**
 - Professors Boardstart, Fayer, Waymouth**
 - General Information and Course Outline**
 - Instructors:** Professor Richard D. Fayer, Professor Rick Waymouth, Office: East Room 113, Office: Wheeler 2 Room 213, Phone: 724-3444, 724-3444, 724-3444
 - Office Hours:** Fayer: Friday, 1 p.m. - 2 p.m. 9/21 - 10/11/06; 11:30 a.m. - 12:30 p.m. 11/2/06; Waymouth: Thursday, 10 a.m. - 11:30 a.m. 10/11/06
 - Head TA's:** Madeline Britton, Rachel TA, Erin Walker, Annapurna TA
 - TA's:** Tom Best, Emily Best, Madeline Britton, Rachel Britton, Debrah Langston, Lisa Trachtenberg, Ivan Wagner
 - Content:** CHEM 31X is an advanced introduction to chemistry for students with a background in chemistry. Students are expected to combine with CHEM 104 and the laboratory of CHEM 104 for the semester. This includes four semesters of assignments, problem sets, lab exercises, and laboratory rotations during the use of laboratory classes, the work reports, and projects. The material will have been covered in a typical high school chemistry course but students are expected to have a high school chemistry lab experience as a pre-requisite.
 - Lectures:** 9:00 AM to 11:00 AM 10/19/06, Room: Auditorium, Mandel Building. The class will begin promptly on the hour. Please be on time and a few minutes before the class begins and be ready to go.
 - Text:** Professor Fayer will teach the first half and Professor Waymouth will teach the second half of the course. Professor Waymouth will teach the weekly laboratory. The course is a required course for students who plan to apply to graduate school.

Figure 3: The ePortfolio for learning and achievement links to learning artifacts.

In the ePortfolio, the dissertation title on the official electronic transcript will link directly to the PDF of the student's dissertation in the Library's digital repository. Stanford doctoral students currently can submit dissertations electronically in PDF format. After students meet predefined criteria, they upload a PDF of their dissertation to the Stanford University Library website. As each electronic dissertation is submitted, a unique, persistent url is created, which permits the dissertation link on the ePortfolio.

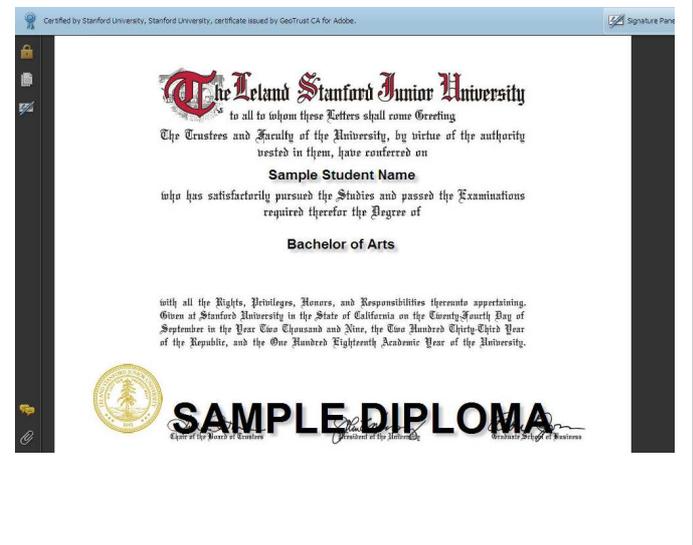
The ePortfolio will enable alumni to request a certified PDF version of their actual diploma once their degree is conferred. The electronic diploma is included along with the official transcript in the ePortfolio. The e-diploma satisfies the growing international demand for proof of a diploma, and it would complement the official transcript by providing clear, definitive evidence that the student graduated (Figure 4).

ePortfolio considerations

A significant challenge of the ePortfolio is maintaining and archiving the hyperlinked information on courses, extracurriculars, and faculty. This challenge requires innovation, creative thinking, and most importantly, collaboration with the University community. The University Library is a key partner in this effort at Stanford, because the library archives electronic dissertations to which the ePortfolio will link. Additionally, the Stanford Registrar's office is collaborating with the libraries to electronically store faculty curriculum vitae so that faculty names on the eTranscript can be directly linked to their CVs. This is one key example of how partnering with other areas of the University creates more possibilities for the ePortfolio than what one office could provide alone.

Official transcripts serve many purposes, such as for admission to a university, proof of enrollment, and proof of degree conferral. Given that, students should have options for transcripts, including the standard paper transcript. Eventually Stanford students will log into a new document center through the self service portal at Stanford. In the document center, they will request unofficial and official documents, transcripts, enrollment certifications, grade reports, instructor letters, and diplomas. For transcripts, they would have numerous selections, including unofficial, official, paper, electronic, standard, or enhanced ePortfolio, any of which will be sent as signed, certified PDFs. One of

Figure 4: The ePortfolio for learning and achievement will link to a certified eDiploma



the appealing aspects of the ePortfolio is that all data elements are intact irrespective of format; if the reader does not need additional information, they can still use the official transcript in its most basic form.

Through collaboration, the ePortfolio has the potential to serve numerous purposes on campus. For example, the Stanford Registrar's office is partnering with Undergraduate Advising and Research to enhance advising through the ePortfolio. In an unofficial version of the ePortfolio, students incorporate papers and projects to show faculty and staff advisors. Students share their ePortfolio with career counselors and alumni mentors to initiate conversations about their education and career paths. They collect meaningful examples of academic and extracurricular work for the purposes of graduate admissions, job applications, and reflection of learning.

Thus, partnering with students and faculty is crucial for the ePortfolio. At Stanford, the student advisory committee will advise on the student needs for the ePortfolio, and faculty committees will decide on the content of the official ePortfolio. Registrars should give faculty committees a broad menu of options for expanding student record information through the enhanced electronic transcript. By collaborating with University partners and leveraging technology, the possibilities of the ePortfolio are unlimited.

A New Transcript Model

The ePortfolio enables institutions of higher learning to answer rising demands for accountability, portability, and sustainability. By documenting learning outcomes and artifacts of achievement, the ePortfolio addresses the expectations of accreditation bodies, government officials and taxpayers, graduate admissions committees, employers, parents, and students. The ePortfolio enhances advising and learning by promoting reflection. It showcases the student's academic experience, differentiates the school's education, and recognizes the faculty. It leverages existing

technology to offer students options for their student records, and provides additional evidence to the value of their higher education experience.

We invite our colleagues to join us in altering the status quo of the standard transcript in order to develop the most interactive and effective transcript option ever offered to students.