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## COMMON CREDENTIAL FOR CERTIFICATES, DEGREES & DIPLOMAS RATIFIED AS PESC APPROVED STANDARD XML TECHNICAL SPECIFICATION v 2.2 RELEASED

(Washington DC) – The Board of Directors of PESC is pleased to announce the release of the *Common Credential for Certificates, Degrees and Diplomas* as a PESC Approved Standard, ratified through PESC’s development, approval & maintenance process. Now approved and released to the general public, this *Common Credential XML Data Standard* is expected to be used by any organization, college, university, school, district, state, province, and/or service provider to fully communicate degrees, certifications and other similar credentials obtained by the student.

*“This standard does not propose to replace the traditional transcript, but to meet the growing demand, now emerging across the landscape, but especially in transfer, labor and workforce sectors, to verify credentials.”*

- Letter of Intent March 22, 2016

- AACRAO
- Stanford University
- University of Maryland University College
- University of Southern California



Tom Black and Mei Hung of Stanford University directed the efforts and team, completing the technical development segment in 10 months.

### PESC Members that approved the Common Credential:

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>➤ AACRAO</li> <li>➤ AcademyOne</li> <li>➤ ACT</li> <li>➤ Alberta Postsecondary Application System</li> <li>➤ Bardic Systems</li> <li>➤ California Community Colleges</li> <li>➤ College Board</li> <li>➤ Credentials Solutions</li> <li>➤ ECE</li> <li>➤ Ellucian</li> <li>➤ Florida International University</li> <li>➤ Georgetown University</li> <li>➤ IERF</li> <li>➤ Indiana State University</li> </ul> | <ul style="list-style-type: none"> <li>➤ NASLA</li> <li>➤ National Student Clearinghouse</li> <li>➤ Oracle</li> <li>➤ Paradigm</li> <li>➤ Parchment</li> <li>➤ San Francisco State University</li> <li>➤ Stanford University</li> <li>➤ Student Connections</li> <li>➤ University of Denver</li> <li>➤ University of Maryland University College</li> <li>➤ University of Missouri System</li> <li>➤ University of Phoenix</li> <li>➤ University of Southern California</li> <li>➤ University of Texas at Austin</li> </ul> |
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Documentation for this newly PESC Approved Standard is posted on the PESC website at [www.PESC.org](http://www.PESC.org). Organizations looking to communicate their use of this or any other PESC Approved Standard should contact the PESC offices at 202.261.6516.

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*“By creating a standard credential data schema that provides more explicit expression of learning, it is hoped that in addition to helping learners to become more self-aware, third parties with whom the learners share this information could use it to further benefit the learners or the enterprises with which the learners are engaged.”*

- Tom Black, Associate Vice Provost for Student Affairs and University Registrar, Stanford University

PESC's Academic Credentialing and Experiential Learning Task Force formed and convened for its inaugural meeting at PESC's Fall 2015 Data Summit in Washington, D.C. With Tom Black, Associate Vice Provost for Student Affairs & University Registrar at Stanford University, as Task Force Chair, and Co-Chairs Joellen Shendy, Associate Vice Provost and Registrar at the University of Maryland University College and Alex Jackl, CEO and Founder of Bardic Systems, the Task Force committed to monitoring and tracking current initiatives, providing speakers and presenters at several industry-leading conferences and events, serving as a clearinghouse for information, and ensuring PESC is prepared for standards development work as the community is reaching the point in which standards are needed.

Community development on the Common Credential for Certificates, Degrees & Diplomas initiated at PESC's Spring 2016 Data Summit held April 13, 2016. The entire development cycle and release to the public of this newly PESC Approved Standard (from origination through the joint Letter of Intent, through broad-based testing and open evaluation and vetting, and finalizing with public comment period and approval by the Change Control Board, PESC Members and PESC Board of Directors) took exactly one year.

In continuing to its supportive, complementary message to each initiative that fostering collaboration across educational sectors to solve industry-shared problems brings much needed clarity and coherence to the education eco-system, PESC's Spring 2017 Data Summit is dedicated to *Empowering the Mobility of Digital Academic Credentials*.

PESC is pleased to recently announce the addition of *Connecting Credentials* as co-sponsor for *Empowering the Mobility of Digital Academic Credentials*. *Connecting Credentials*' Co-Director Evelyn Ganzglass joins the PESC program as a featured speaker and will discuss the Marketplace Supply and Demand including the upcoming roll out of new workgroups and initiatives under *Connecting Credentials*.

For more information about the *Empowering the Mobility of Digital Academic Credentials* including registration, see [www.PESC.org](http://www.PESC.org) or tweet us @PESCupdates using #PESCspring17summit.

For more information about *Connecting Credentials*, see [www.ConnectingCredentials.org](http://www.ConnectingCredentials.org).

PESC is sponsored annually by Credentials Solutions, National Student Clearinghouse, Oracle and Parchment Inc. PESC partners include AACRAO, APEREO, ARUCC, EMREX, EWP, Groningen Declaration Network, Internet2, SHEEO, and the US Department of Education's Common Education Data Standards (CEDs) Initiative.

PESC is a proud exhibitor at AACRAO's Annual Meeting and the Annual STATS-DC Conference of the National Center for Education Statistics (NCES) of the US Department of Education and is a proud Affiliate of the NCES National Forum on Education Statistics.

PESC is a proud sponsor of AIR's Annual Conference and of the Annual California Electronic Transcripts Workshop and CCCApply.

PESC is celebrating its 20th Year Anniversary at EDiINTEROP | PESC Fall 2018 Symposium and Data Summit being held in October 2017 in Toronto. A Program Committee is being organized

**ACTIVATING INTEROPERABILITY ACROSS THE EDUCATION DOMAIN**

under the Canadian PESC User Group and a separate announcement will be issued with details and information.

### **ABOUT PESC**

**ESTABLISHED IN 1997 AT THE NATIONAL CENTER FOR HIGHER EDUCATION & HEADQUARTERED IN WASHINGTON, D.C.**, PESC is an international, 501 (c)(3) non-profit, community-based, umbrella association of data, software and education technology service providers; schools, districts, colleges and universities; college, university and state systems; local, state/province and federal government agencies; professional, commercial and non-profit organizations; and non-profit associations & foundations.

### **LEADING THE ESTABLISHMENT AND ADOPTION OF DATA EXCHANGE STANDARDS ACROSS THE EDUCATION DOMAIN.**

Through open and transparent community participation, PESC enables cost-effective connectivity between data systems to accelerate performance and service, to simplify data access and research, and to improve data quality along the Education lifecycle. PESC envisions global interoperability within the Education domain, supported by a trustworthy, inter-connected network built by and between communities of interest in which data flows digitally and seamlessly from one community or system to another and throughout the entire eco-system when and where needed without compatibility barriers but in a safe, secure, reliable, legal, and efficient manner.

**ABOUT PRIVACY** While PESC promotes the implementation and usage of data exchange standards, PESC does not set (create or establish) policies related to privacy and security. Organizations and entities using PESC Approved Standards and services should ensure they comply with FERPA and all local, state, federal and international rules on privacy and security as applicable. For more information, see [www.PESC.org](http://www.PESC.org).

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**UNIVERSITY OF MARYLAND  
UNIVERSITY COLLEGE**

**UNIVERSITY OF  
SOUTHERN CALIFORNIA**

**AACRAO**

## LETTER OF INTENT

### COMMON CREDENTIAL FOR CERTIFICATES, DEGREES & DIPLOMAS

March 22, 2016

Michael Sessa  
PESC President & CEO  
1250 Connecticut Ave NW  
Suite 200  
Washington, D.C. 20036

We are pleased to submit to PESC this Letter of Intent (LOI) to communicate that Stanford University, the University of Maryland University College, the University of Southern California and AACRAO intend to work openly, transparently and collaboratively with the education community through PESC to develop an XML-based data standard: Common Credential for Certificates, Degrees and Diplomas.

We propose development, submission and consideration of this Common Credential as a PESC Approved Standard. This proposed standard can be used by any organization, school, college and university, district and state and/or service provider to fully communicate degrees, certifications and other similar credentials obtained by the student. Our deliverables will include the XML Schema, an Implementation Guide, and Instance Documentation.

While the traditional transcript contains comprehensive information about a student's educational experience, in some instances only a simple verification of a degree, diploma, certification or other credential is needed. While this standard does not propose to replace the traditional transcript, we look to meet the growing demand, now emerging across the landscape but especially in transfer, labor and workforce sectors, to verify credentials. A brief business case and justification is attached.

We are pleased to collaborate on this Letter of Intent and look forward to preparing and using an international data standard that will greatly enhance the process of communicating and verifying credentials.

Sincerely,

**TOM BLACK**  
ASSOCIATE VICE PROVOST  
& UNIVERSITY REGISTRAR  
STANFORD UNIVERSITY

**TUAN ANH DO**  
PESC BOARD OF DIRECTORS  
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# The Business Case for the Development of a PESC Standard in XML for Supporting Credentialing and Experiential Learning Records and for Enhancing Data Exchange Mobility

## Overview

The current transcript, designed to record learning in the form of course enrollments, courses credits and grades, is no longer a sufficiently robust approach to satisfy the needs of the modern learner. The current transcript standard was designed to record learning in the form of course enrollments, courses credits and grades. Higher Education institutions have long adopted the Carnegie Unit as policy which specifies that learning be recorded in the form of time. The GPA (grade point average), a calculation based on that standard, was commonly used to demonstrate a student's achievement. While the transcript and the Carnegie Unit have served the academy well for over a hundred years, changes in pedagogy and technology have caused a greater awareness that learning should not be measured just as course credits and grades, but should be more descriptive. Learning outcomes and a variety of other assessment methods are a means to describe learning more in the form of skills, capacities and abilities mastered, in addition to content knowledge acquired.

While there are new ideas about what should be recorded, Higher Education has not coalesced around a single approach, or even a handful of approaches. It will take time to settle on the best way to describe and record the learning that takes place on campuses. Further, non-curricular or experiential learning, arguably counting among the most important activities in which students can engage, is increasingly considered worthy of noting and recording, alongside the curricular learning that leads to majors and minors and ultimately degrees.

Starting over twenty-five years ago, transcript and course inventory standards were promulgated to enable the portability of the established records of the academy as data. EDI, XML and PDF formats have been employed in a variety of use cases to make data exchange quite common at least within Higher Education. Certainly many students benefit from the ease with which courses and credit information have transferred between institutions. And, the use of the PDF format has made it easier for the exchange of student achievement information with third parties outside Higher Education.

It is not too early to think about how to capture and convey learning data that describes experiential learning alongside one of its most common expressions of acknowledgement, the certificate credential. Paper certificate credentials have been in existence for centuries and are used by many organizations and institutions to recognize participation, completion or achievement. However, there is no standard at present enabling the exchange of information related to the certificate credential. Thus, it is

hereby proposed that the following XML standard begin to serve as a means both to create the digital form of the certificate credential and to embed within it the information that the certificate credential recognizes. Certainly this credential standard could be adopted to convey diploma information as well. The principal value proposition for a digital credential is to convey to the learner what (s)he has learned or achieved, but it must also provide a standardized form for the learner so that the personal data it contains may be more easily controlled and shared with others using certification and authorization technology commonly available today.

### **Credentialing and Experiential Learning Records Standard Description**

The standard is designed for both electronic certification production and recording credential learning records. The design of new standard incorporates current PESC standards. The new standard composes in 3 main sections:

1. *Transmission Data Section:* This section uses the existing PESC Request and Response of the XML Transcript standard. It describes the requesting source, i.e., in this use case, the organization or institution, and it also describes the destination, i.e., in this use case, the service provider for credential creation. It serves the same purpose as the PESC PDF (Portable Document Format) attachment standard, which is to make data exchange effective and machine-readable.
2. *Document Production Section:* This section has information for digital certificate file production. The data is used for presenting a statement of learning achievement levels and learning result recognition. The section also describes the data format requested, such as XML, PDF, or PDF with attachment.
3. *Credential Learning Record Detail Section:* This section describes acknowledgment of credential learning records and expression of learning that is more explicit in terms of intellectual skills, outcomes, goals or capacities. It adopts PESC Core Main Components, Education Course Inventory and College Transcript standards. This section is used in PDF attachments for better description and for machine-readable learning records.

### **Business Process Supports the Standard**

The new proposed standard supports the following business process scenarios:

#### ***Scenario 1:***

The organization or institution produces an XML file that follows the standard when a learner participates, completes or achieves success in a supervised activity or program.

**Scenario 2:**

The XML file is transmitted from the organization or institution to a service provider, the destination, for the creation of a digital artifact or credential—usually rendered in PDF format—using information from the Transmission Data Section.

**Scenario 3:**

The service provider takes information from the Document Production Section to generate a digital artifact (usually per PESC PDF standard) as specified by the organization or institution. Credential Learning Record Detail Section relays comprehensive information about the supervised activity or program that is appended as an attachment file to the PDF artifact.

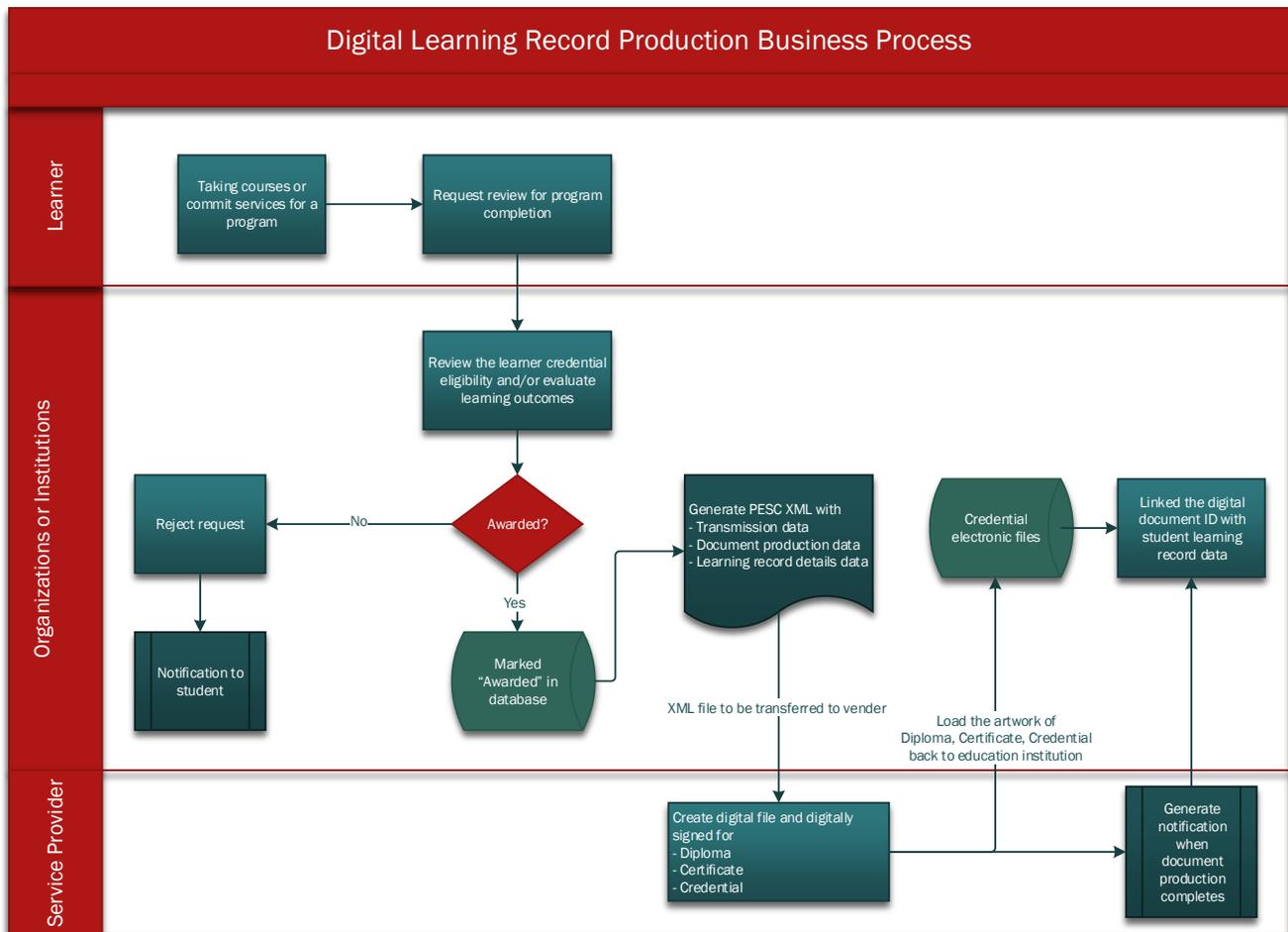
**Scenario 4:**

The organization or institution provides both digital versions of the artifact file and the appended detailed credential learning records to learners who in turn can make these available to other authorized third parties that request access.

**Scenario 5:**

The learner also exports such digital artifacts and appended information to a variety of software locally hosted, on mobile devices or in the cloud. Any authorized third parties viewing these data via the Internet can validate the detailed learning records. The new standard can be used for better data presentation in either a contextual or graphical way.

## Digital Learning Record Production Business Process Diagram



### Planned Collaboration for Developing the Standard

The work group is composed of staff from professional education enterprise system consulting firms, representatives from postsecondary institutions including members of AACRAO, representatives of educational software and service providers, representatives of state and federal agencies interested in credentialing and experiential learning records, and any others interested in the project.