



COMMUNITY SOURCED. OPEN DATA STANDARDS.

# Introduction to DRA

Michael D. Sessa, President & CEO - 28 February 2018



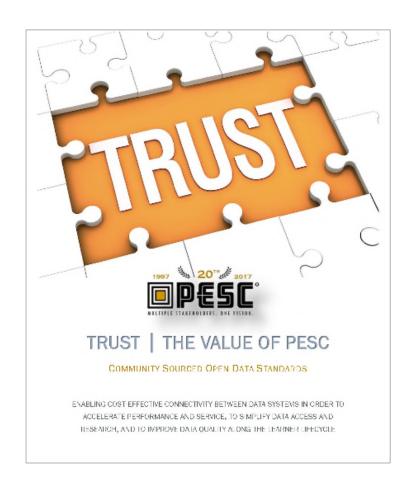
## **PESC** is

- PESC Postsecondary Electronic Standards Council <u>www.PESC.org</u>
- Non-profit 501c3 (like charities & churches) founded 1997 with headquarters in Washington DC
- Member Association 3 continents (Australia, Europe, North America)
  - Data, Software & Technology Service Providers
  - Schools, Districts, Colleges & Universities
  - College, University & State/Province Systems
  - Local, State/Province & Federal Government Offices
  - Professional, Commercial & Non-Profit Organizations
  - Non-Profit Associations & Foundations
- Funded by: Annual Member Dues, Annual Sponsors, Registration Fees
- 2 full time staff, 150+ Member Volunteers, 15 Groups & Committees



## **PESC** is

- PESC Approved Standards
  - Data Standards-Development Body
  - Data Standards-Setting Body
  - Standards Maintenance and Version Control
- Education & Outreach
  - PESC Spring & PESC Fall Data Summits
  - The STANDARD Newsletter
  - Conferences, Meetings, Speaking Events
  - Annual Best Practices Competition
- Collaboration, Partnerships & Affiliations
  - Events, Exhibits, Pilots & Demos
  - Sponsorship, MOUs & Joint Initiatives
- Neutral, Trusted The Value of PESC





**Student Aid** 

## **PESC APPROVED STANDARDS**

Academic College Transcript	1.0 - 1.8
Academic ePortfolio	1.0
Academic High School Transcript	1.0 - 1.6
Academic Record	1.0 - 1.12
Admissions Application	1.0 - 1.4
Common Credential	1.0
Core Main	1.0 - 1.19
Data Transport	1.0, 2.0
EDI	
<b>Education Course Inventory</b>	1.0
<b>Education Test Score Reporting</b>	1.0 - 1.1
Functional Acknowledgment	1.0 - 1.2
PDFxml Attachment	1.0
Request - Response	1.0



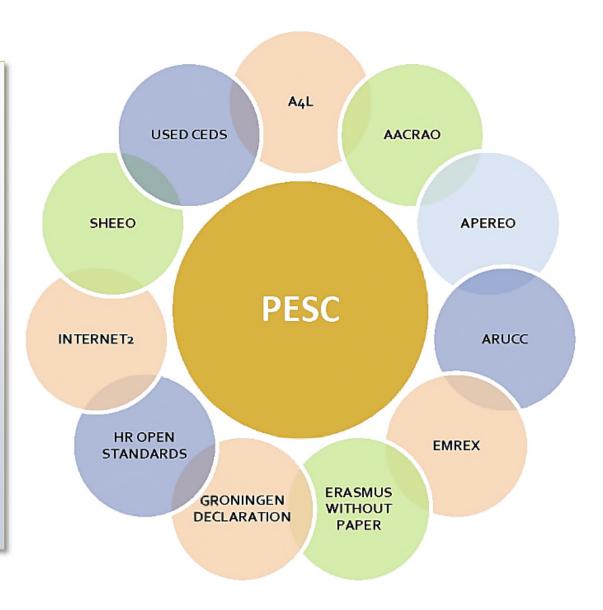
**Technical Interoperability** 



## Collaboration, Partnerships & Affiliations

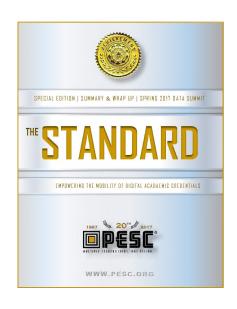
## PESC Partnership and Affiliations

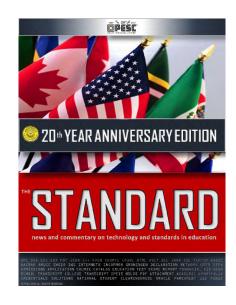
- Access 4 Learning (PK12)
- American Association of Collegiate Registrars and Admissions Officers
- APEREO (Open Source)
- Association of Registrars of the Universities and Colleges of Canada
- EMREX (Europe)
- Erasmus Without Paper (Europe)
- Groningen Declaration Network
- HR Open Standards
- Internet2
- State Higher Education Executive Officers
- U.S. Department of Education's Common Education Data Standards Initiative





Education & Outreach















#### **Education & Outreach**

#### **PESC MEMBERS**

#### AUSTRALIA

University of Melbourne

#### CANADA

#### ApplyAlberta McGill University

Memorial University of Newfoundland

OCAS

Ontario College Application Service OUAC

Ontario Universities' Application Centre

Simon Fraser University University of British Columbia

University of Lethbridge

#### IRELAND

Digitary

#### NETHERLANDS

Groningen Declaration Network

#### UNITED STATES OF AMERICA

#### AACRAO

American Association of Collegiate Registrars and Admissions Officers

A41 Access4Learning

ACE

American Council on Education

College Board

Common Application

NASLA

National Association of Student Financial Aid Administrators

AcademyOne

ACT

**Bardic Systems Credentials Solutions** 

ECE

Educational Credential Evaluators Eduventures

**PESC MEMBERS** 

Ellucian FIM Resources

**FSMB** 

Federation of State Medical Boards IERF

International Education Research Foundation

iQ4 Jenzabar

National Student Clearinghouse

Oracle

Paradigm

Parchment **Smart Catalog** 

Student Connections

Workday

Arizona State University **Brown University** 

California Community College System California State University System

Central Connecticut State University Community College of the Air Force

Cosumnes River College

**Elon University Emory University** 

Florida International University Georgetown University

Indiana State University

Michigan State University

Southern Connecticut State University

Stanford University

University of Arizona

University of California at Berkeley

University of Chicago

University of Colorado Boulder

University of Denver University of Idaho

University of Louisiana at Lafayette

University of Maryland University College

University of Michigan University of Mississippi

University of Missouri System

University of Northern Iowa

University of Oregon

University of Phoenix

University of Puerto Rico System

University of Southern California

University of Texas at Austin

University of Virginia

University of Wisconsin at Madison

Washington State University

Western Governors University



#### BECOME A DATA ADVOCATE.

JOIN THE EFFORT.
JOIN THE COMMUNITY.

JOIN PESC.

Message brought to you by lectronic Standards Council, maker of standards.



#CollegeandCareer www.PESC.org



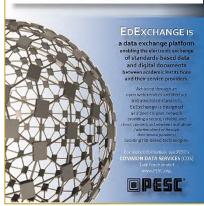
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#CollegeandCareer







JOIN THE EFFORT.

JOIN PESC. PESC

UNLOCK THE MOBILITY OF EDUCATION DATA WITH PESC APPROVED STANDARDS



## **Current Initiatives**

- Academic Credentialing & Experiential Learning Task Force\*
- Canadian PESC User Group ARUCC/GDN Project
- EdExchange User Group California Community Colleges/Parchment Pilot
- GEO Code User Group *University of Southern California/IERF Pilot*
- JSON Task Force Partnership with elementary/secondary on strategy
- www.PESC.org



## **Academic Credentialing\***

- Academic Credentialing & Experiential Learning Task Force
- Common Credential for Certificates, Degrees & Diplomas PESC Approved XML Standard
- Empowering the Mobility of Digital Academic Credentials Spring 2017 Data Summit
- MOU with HR Open Standards
- Partnership with Credential Engine
- Credential Ecosystem Data Mapping Initiative\*
- PESC EMREX/ELMO Data Mapping Initiative
- www.PESC.org



### Credential Ecosystem Data Mapping Initiative

Transparent, Interoperable Navigation Across Education, Training & Employment

- VALUE STATEMENT Educators, employers, students, veterans, policy makers and the economy in general are best served through comprehensive access to and availability of open, linked and discoverable data about credentials, providers of credentials & quality assurance groups.
- MISSION STATEMENT To ensure interoperability of data standards across education, training and employment sectors.
- GOVERNANCE The mission of the initiative is administered collaboratively by a Delegation of stakeholders in the competency and credential marketplace that develop, set and promote data standards.



#### **PROJECT GOALS**

- 1. To promote collaboration, transparency, harmonization, data linkages, open communications and overall interoperability among stakeholders in the competency and credential marketplace.
- 2. To determine levels of compatibility between data standards; identify opportunities for further alignment, convergence and partnerships; and develop better understanding of each stakeholder's role across education, employment and training sectors.
- 3. To support providers of credentials with guidance on data transformation; open, linked data structures; and nationally and internationally recognized frameworks.
- 4. To inventory, share, map/crosswalk, data standards, models, taxonomies, vocabularies & schemas.
- 5. To produce agreed upon documentation, outputs, tools and artifacts for use and adoption.
- 6. To establish an inclusive approach and process for representation in the Delegation.



#### WORKPLAN

- 1. Begin with Competencies and Competency Frameworks.
- 2. Determine Project Use Cases and Credential Ecosystem Scope.
- 3. Reach Out to All Credential-related Domains.
- 4. Develop Final Report and Action Plan.
- 5. To ensure resources, guidance, artifacts and tools (e.g. web page, conceptual models, written analysis, and crosswalks) provided remain current and sustainable.
- 6. Facilitate and support initiatives that improve data integration and data transformations.
- 7. Identify opportunities for additional partnerships, affiliations, convergence and alignment with new, emerging technologies and future marketplace initiatives



http://credreg.net/page/ecosystemcompetencies

#### **PARTNERS**

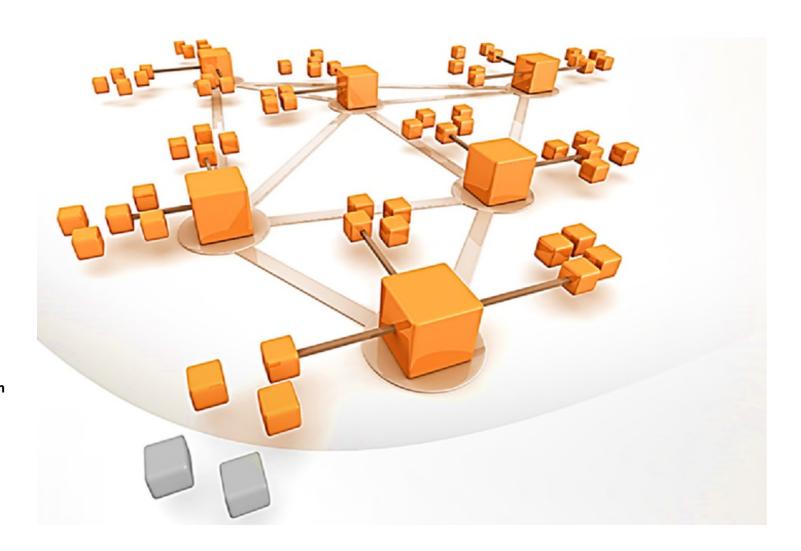
- 1. Access 4 Learning
- 2. Advanced Distributed Learning (ADL)
- 3. Common Education Data Standards (CEDS)
- 4. Credential Engine
- 5. HR Open Standards
- 6. IEEE
- 7. IMS Global
- 8. Medbiquitous
- 9. PESC
- 10. Schema.org



## **PESC Vision**

#### Global mobility or Interoperability

within the learner domain supported by a trustworthy, inter-connected network built by, for & between communities of trust in which data flows digitally and seamlessly from one community, system or network 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.





## **PESC APPROVED STANDARDS**

IINIVERSITY

UNIVERSITY OF MARYLAND UNIVERSITY OF

UNIVERSITY COLLEGE SOUTHERN CALLEDRNIA

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

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.

TOM BLACK

PESC BOARD OF DIRECTORS REPRESENTING THE AMOUNTAIN ASSOCIATION OF

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PATRICK ELLIOTT

W. MATT BEMIS



FOR IMMEDIATE RELEASE April 12, 2016 Contact: PESC Membership Services Director

#### COMMON XML CREDENTIAL DATA STANDARD FOR CERTIFICATES, DEGREES AND DIPLOMAS LAUNCHED BY PESC

(Washington DC) - PESC is pleased to announce that leaders from Stanford University, University of Maryland University College, University of Southern California, and the Association of American Collegiate and Admissions Officers (AACRAO) are collaborating through PESC to develop a COMMON CREDENTIAL DATA STANDARD for certificates, degrees and diplomas.

According to the Letter of Intent submitted on March 22, 2016, "the proposed standard can be used by any organization, school, college and university, district and state/province and/or service provider to fully communicate degrees, certifications and other similar credentials obtained by the student."

"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 & University Registrar, Student and Academic Services at Stanford University and Chair of PESC's Academic Credentialina and Experiential Learning Task Force,



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FROM THE LETTER OF INTENT: While the traditional transcript contains comprehens 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.



FOR IMMEDIATE RELEASE January 23, 2017 Contact: Jennifer Kim PESC Membership Services Director +1,202,261,6516 jennifer.kim@pesc.org

#### COMMON CREDENTIAL PROPOSED STANDARD RELEASED FOR 30 DAY PUBLIC COMMENT PERIOD

#### **UPDATED XML TECHNICAL SPECIFICATION INCLUDED FOR COMMENT**

Washington DC - The Board of Directors of PESC is pleased to announce the release of the Common Credential for Certificates, Degrees and Diplomas, a proposed standard, for a 30 day public comment period. The XML development work which started in early 2016, has been meticulous, collaborative and transparent, and leaders have worked painstakingly to ensure major stakeh participated in the development, analyzed and evaluated development work, and contributed to a

"This credential standard will promote interoperability where presently there is none for credentials that serve as alternatives to the academic transcript," states Thomas Black, Associate Vice Provost & University Registrar, Student and Academic Services at Stanford University and Chair of PESC's Academic Credentialing and Experiential Learning Task Force. "There is great potential to innovate using this standard, and now it is time for our respective communities to embrace the ideas and concepts that are incorporated in the standard for the betterment and prosperity of our students and graduates holding these credentials," Mr. Black continues.

The PESC directive that launched this development concluded that while the traditional transcript contains comprehensive information about a student's educational experience, in some insta 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, the PESC community looks to meet the growing demand, now emerging across the landscape but especially in transfer, labor and workforce sectors, to verify credential

"In true collaboration, PESC's Technical Advisory Board has also released an updated version of PESC's XML Technical Specification, on which the Common Credential is based, and we're asking for public comment on the XML Technical Specification as well," states Michael Sessa, PESC President & CEO. "The XML Technical Specification is the result of merging PESC's original specification with that of the U.S. Department of Education's specification in 2003, a major milestone in the history of PESC, as with a combined, single XML Technical Specification, technical interoperability is now baseline enabling applications and data to flow throughout the education network," Mr. Sessa continued.

LEADING THE ESTABLISHMENT AND ADOPTION OF DATA EXCHANGE STANDARDS IN EDUCATION



FOR IMMEDIATE RELEASE

MARCH 31, 2017 Contact: JENNIFER KIM RSHIP SERVICES DIRECTOR

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

(Windington JCL) — The Board of Diseases of PSSC is bleased to emotions the release of the Common Condented for Certification, Exposure and Epidenous as a PSSC Apprehent Secretification of other similar credental collections by the abutions.

"This standard does not propose to replace the traditional rns standing dees hat propose to sepace the dedicate 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 fixest March 22, 2016

PESC Members that approved the Common Credentials

AACRAO NASLA

Alberta Postecondary Applicati Bardle Systems California Community Colleges College Board Credentials Solution ECE

University of Maryland University College University of Missouri System University of Phoenix University of Southern California

entation for this newly PESC Approved Standard is posted on the PESC website at 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.

ACTIVATING INTEROPERABILITY ACROSS THE EDUCATION DOMAIN

#### 1. Public Letter of Intent "Levels the Playing Field"

2. Development Group "Candidate Standard"

3. Public Comment "Open, Public Crowd-Power" 4. PESC Approved "Ready to Use"



## **PESC APPROVED STANDARDS**

#### 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.

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

The current transcript, designed to record learning in the form of course enrollments, courses redits 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 redits and grades. Higher Education institutions have long adopted the Carnegie Unit as policy which pecifies that learning be recorded in the form of time. The GPA (grade point average), a calculation based he Carnegie Unit have served the academy well for over a hundred years, changes in pedagogy and echnology 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 re a means to describe learning more in the form of skills, capacities and abilities mastered, in addition to

round a single approach, or even a handful of approaches. It will take time to settle on the best way to lescribe and record the learning that takes place on campuses. Further, non-curricular or experiential carning, arguably counting among the most important activities in which students can engage, is nereasingly considered worthy of noting and recording, alongside the curricular learning that leads to najore and minore and ultimately decrees

nable the portability of the established records of the academy as data. EDI, XML and PDF formats have een 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 ransferred between institutions. And, the use of the PDF format has made it easier for the exchange of sudent achievement information with third parties outside Higher Education.

It is not too early to think shout how to capture and convey learning data that describes xperiential learning alongside one of its most common expressions of acknowledgement, the certificate redential. Paper certificate credentials have been in existence for centuries and are used by many tandard 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

#### Credentialing and Experiential Learning Records Standard Description

records. The design of new standard incorporates current PESC standards. The new standard composes in

- 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, serves the same purpose as the PESC PDF (Portable Document Format) attachment standard, which is to
- 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.
- 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

#### The new proposed standard supports the following business process scena

#### 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.

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 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:

credential learning records to learners who in turn can make these available to other authorized third

#### Scenario 5:

The learner also exports such digital attifacts 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

**Public Letter of Intent** The Business/Use Case "What Are We Trying To Solve & Why"



## **PESC APPROVED STANDARDS**

Academic Credentialing & Experiential Learning

Canadian PESC User Group (CanPESC)

Global Education
Organization User Group

JSON Task Force

#### **PESC APPROVED STANDARDS**

Free & Open

**PESC Member** 

Change Control Board (CCB)

Seal of Approval Board (SAB)

Technical Advisory
Board (TAB)

EdExchange (CDS)
User Group

Education Record User Group (ERUG)

PESC Board of Directors

**PESC MEMBERS** 

Business Interoperability + Technical Interoperability Free, Public & Open + PESC Member Driven

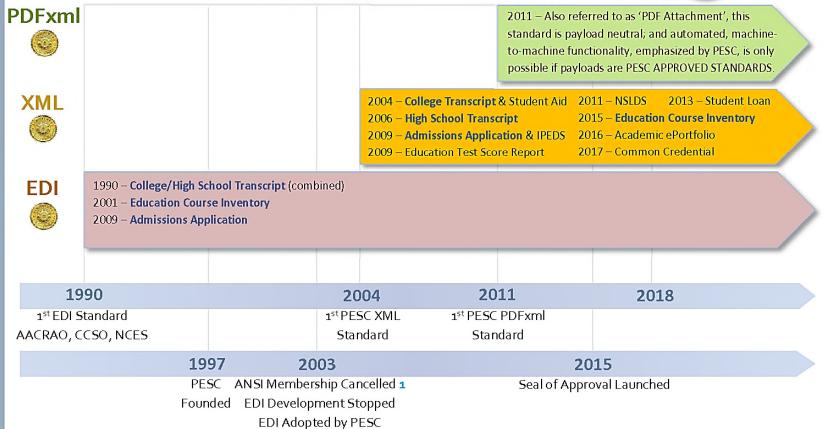


**Leading the Establishment** & Adoption of **Open Data** Standards Across the Education Domain

## THE EVOLUTION OF PESC APPROVED STANDARDS BY TECHNOLOGY

**JSON** 

In Process





## **Opportunities for PESC & ORA**

- Participate in free and open PESC groups and initiatives:
  - Academic Credentialing & Experiential Learning Task Force
  - Canadian PESC User Group
  - Global Education Organization Code User Group
  - JSON Task Force
  - PESC Approved Standards (public comment process)
- Explore Partnership/Affiliation
- Explore MOU
- Options: Member-based, Data Summits
- Credential Ecosystem Data Mapping Affiliation

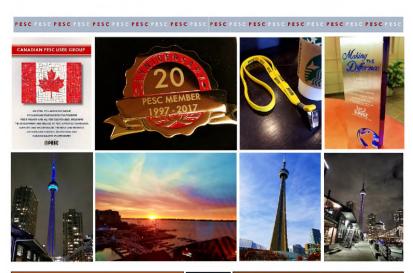


## **Thank You!**

- PESC Postsecondary Electronic Standards Council
- www.PESC.org
- www.facebook.com/pescupdates
- www.twitter.com/pescupdates
- #PESCspring18summit
- #CollegeAndCareer
- Michael Sessa
- michael.sessa@pesc.org











# COMMON CREDENTIAL FOR CERTIFICATES DEGREES & DIPLOMAS



# Collaboration, Partnerships & Affiliations



Amelia Parnell of introducing NASPA to attendees at the Spring 2016 Data Summit in Dupont Circle.



The Groningen Declaration Network panel discusses indepth the mission and vision of this expanding global initiative.



#### PESC's Roots Run Deep

Manuel Dietze and Stephan Velay of unisolution GmbH at the U.S. Briefing on RS3G hosted by PESC on May 28, 2008. On November 9, 2007, 40 participants from 13 countries met in Rome, Italy in a workshop to begin discussing how to define electronic standards for the exchange of student data between institutions of higher education. The workshop and the group now referred to as the "Rome Student Systems and Standards Group" ("RS3G") is continuing the initiative. As PESC & U.S. higher education have a vested interest in this initiative, several representatives from PESC attended this first workshop in Rome and continue to participate.

## ACTIVATING INTEROPERABILITY ACROSS THE EDUCATION DOMAIN PESC Board '10 Year Service' DC May 3-5, 2017 GDN Board in Melbourne April 26-28, 2017

