

– CONNECTING THE –
NEW DIGITAL ECOSYSTEM

The Academic High School and College Transcript

Rick Skeel, Project Manager, Ellucian

Matt Bemis, Associate Registrar, USC

Monterey Sims, Director Admissions & Evaluation,
University of Phoenix

Thomas Black, Chief Innovation Officer, Paradigm

Ken Sauer, Senior Associate Commissioner & CAO,
Indiana Commission for Higher Education

Tuesday, December 8, 2020 12:15 pm – 1:30 pm EST



**DATA SUMMIT &
SYMPOSIUM**

 **PESC**[®]



Agenda

- *Intro/Kick off – Rick*
- *Discussion of transcript exchange (sending and receiving) – Matt/Monterey/Ken*
- *Digital ecosystem – (Tom/Ken)*
- *Current vs. Future state – All*

The EDI experience at USC

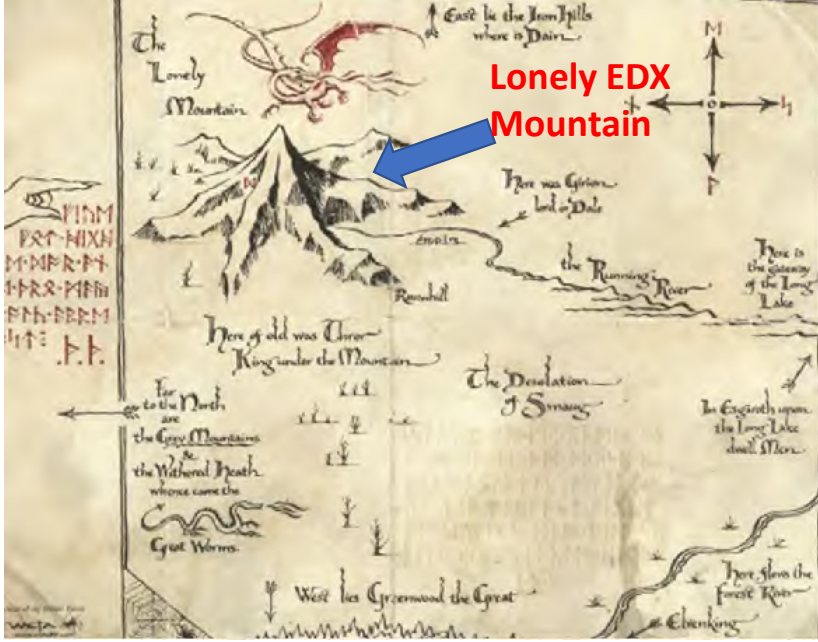
- History of EDI Data exchange at USC
 - Implemented in 2010 as part of an unfunded mandate for state community colleges to exchange electronic transcript data
 - Inbound implementation was quick and easy
 - Outbound EDI proved to be a humbling experience
 - Since going live, USC exceeds 15,000 transactions annually
- Integrated EDI exchange with vendors to automate key time sensitive and high volume transaction
 - International Education Research Foundation (IERF) – All international credential evaluation results sent from vendor over the NSC servers using PESC standards (e.g. use of GEOcode and EDI TS130)
 - CollegeSource – Student ‘self service’ platform allows transfer applicants to self report prior learning, packaging the data in EDI/XML formats sent over the NSC server.

The EDI experience at UOPX

There and back again, a transcript tale...

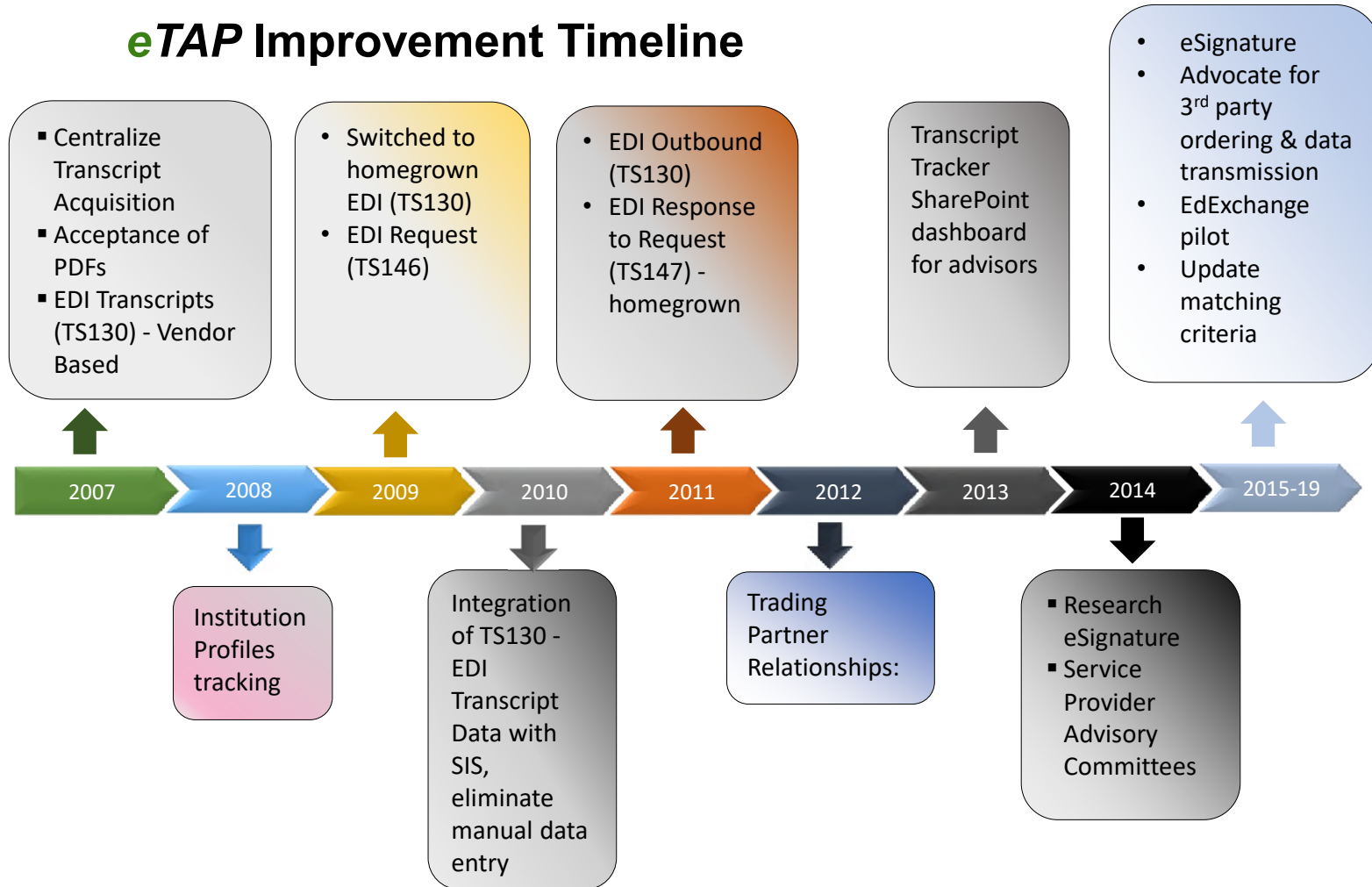


Data exchange requires partners, it can be a long yet rewarding journey!



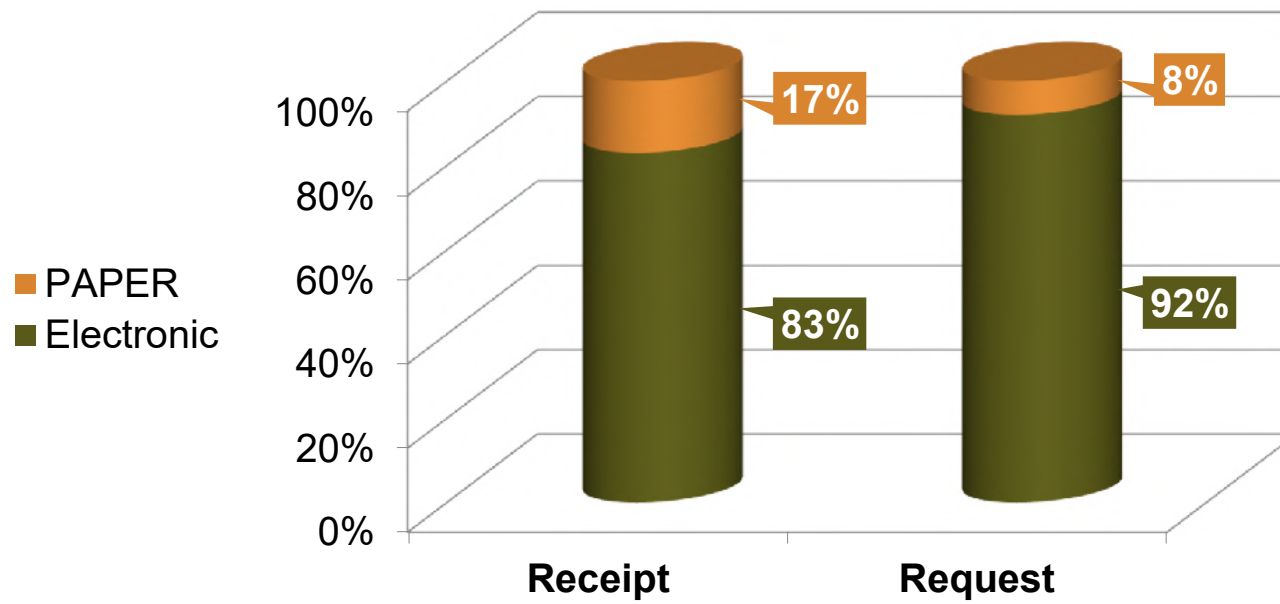


eTAP Improvement Timeline





The journey is far from done!



INDIANA E-TRANSCRIPT PROGRAM: STATUS REPORT

PESC Data Summit & Symposium
December 8, 2020

Ken Sauer, Ph.D.
Senior Associate Commissioner and Chief Academic Officer
Indiana Commission for Higher Education (ICHE)



OVERVIEW

- ▶ Started in 2005 by ICHE and made statutory in 2013
- ▶ Includes both:
 - ▶ High School to College (HS2C)
 - ▶ College to College (C2C)
- ▶ Funded by state: full support for HS2C, partial for C2C
- ▶ Built on PESC e-Transcript standards, powered by Parchment
- ▶ Aims at exchanging transcripts as XML data files



HS2C

- ▶ 2 million sent since 2005 via Parchment platform
- ▶ 200,000 transcripts sent annually
- ▶ Free to all HS students, recent alums
- ▶ Common statewide HS XML schema built on PESC standards
- ▶ 100% sent as PDFs (virtually no paper transcripts), with
 - ▶ 75% also sent as XML data through Parchment
 - ▶ Naviance and Common App not helpful in supporting XML



INDIANA HS BY SIS VENDOR

SIS Vendor	Number of All High Schools	Percent of All High Schools	Cumulative Percent
1 PowerSchool	165	41.0%	
2 Skyward	88	21.9%	
3 Harmony	80	19.9%	82.8%
4 RDS	20	5.0%	
5 Synergy	19	4.7%	
6 Infinite Campus	13	3.2%	95.8%
7-13 Others	17	4.2%	100.0%
Total	402	100.0%	

C2C

- ▶ Common statewide college XML schema built on PESC standards
- ▶ Desire for C2C exchange driven by both:
 - ▶ Multi-directional transfer of college students
 - ▶ Indiana's large dual credit initiative
- ▶ Breakthrough last year: Ivy Tech licenses Parchment
- ▶ Community college send/receive, then university send/receive



CONCLUSIONS & STATE PERSPECTIVE

- ▶ Benefits of exchanging transcripts as XML data files:
 - ▶ Processing applications more efficiently & quickly
 - ▶ Incorporating data into SIS to facilitate research
- ▶ Embracing PESC standards facilitates inter-state exchange of transcripts
- ▶ E-Transcript infrastructure a step toward CLR and digital credentials:
 - ▶ Indiana's participation in the AACRAO-NASPA-NILOA Phase II CLR project
 - ▶ Parchment Award product



CONTACT INFO

Ken Sauer, Ph.D.

Senior Associate Commissioner and Chief Academic Officer
Indiana Commission for Higher Education

Office: (317) 232-1090

Cell: (317) 908-0536

E-mail: ksauer@che.in.gov



Past Will Not Be Prologue to Our Future

The Transcript:

Foundationally is an administrative tool

Originated as an internal means for tracking...

Repurposed as a reporting device

Codified for interinstitutional understanding

Digital expression for exportability

Shibboleth Society or "Inside baseball" phenomenon!

JOHNS HOPKINS UNIVERSITY															
Student Name		Student ID	Date of Birth		JHU Degree and Date Conferred				Date Issued	Official Transcript					
Last Name, First Name		XXXXXX	MM/DD		Bachelor of Arts 08/26/2009 Master of Science in Education 12/29/2010 Doctor of Philosophy 05/24/2013				MM/DD/YY	Page 1 of 2					
DIV	DEPT	CRSE #	CRSE TITLE	INSTRUCTOR	GRADE	CREDIT	GPA	DIV	DEPT	CRSE #	CRSE TITLE	INSTRUCTOR	GRADE	CREDIT	GPA
Zanvyl Krieger School of Arts & Sciences				Bachelor of Arts				School of Education				Master of Science in Education			
Fall 2008		Transfer & Exam Credit				4.0 0.0		Fall 2009		Educational Studies					
		Advanced Placement Exam						ED LRSP 600.600		Course Title		E.Last B 3.0 0.0			
								ED LRSP 600.600		Course Title		E.Last A 3.0 0.0			
								TERM GPA: 0.0		TOTAL:		6.0 0.0			
Fall 2008		Political Science				E.Last B- 3.0 0.0		Spring 2010		Educational Studies					
AS	PSCI	100.100	Course Title	E.Last	A	3.0	0.0	ED LRSP 600.600		Course Title		E.Last A 3.0 0.0			
AS	PSCI	100.100	Course Title	E.Last	A+	3.0	0.0	BU ENTR 700.700		Course Title		E.Last A- 3.0 0.0			
EN	MATH	200.200	Course Title	E.Last	A+	2.0	0.0	TERM GPA: 0.0		TOTAL:		6.0 0.0			
AS	PSCI	100.100	Course Title	E.Last	B	1.0	0.0								
AS	PSCI	100.100	Course Title	E.Last											
		TERM GPA: 0.0				TOTAL:		12.0 0.0							
Interession 2009		International Studies				E.Last A- 2.0 0.0		Summer 2010		Stony Brook University					
AS	PSCI	100.100	Course Title	E.Last	A	2.0	0.0	ED LRSP 000.000		Course Title		TOTAL:		TR 3.0 0.0	
		TERM GPA: 0.0				TOTAL:		2.0 0.0		TERM GPA: 0.0		TOTAL:		3.0 0.0	
Spring 2009		International Studies				E.Last A 3.0 0.0		Fall 2010		Educational Studies					
EN	ECON	200.200	Course Title	E.Last	A	3.0	0.0	ED LRSP 600.600		Course Title		E.Last B 3.0 0.0			
PY	MUSC	300.300	Course Title	E.Last	A-	2.0	0.0	ED LRSP 600.600		Course Title		E.Last A 3.0 0.0			
AS	PSCI	100.100	Course Title	E.Last	A-	2.0	0.0	TERM GPA: 0.0		TOTAL:		6.0 0.0			
AS	PSCI	100.100	Course Title	E.Last	W	0.0	0.0	CUMULATIVE GPA: 0.0		TOTAL CREDITS:		21.0 0.0			
AS	PSCI	100.100	Course Title	E.Last	A	3.0	0.0	MSE in Educational Studies Degree Conferred 12/29/2010		Thesis: "The evolution of higher education in Ghana"					
		TERM GPA: 0.0				TOTAL:		8.0 0.0							
Summer 2009		International Studies				E.Last A- 3.0 0.0		Paul H. Nitze School of Advanced International Studies		Doctor of Philosophy					
AS	PSCI	100.100	Course Title	E.Last	A	3.0	0.0	Fall 2011		International Relations					
		TERM GPA: 0.0				TOTAL:		3.0 0.0		SA ECON 800.800		Course Title		E.Last B 3.0 0.0	
		CUMULATIVE GPA: 0.0				TOTAL CREDITS:		120 0.0		SA ECON 800.800		Course Title		E.Last A 3.0 0.0	
		BA in International Studies Degree Conferred 08/26/2009				Graduated with General Honors				SA ECON 800.800		Course Title		E.Last A- 3.0 0.0	
										TERM GPA: 0.0		TOTAL:		6.0 8.0	

THIS INFORMATION HAS BEEN RELEASED IN ACCORDANCE WITH THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA) AND CANNOT BE FURTHER DISCLOSED TO ANY OTHER PARTY WITHOUT THE PRIOR WRITTEN CONSENT OF THE STUDENT.

The original transcript is in electronic PDF form. A printed copy of this transcript is not an original and is not considered to be an official transcript.

Thomas Black
Thomas Black, University Registrar

What Was The Worldview of the Academy

(that is changing or about to change)?

- Administrators needed to see evidence of completion
 - Degree auditing
 - Official notes, statuses and coded remarks
 - Intra/Inter-institutional Interoperability
- Academics needed to draw inferences
 - Time with the material
 - Order and sequence of preparation
 - Grades as signals of engagement, mastery & capacity
 - Broadly evidentiary



Why It Doesn't Work Any More.

Expense of Education; Multiple Stakeholders; Lifelong Phenomenon;
Technology & Emphasis on Specific Skill Development

The Record is arguably:

- Incomplete—not comprehensive
- Difficult to understand—not comprehensible
- Not necessarily market relevant
- Not evidentiary
- Not Accessible



What Is Being Asked For Now?

Pedagogically Inclusive

Learner-centric
 claims
 narrative
 self-sovereign

Instrumentality
 credentials

Portable
 standards

Fungible and Interconvertible
 machine-readable

Digitally Verifiable



Why Is This Hard To Do? Moving Value Targets.

2016

- 1) Complex problem solving
- 2) Coordinating with others
- 3) People management
- 4) Critical thinking and analysis
- 5) Negotiation
- 6) Quality control
- 7) Service orientation
- 8) Judgment and decision making
- 9) Active listening
- 10) Creativity, originality and initiative

2020

- 1) Complex problem solving
- 2) Critical thinking and analysis **+2**
- 3) Creativity, originality and initiative **+7**
- 4) People management **-1**
- 5) Coordinating with others **-3**
- 6) Emotional intelligence **new**
- 7) Judgment and decision making **+1**
- 8) Service orientation **-1**
- 9) Negotiation **-4**
- 10) Cognitive flexibility **new**

Future?

2025

- 1) Analytical thinking and innovation **new**
- 2) Active learning & learning strategies **new**
- 3) Complex problem solving **-2**
- 4) Critical thinking and analysis **-2**
- 5) Creativity, originality and initiative **-2**
- 6) Leadership and social influence **new**
- 7) Technology use, monitoring and control **new**
- 8) Technology design and programming **new**
- 9) Resilience, stress tolerance and flexibility **new**
- 10) Reasoning, problem solving and ideation **new**

World Economic Forum, *The Future of Jobs (2025)*

What Keeps You Up All Night?

Is it...

What & how is being taught, learned?

What is recorded & why?

Data or meta data?

Credentials?

Standards?

Platforms?

Algorithms?

Digital ledgers?

Stakeholders?

Stay tuned to the rest of the Summit & Symposium!

More resources

[AACRAO Web Site](#)

[AACRAO Research and Publications](#)

[Electronic Records & Data Exchange](#)

- PDF Best Practices
- Technical Resources
- CLR Resources
- Paper vs. Electronic cost calculator

speede-g@vt.edu SPEEDE larger community Listserv [Subscribe](#)

SPEEDE@AACRAO.ORG for questions and testing

[Postsecondary Electronic Standards Council](#)

- Approved Standards
- Implementation Guides for EDI and XML



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The Academic High School and College
Transcript

Rick Skeel rskeel@ellucian.com

Matt Bemis wbemis@usc.edu

Monterey Sims monterey.sims@phoenix.edu

Ken Sauer ksauer@che.in.gov

Thomas Black thomasb@paradigm-corp.com

**DATA SUMMIT &
SYMPOSIUM**



Thank You!

– CONNECTING THE – NEW DIGITAL ECOSYSTEM

EDI vs. JSON vs. PDF vs. XML

Jason Weaver, Vice President of Product, Parchment

Matt Bemis, Associate Registrar, USC

Ben Harper, Manager, Software Development and Architect, OCAS

Monterey Sims, Director Admissions and Evaluation
University of Phoenix

Tuesday, December 8, 2020 3 pm – 4 pm EST

**DATA SUMMIT &
SYMPOSIUM**



Agenda

- Review formats (The What)
- Contrast and Compare (The How)
 - Best fit
 - Using multiple formats
 - Structured data
- Industry trends (The Why)
 - What is happening now
 - Looking in the crystal ball
 - Importance of increasing adoption

JavaScript Object Notation (JSON)

- JSON is short for JavaScript Object Notation
- Text format that employs key/value pairs
- Hierarchical in nature

The logo for JSON, featuring the word "JSON" in a bold, blue, sans-serif font, enclosed within a pair of large, grey, curly braces. The text has a subtle drop shadow effect.

JavaScript Object Notation

"JASON" "J-S-O-N" "JAY-SAWN"

How do you pronounce JSON?

Douglas Crockford of Yahoo, JSON creator, sets the record straight.

Listen to his pronunciation here:

<https://www.youtube.com/watch?v=zhVdWQWKRqM>

JSON-XML comparison

JSON

```
{"employees":[
  { "firstName":"John", "lastName":"Doe" },
  { "firstName":"Anna", "lastName":"Smith" },
  { "firstName":"Peter", "lastName":"Jones" }
]}
```

XML

```
<employees>
  <employee>
    <firstName>John</firstName>
  <lastName>Doe</lastName>
  </employee>
  <employee>
    <firstName>Anna</firstName>
  <lastName>Smith</lastName>
  </employee>
  <employee>
    <firstName>Peter</firstName>
  <lastName>Jones</lastName>
  </employee>
</employees>
```

JSON-LD

Linked Data

Linked Data empowers people that publish and use information on the Web. It is a way to create a network of standards-based, machine-readable data across Web sites. It allows an application to start at one piece of Linked Data, and follow embedded links to other pieces of Linked Data that are hosted on different sites across the Web.

JSON-LD is a lightweight Linked Data format. It is easy for humans to read and write. It is based on the already successful JSON format and provides a way to help JSON data interoperate at Web-scale. JSON-LD is an ideal data format for programming environments, REST Web services, and unstructured databases.

JSON-LD

```
{
  @context: "https://credreg.net/ctdl/schema/context/json",
  @id: "https://credentialengineregistry.org/resources/ce-1abb6c52-0f8c-4b17-9f89-7e9807673106",
  @type: "ceterms:CredentialOrganization",
  ceterms:ctid: "ce-1abb6c52-0f8c-4b17-9f89-7e9807673106",
  ceterms:duns: "007424644",
  ceterms:fein: "351150631",
  - ceterms:name: {
      en: "Ivy Tech Community College of Indiana"
    },
  + ceterms:owns: [...],
  ceterms:image: "https://www.ivytech.edu/images/ivy-tech-2015-logo_header.png",
  ceterms:opeID: "009917",
  - ceterms:offers: [
    "https://credentialengineregistry.org/resources/ce-7533f794-87d4-4268-8f14-a8ed7b402ac0",
    "https://credentialengineregistry.org/resources/ce-26028070-1851-44dc-b3bd-4e36cab80f60",
    "https://credentialengineregistry.org/resources/ce-e73de3b3-bbb3-4b74-9d20-6602b5972c70",
    "https://credentialengineregistry.org/resources/ce-0e3ef525-1cec-4cc8-bf65-62fa101585f5",
    "https://credentialengineregistry.org/resources/ce-cb32d1cf-482e-4e2a-8e11-12e9e10c60e2",
    "https://credentialengineregistry.org/resources/ce-9d99809e-07cb-4520-8d09-abb6f251f2d9",
    "https://credentialengineregistry.org/resources/ce-2bd1028e-6c20-4758-a87b-5787c3cb31ba",
    "https://credentialengineregistry.org/resources/ce-924c1d80-5b42-4d20-ab5f-ed67b26324b",
    "https://credentialengineregistry.org/resources/ce-c7bbe762-028c-4a55-9c9c-5222a1f9425b",
    "https://credentialengineregistry.org/resources/ce-ed6a602c-7ab0-46d2-a208-313e744c5592",
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    "https://credentialengineregistry.org/resources/ce-84afaea0-2219-4827-9d64-56eadc976a6b",
    "https://credentialengineregistry.org/resources/ce-9ddb3bdb-432b-432d-97e3-b91098174ee5",
    "https://credentialengineregistry.org/resources/ce-50ae4b48-ff79-4ff3-8cb2-94c723b9f478",
    "https://credentialengineregistry.org/resources/ce-e3dff506-58ef-4ab9-8aa9-d03bc0f8b6e7",
    "https://credentialengineregistry.org/resources/ce-eacc9f42-4419-4873-8d1d-55ac4c230ea9",
  ]
}
```

Portable Document Format (PDF)

History & Overview

- Released by Adobe Systems 1993
- Cooperated w/ISO for standardized subsets
- Open standard in 2008
- Image vs. data
- Sending: extract a data from SIS spool to PDF
- Receiving: determine how to get data to SIS
- Authentication
- Encryption
- Attachments at document or page-level

Challenges

- Email directed to spam filters
- Bad email addresses
- Security features can cause issues for uploading, expirations, etc.

Benefits

- Familiar - mirror official paper transcript
- Quick implementation
 - Supported by a variety of vendors
 - Requires little technical knowledge
- Affordably deliver transcripts

PDF best practices

- Utilize security within the PDF according to the audience receiving it
- Use secure transmission methods
- Keep it digital
- Consider batching
- Explore OCR
- Coordinate with primary trading partners



Electronic Data Interchange (EDI)

- The AACRAO Standardization of Postsecondary Education Electronic Data Exchange Committee (SPEEDE) began developing national standard in 1989 (initial format for the College Transcript)
- US Department of Education's National Center for Education Statistics (NCES) began developing a national standard during same timeframe (K-12)
- Both groups worked with the American National Standards Institute (ANSI) Accredited Standards Committee (ASC) X12 to develop standard formats (ANSI ASC X12 Transaction Set 130 for the Student Educational Record (Transcript) approved in early 1990's)
- Adopted as approved PESC (P20W Education Standards Council) standards around 2008 (maintained by Education Record User Group (ERUG), Current version is TS130 Version 4.0, May 2009)

EDI format

- Delimited – like a CSV file
- Named “Segments”
- Mixture of Optional and Required fields and segments
- Multiple Occurring and Nested Segments

EDI format example

SES|200507|1|||Fall 2005;
SUM|U|4|N|||1|||3.33;
CRS|R|U||1|01|B+|||82|0014.000|3.33||CECN|801|Principles of Eng Economics;
SES|200601|1|||Winter 2006;
SUM|U|U|N|||1|||3.67;
CRS|R|U||1|01|A-|||3.67||CVL|425|Hydrology and Hydraulic Eng;
SES|200609|1|||Fall 2006;
SUM|U|U|N|||1|||3.67;
CRS|R|U||1|01|A-|||3.67||CVL|324|Geotech Properties of Soil I;

Delimiter

Named Segment

Empty – i.e. Optional Fields

Segment Terminator

EDI considerations

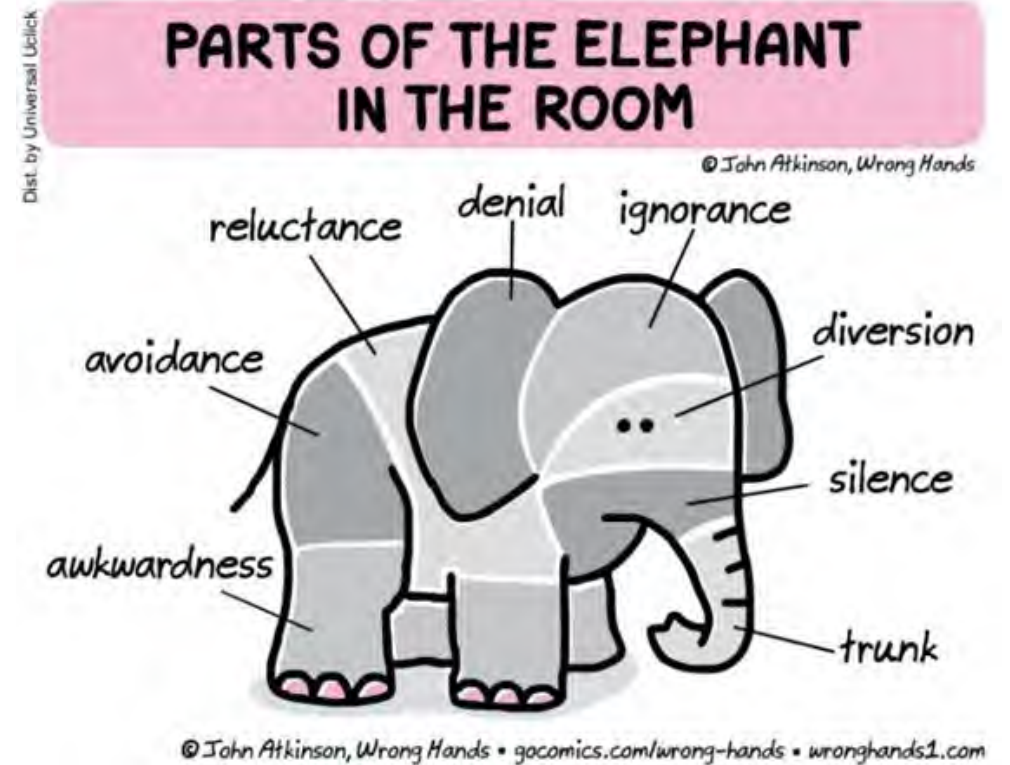
- Capabilities of the organization
 - IT resources available
 - Interest level of senior management
 - Compatibility with SIS
- Cost/benefit analysis
 - In house vs. vendor sponsored solution
 - Efficiency gains
 - Process reengineering
- Strategic goals
 - Preferred trading partner methodologies
- Technical complexity limits some institutions
- Need for translation software or SIS compatibility to recognize full benefits
- Data mapping can be cumbersome
- Perception of complexity or lack of IT resources
- Many small important setup details, but it's only done once

EDI Process Benefits

- Standards are consistent
- Resources are available
- Processes can be batched and automated
- Large network of institutions using standard
- Efficient transmission of data
- State/Province and district initiatives
- Sender and receiver are identified
- Automated acknowledgements
- Secure transmission
- Costs decrease
- *Speede* delivery 😊

Best fit?

- Identify the problem to be solved
- Determine guiding principles
- Identify potential solutions
- Validate solution



EDI to XML crosswalk

- Support interoperability among users of different PESC Standards

EDI Pos	EDI Element/ Name	EDI Value ✓	XML Value	XML Position
MKS Loop				
2-306	MKS/Marks Awarded	NA	NA	
2-306	MKS01/ Mark Code Type	1 School Mark 2 Department Mark 3 Final Mark 4 Supplemental Mark 5 Mid-term Mark 6 Six-week Mark 7 Examination Mark 8 Work Experience Mark 9 Nine Weeks' Mark 10 Mark at Time of Withdrawal based on the American Medical Colleges Admissions Services (AMCAS) grade scale.	Did not find	
2-306	MKS02/ Academic Grade Qualifier		Did not find	
2-306	MKS03/ Academic Grade		Did not find	
2-306	LUI/Language Use (Language of Examination)	NA	NA	
2-306	LUI01/ Identification Code Qualifier (Language Code Qualifier)	LD NISO Z39.53 Language Codes LE ISO 639 Language Codes	Did not find	
2-306	LUI02/ Identification Code (Language Code)		Did not find	
2-306	LUI03/ Description (Language Name)		Did not find	
2-306	LUI04/ Use of Language Indicator	1 Language of Instruction 2 Language of Examination 3 Language in which Examination is Written	Did not find	
2-306	LUI05/ Language Proficiency Indicator		Did not find	

<https://www.pesc.org/pesc-approved-standards-1.html>

Multiple formats and structured data

- EDI and JSON and PDF and XML, Oh My!
- Each has their own benefits – the key is **structure** using a **standard**
- Adoption of one format or another may be influenced by:
 - Capabilities of your technical team
 - Capabilities of your existing Student Information System
 - Capabilities of your partners with whom you will exchange
- You do you.

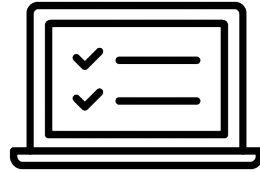
Variability among implementations

- PESC Implementation Guides are not law/gospel
 - Control of content and format lies with the Institution
- When exchanging with many partners, you may need to learn their ways
- Transcripts not just grades – reflect the uniqueness of the institution
- Varied use of NoteMessages and UserDefinedExtensions
- It is challenging to manage
 - This is a core value proposition of exchanges, hubs and related vendors/partners

What's happening now?

- OCAS Initiatives
- USC Experience
- UOPX Case Study

About OCAS - Our Products and Services



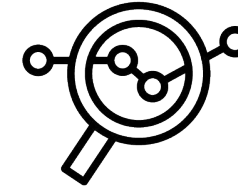
Domestic Application Service

- Apply
- Mobile App
- College-Branded Application
- Electronic Transcript Exchange
- Partner Portal



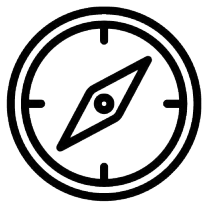
International Application Service

- Applicant Portal
- College Portal
- Agent Portal
- SIS Integration



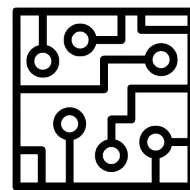
Data and Insight Services

- Applied Research
- Business Intelligence
- Data Warehouse



Learner Experience Services

- Ontariocolleges.ca Experience
- Tier 1 Support
- Outbound Calling/Marketing



Technology Services

- Website Design and Development
- Managed Cloud Hosting
- IT and Project Management Consulting



Finance Services

- Bookkeeping and General Ledger
- Payroll
- Accounting



Service Innovation

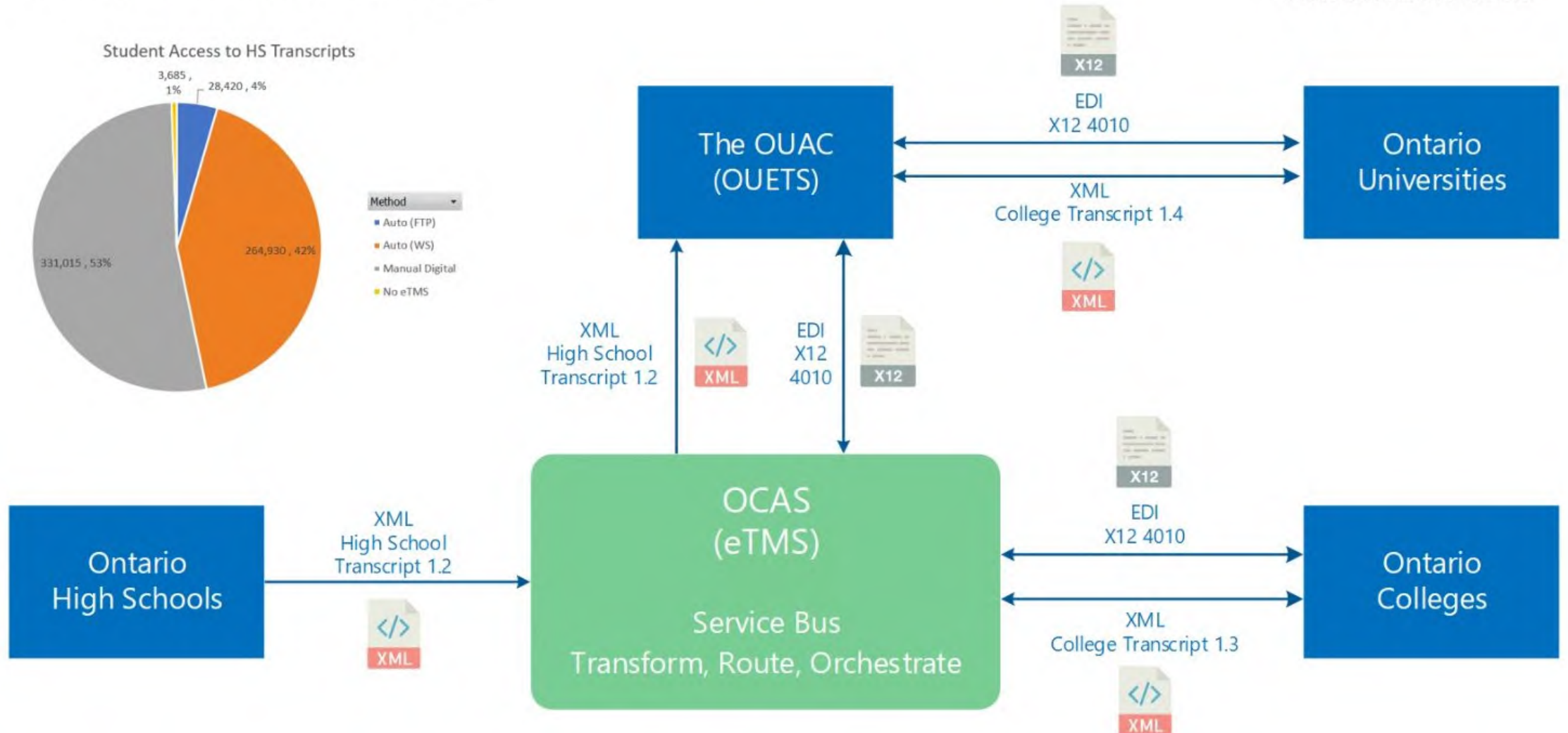
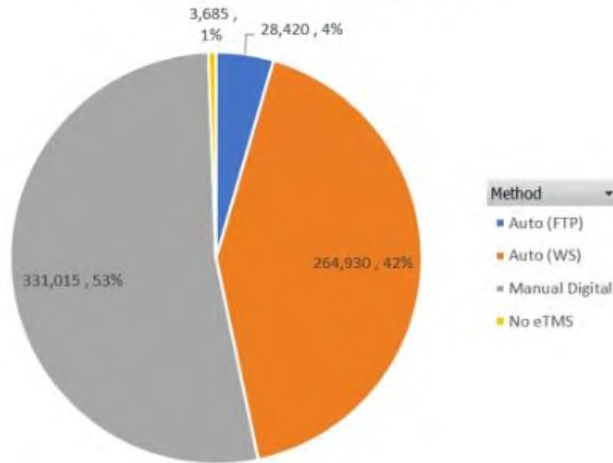
- Apprenticeship Modernization
- Credential Modernization
- Continuous Learning Platform

Transcript Exchange in Ontario

20 Public Universities (502,000 enrolled)
 24 Public Colleges (273,000 enrolled)
 876 High Schools (630,000 students)

Retiring the EDI Format
Colleges: 2021
Universities: 2022

Student Access to HS Transcripts



The EDI experience at USC

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\$avings

- 25-35% savings for senders
- 65-75% savings for receivers
- Savings contingent on volume, partners and level of automation
- [Cost Savings Calculator](#)



Microsoft Excel
Worksheet

University of Phoenix Case Study



University
of Phoenix®



Costs and volume by method

Requests

Volume 1 yr = ~60, 000

Cost by request method

(not including Vendor service fee(s))

- Electronic PDF Request
 - Average Institution Fee \$4
- EDI
 - Average Institution Fee \$0
- PAPER
 - Average institution Fee \$7.69

Electronic Partnerships = 4821
(requesting & receiving)

- Requests
 - Electronic 92% vs. Physical 8%
 - SPEEDE Server (EDI TS146) 2%
 - Institution/Vendor Portal 90%
 - USPS/paper 8%
- Receipt
 - Electronic 83% vs. Physical 17%
 - XML <1%
 - EDI 10%
 - PDF 73%
 - PAPER 17%

The WHY!



Time to Fulfill Request

- Electronic (PDF, EDI) 1.5 days
- PAPER 17 days



Time to Process Transcript Received

- PAPER 3 days
- PDF 1-2 days
- EDI/XML SAME DAY!!!



Rework/Student Experience

- PDF/PAPER errors 5%
- EDI exceptions 1%



Results of adoption

EDX benefits to the student...

- Timeliness
- Accuracy
- Security

EDX benefits to institutions...

- Decreases risk of exposing PII
- Decreases acceptance of fraudulent credentials
- Decreased operating cost
- Reduces errors
- Improves partnerships
- Improve efficiency

Evolution of PESC standards

- PESC Standards continue to evolve in formats and content
 - Robust but responsive process via Standards Development Forum
- Extremely diverse network of institutions with different areas of study, geographies, student bodies
- Rapidly growing number of consumers of transcripts outside Post-Secondary Education (employers especially)
- Evolution of Credential and Learner record ownership (Consent)
- Interoperability with other standards beyond PESC facilitates student mobility

Future

- www.aruccnationalnetwork.ca
Student Mobility across Canada



- CanPESC Common Digital Layout Working Group

– CONNECTING THE – NEW DIGITAL ECOSYSTEM

EDI vs. JSON vs. PDF vs. XML

Jason Weaver, Vice President of Product, Parchment

jweaver@parchment.com

Matt Bemis, Associate Registrar, USC

wbemis@usc.edu

Ben Harper, Manager, Software Development and Architect, OCAS

bharper@ocas.ca

Monterey Sims, Director Admissions and Evaluation, University of Phoenix

monterey.sims@phoenix.edu

THANK YOU!

**DATA SUMMIT &
SYMPOSIUM**

