

# PESC EdUnify Harmonizing and Harnessing Electronic Services

EUNIS 2010 - Warsaw Poland





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# Outline

- Celebrating Chopin and his Contribution to Music, Art and Innovation
- EdUnify is Not...
- What is EdUnify?
- History of the Project
- Status, Future activity?
- How to get involved (contribute)?
- Q & A

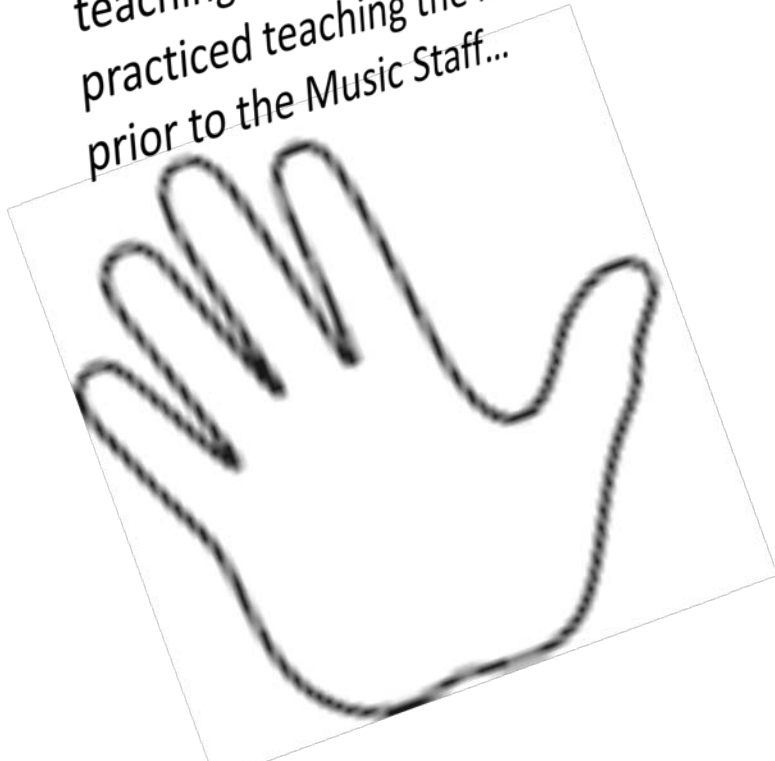


# Music

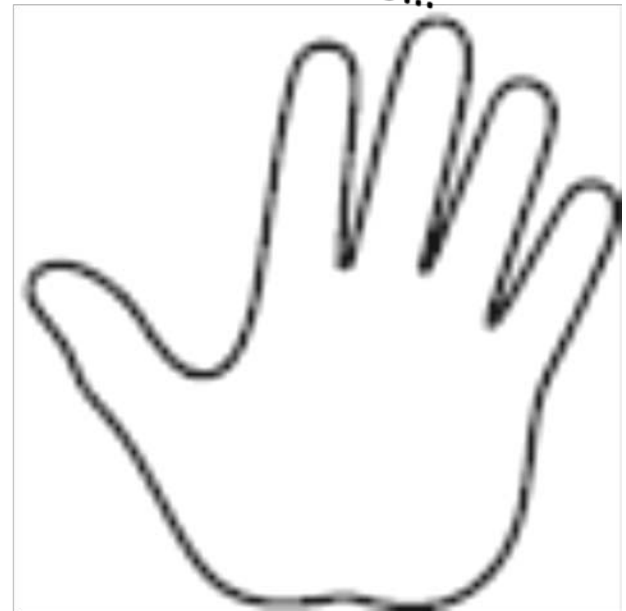
## The Abstraction of Notes and Scales



We are limiting how technology can enable teaching and learning the same way Monks practiced teaching the liturgy with music prior to the Music Staff...



Celebrating the great talent of Chopin and how he applied his skills using the common standard of the Music Staff developed in the 10<sup>th</sup> Century by Guido of Arezzo...



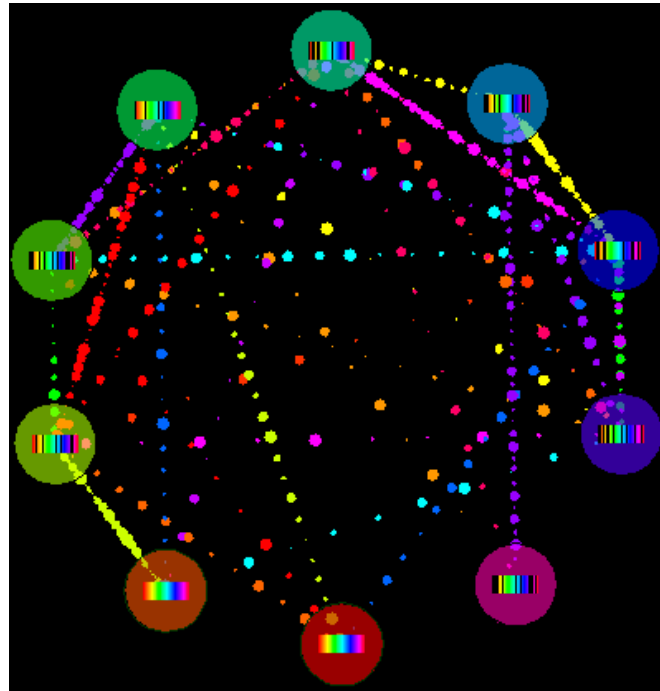
# Why don't we all do things the same way?

Kilometers	Learning Outcomes	Miles	Meters
HTML	110 Volts	Domain Naming	Course Units
URL	+48 22-55 442230	Birth date	Grade Point Averages
8bit, 16bit, 32bit, 64bit, 128bit	Surname		
Celsius	Fahrenheit	Grade Level	Program of Study

# Can we Align Values? **Chaos** or **Control**

- Innovation
- Do it now
- Different starting points
- Different ending points
- Random
- Decentralized
- Trust Assertions
- Fill in the boxes
- Gaps
- Compromises
- Common methods
- Measures
- Centralized
- Trust Assumptions

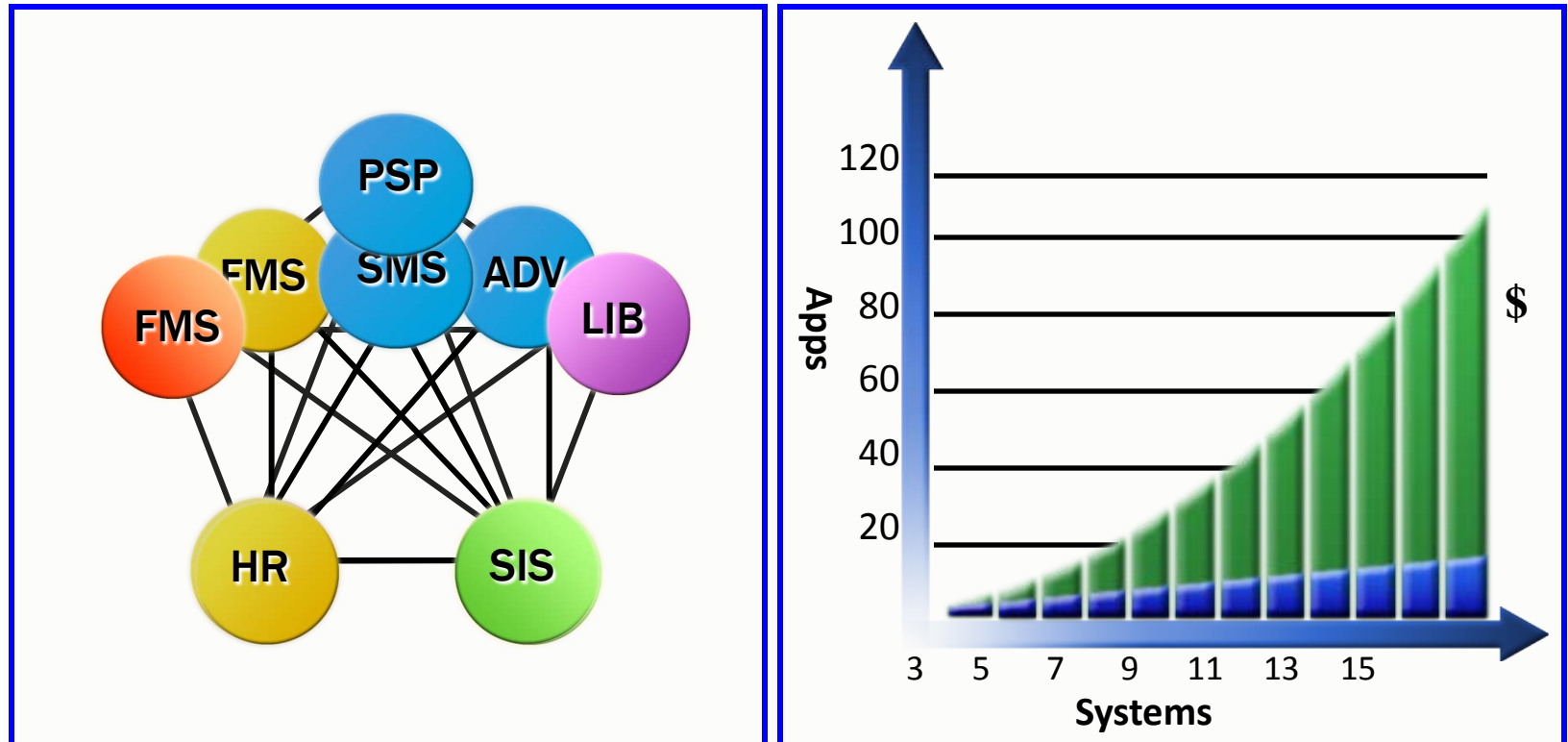
# mo·bil·i·ty



# com·merce

# Economics of Data Management

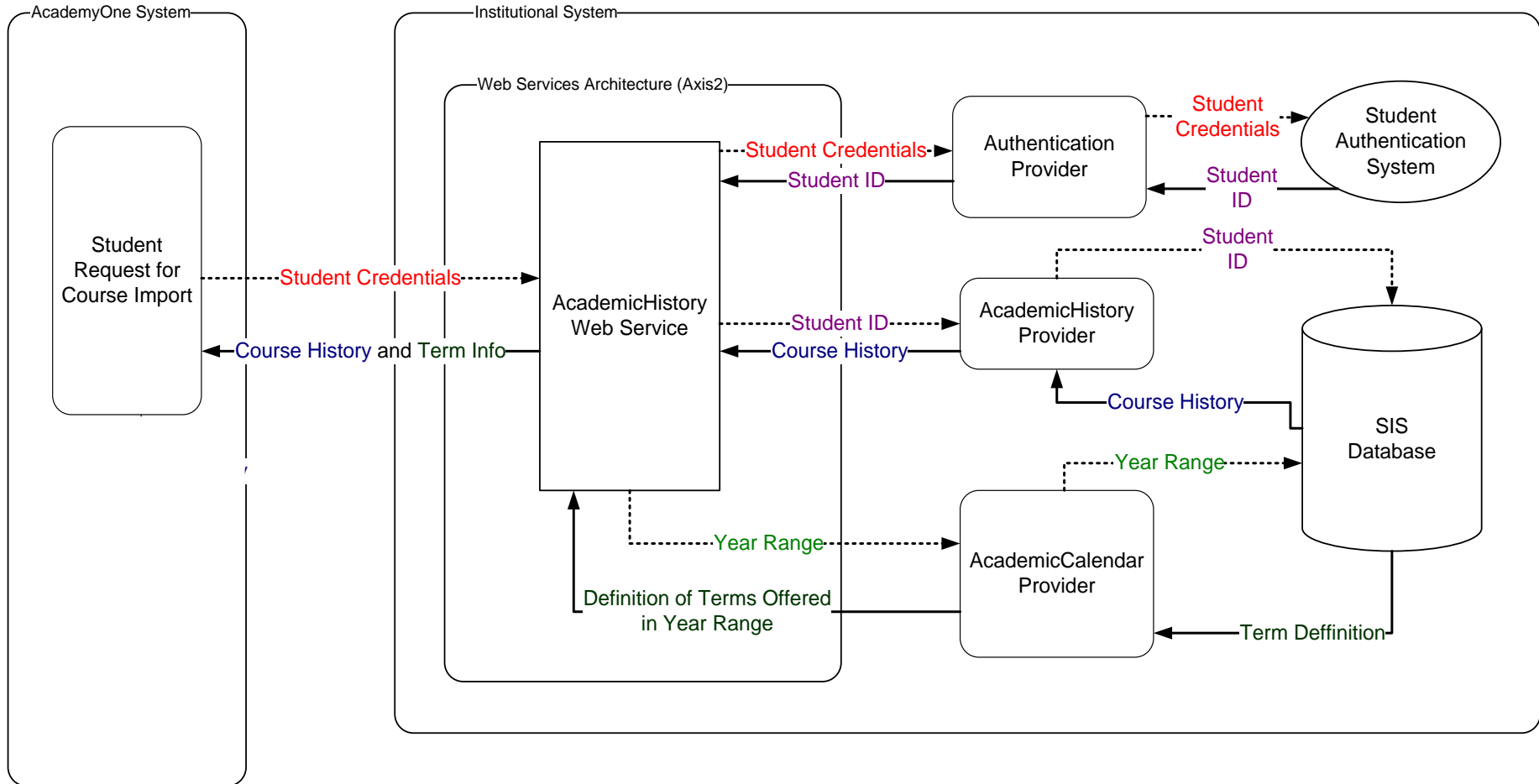
**“For every dollar spent on Enterprise Applications, an additional \$4 - \$5 is spent on programmatic adaptation and integration of those applications into the existing Enterprise environment.”**



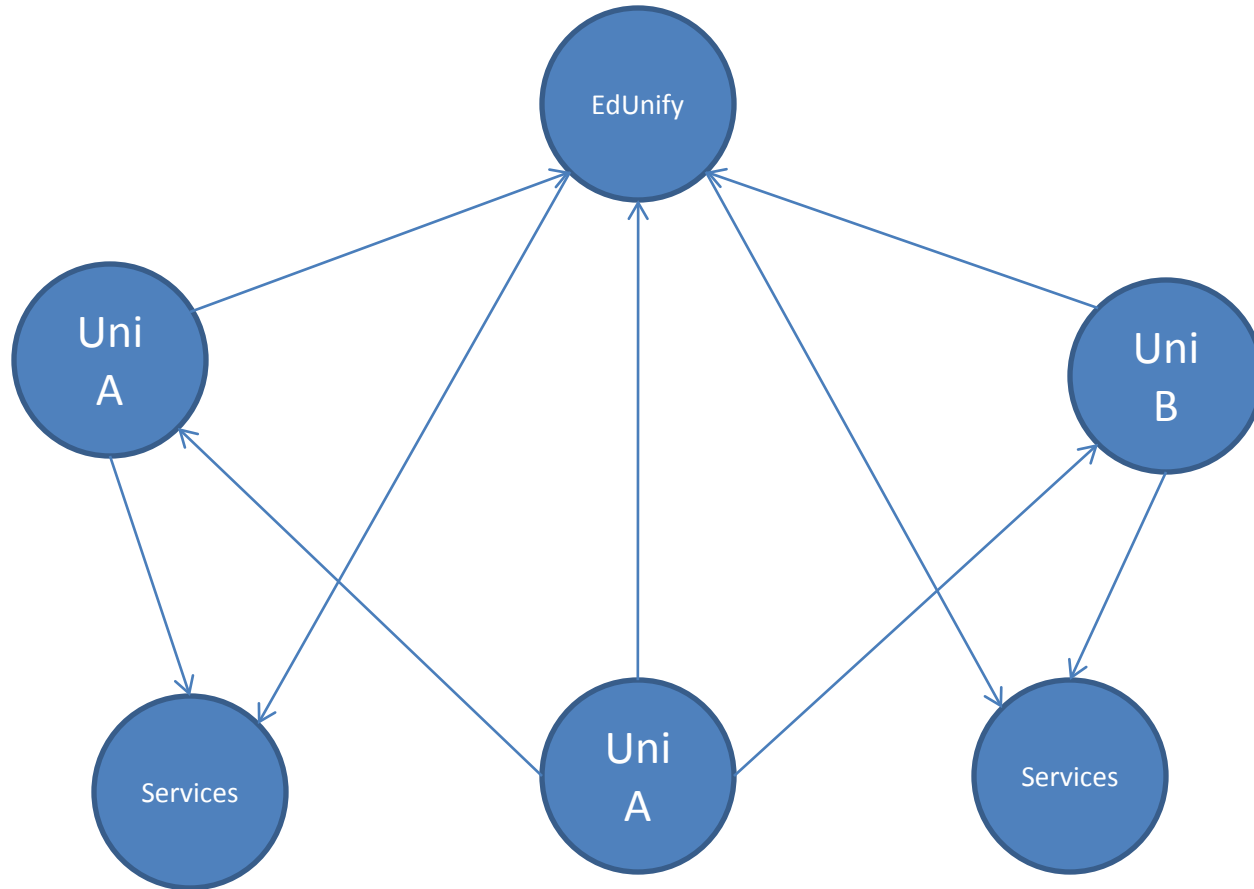


# Sample Web Service

## Student Academic History



# Sample Network



# What are electronic data standards?

- Specifications and guidance designed either on a voluntary basis or by act of governance
- The level of adoption and uniformity can vary greatly by institution, capability and interest
- Applying common practices and methods to satisfy business and technical drivers
- May develop from current practices or evolving ones organized to align efforts

**de facto**

**de jure**

# EdUnify Is NOT

- Does not answer your phone, take messages or wake you in the morning
- Does not create a database
- Does not make standards
- Does not change software in place
- Does not print or deliver transcripts or diploma supplements

# What is EdUnify?

- A registry and lookup service shared by the education community
- Recording services in a common format to enable search and lookup like DNS, Email Name Resolution
- A White/Yellow Pages for automated services rendered by our community

# EdUnify Is...

- Complimentary to other initiatives like Common Data Standards
- Will help denote how existing/planned standards can be employed to harmonize systems, components, interfaces and services

# How is EdUnify different from other Standards Initiatives?

- Where can specifications and the details be found today?
- What motivates us to align with common specifications?
- How can we initiate adoption of common practices and harmonize outcomes?
- Why should we care about this?
- When will we adopt common, reusable methods?

# The Implications

- Spending more on external interfaces and integration
- Increased complexity, finding services and specifications
- Having less control over the semantics of data
- Technology is not the only obstacle
- The Will to share and overcome self interests



# Why do we need EdUnify Now?

- Reuse: Cell Phone
- Reduce complexity: Before Google
- What do we do with Common Data Standards? Vocabularies, Tagging
- Expanding Adoption by Aligning Incentives and Rewards, Self Interests
- Creating the Virtual Learning Environments and Business Processes for the 21<sup>st</sup> Century

# How will it Work?

- Proof of Concept
- Beta, Participation
- Sustainability
- Vocabulary, Semantics, Tagging, Ontology
- Auto Lookup and Search
- Membership Model
- Guest, Authenticated, Gateway, Registrars

# What are the Primary Services?

- Web Service and Rest Registry service
- Users and program search service
- Alert notification service
- Annotation and Ontology service
- Feedback and rating service
- Monitoring service



# https://demo.edunify.pesc.org

The screenshot shows a Windows Internet Explorer browser window displaying the EdUnify website. The browser's address bar shows the URL <https://demo.edunify.pesc.org/>. The website has a blue header with navigation links: [View the Demo](#), [Getting Started](#), [About Us](#), [Useful Links](#), [Contact Us](#), and [API Docs](#). There are also [Sign up](#) and [Sign in](#) buttons. Below the header is a search bar and a navigation menu with [Home](#), [Services](#), [Register a Service](#), and [Providers](#). The main content area features a central banner: "EdUnify: the digital marketplace of Education Web Services across the globe." Below this banner is a status bar: "EdUnify currently has **10 services**, **11 service providers** and **19 members**". The page is divided into several sections: "Latest Activity" on the left, "Discover" and "Register" in the center, "Annotate" and "Monitor" in the center, "Site Announcements" on the right, and "Latest Services" on the right. The browser's taskbar at the bottom shows the Windows logo, Google search bar, and several open applications including Microsoft PowerPoint and EdUnify - Home - W... The system tray shows the time as 5:26 AM.

EdUnify - Home - Windows Internet Explorer provided by Comcast

<https://demo.edunify.pesc.org/>

File Edit View Favorites Tools Help

Google Search Share Sidewiki Bookmarks Check Translate AutoFill DKMold...

Norton Cards & Logins

Favorites Philadelphia Phillies Sprin... Suggested Sites Web Slice Gallery

EdUnify - Home Frédéric Chopin - Wikipedi...

View the Demo Getting Started About Us Useful Links Contact Us API Docs

Sign up Sign in

Search: Go! Home Services Register a Service Providers

Home »

**EdUnify: the digital marketplace of Education Web Services across the globe.**

EdUnify currently has **10 services**, **11 service providers** and **19 members**

**Latest Activity**

Last 7 days

Bill Hollowsky **joined** the EdUnify Registry

Older

MobilityService has been **updated** (51 updates from latest WSDL). See [changelog entry](#).

MobilityService has been **updated** (51 updates from latest WSDL). See [changelog entry](#).

AdvancedZipInfo has been **updated** (57 updates from latest WSDL). See [changelog entry](#).

**DISCOVER**

- Find the right Web Service
- Powerful search and filtering
- Information from providers and community

[More info](#)

**REGISTER**

- Easily register Web Services
- Instantly available to everyone
- Providers can advertise, describe and monitor their Services

[More info](#)

**ANNOTATE**

- Anyone can describe and annotate

**MONITOR**

- Services change and get outdated

**Site Announcements**

**EdUnify has been upgraded**  
By [Tod Jackson](#) (7 days ago)  
[More](#)

**Latest Services**

[PersonManagementServiceSyncService](#)

[AcademicHistoryService](#)

[AcademicHistoryService](#)

[AcademicHistoryService](#)

[MobilityService](#)

[More](#)

<https://demo.edunify.pesc.org/>

Internet | Protected Mode: On 100%

Google Microsoft PowerPoi... EdUnify - Home - W...

5:26 AM

# <https://demo.edunify.pesc.org>

*"Web Services are hard to find"*

## **DISCOVER**

- Find the right Web Service
- Powerful search and filtering
- Information from providers and community

[More info](#)

*"My Web Services are not visible"*

## **REGISTER**

- Easily register Web Services
- Instantly available to everyone
- Providers can advertise, describe and monitor their Services

[More info](#)

*"Web Services are poorly described"*

## **ANNOTATE**

- Anyone can describe and annotate
- Ongoing expert curation
- Social curation by the community

[More info](#)

*"Web Services are volatile"*

## **MONITOR**

- Services change and get outdated
- EdUnify monitors services
- Monitors availability and reliability

[More info](#)

# Developed by

[Terms of Use](#) | [About Us](#) | [Contact Us](#) | [Join the friends list](#) | [Getting Started](#) | [Further Help](#) | [Registry Stats](#) | [API Docs](#) | [For Developers](#)

the EdUnify Registry, based on BioCatalogue developed by:



and the same people who brought you



The EdUnify project is funded by [PESC](#)



Copyright (c) 2008 - 2009 [The University of Manchester](#) and the [European Bioinformatics Institute \(EMBL-EBI\)](#)


# Thank you Partners

## Our Partners




The EMBRACE Registry and the BioCatalogue have now been merged

# Annotation and Tagging

Top 20 tags on EdUnify 

[ [See All Tags](#) ]

academic history | Agreement Data | Arrival Date | Asking Agreement Data | Asking Arrival Date | Asking Course Data |  
CollegeTransfer | Course Data | Course Import | Departure Date | email | Learning Agreement | Organization Data |  
student transcript | Transcript of Records | unique national id | ZIP code | ZIP info | ZIP validation | ZIP verification

more 

# An·no·ta·tion

1. The act or process of furnishing critical commentary or explanatory notes.
2. A critical or explanatory note; a commentary.



# What does a service look like?

[Switch to Simple View](#)


## PersonManagementServiceSyncService

SOAP 

Annotations: 1  1  0  0


Categories: [Help categorise this...](#)

WSDL File Information ----- Services: PersonManagementService (Synchronous Communications) Author: Colin Smythe Date: 28th February, 2009 Version: Final 1.0 Status: CM/DN Description: The Person Management Service. This forms a part of the IMS GLC Learning Informaton Services v2.0 Specification. History: Release 1.0: This is the first formal release of version 2.0 of this service. This version supercedes v1.0. This is an integration of the Person Service from the Learning Information Services and the 'identification' ...


Provider: [www-imsqlobal-org](http://www-imsqlobal-org) | Submitter / Source:  [Tod Jackson](#)  (19 days ago)

Tags on this service: *none*




WSDL Location: <https://dev.edunify.pesc.org/wsd/SunGardHE/PersonManagementServiceSyncSingle.wsdl> | 13 SOAP Operations



## MobilityService



SOAP 

aka **MobilityService\_FR**

Annotations: 29  27  2  0


Categories: [Help categorise this...](#)

This mobility service shows a way to exchange data between Higher Educational Institutions. Especially this French version could be very interesting for French institutions, because in this service is presented one of possibilities to deal with French informations. It is a service very useful for International Relation Office: - Exchange of data faster (do not need post service) - Less manual work (also less mistake due to handwritten papers)

Provider: [mobility-usos.edu.pl](http://mobility.usos.edu.pl) | Submitter / Source:  [Daniel Nguyen](#)  (about 1 month ago)

Tags on this service: *none*

WSDL Location: <http://mobility.usos.edu.pl:8080/mobility-server-transport/webservices/mobility-service?wsdl> | 8 SOAP Operations



# Search for, Annotations

The screenshot shows the EdUnify Services website in Internet Explorer. The browser address bar shows the URL <https://demo.edunify.pesc.org/services>. The page features a search bar at the top with a 'Go!' button and navigation links for Home, Services, Register a Service, and Providers. A 'Top 10 tags on BioCatalogue' section lists various tags like 'academic history', 'CollegeTransfer', and 'ZIP code'. A 'Filtering' sidebar on the left shows 'Current Filters Applied' as 'none' and 'Service Types' including SOAP (4) and REST (1). The main content area displays 'AdvancedZipInfo' with a SOAP icon, 1 eye icon, 0 star icon, and 16 annotations. The annotations section shows a verified ZIP code service by Stephen Wheat, with a WSDL location and 11 Soap Operations.

EdUnify - Services - Browse All Services - Internet Explorer provided by Dell

<https://demo.edunify.pesc.org/services>

File Edit View Favorites Tools Help

Google Search Share Sidewiki Bookmarks Check Sign In Convert Select

Favorites Philadelphia Phillies Sprin... Suggested Sites Web Slice Gallery

EdUnify - Services - Browse All Services

Getting Started About Us Contact Us

Sign up Sign in

Search: Go! Home Services Register a Service Providers

Home » Services

Top 10 tags on BioCatalogue [ See All Tags ]

academic history CollegeTransfer Course Import email student transcript weather ZIP code ZIP info ZIP validation ZIP verification

Displaying all 5 services

Sort by: Newest

Switch to Simple View

**AdvancedZipInfo** SOAP 1 0 Annotations: 16 10 6 0

aka ZIP Code Information Service

Categories: [Help categorise this...](#)

This verified ZIP codes. by Stephen Wheat (about 14 hours ago)

Provider: [wsparam-strikeiron-com](#) | Submitter / Source: Stephen Wheat (about 14 hours ago)

Tags on this service: [ZIP code](#) | [ZIP info](#) | [ZIP validation](#) | [ZIP verification](#)

WSDL Location: <http://wsparam.strikeiron.com/ZIPPostalCodeInfo5?WSDL> | 11 Soap Operations

Internet | Protected Mode: On 100% 6:11 AM

# Categories, Monitoring, Ranking

The screenshot shows a web browser window displaying the EdUnify Services website. The browser's address bar shows the URL <https://demo.edunify.pesc.org/services>. The page features a sidebar on the left with navigation options like "Biostatistics (0)", "Chemoinformatics (0)", "Service Providers (4)", "Submitters (2)", and "Countries (2)". The main content area lists three services:

- CollegeTransfer Course Import** (REST): A service for creating and populating student accounts with course history. It has 15 views, 0 stars, and 3 annotations. It was submitted by David K. Moldoff 1 day ago.
- AcademicHistoryService** (SOAP): A deployment of the OpenEAI Academic History web service at Midland's Tech. It has 6 views, 0 stars, and 5 annotations. It was submitted by Stephen Wheat 1 day ago.
- WeatherForecast** (SOAP): A weather forecast service. It has 5 views, 0 stars, and 15 annotations.

The browser's taskbar at the bottom shows the system clock at 6:13 AM and the date as 10/10/2010.

# Details of a SOAP Service

EdUnify - Services - AcademicHistoryService (SOAP) [Provided by: mtconline-midlandstech-edu] - Internet Explorer provided by De

https://demo.edunify.pesc.org/services/2

File Edit View Favorites Tools Help

Google Search Share Sidewiki Bookmarks Check Sign In Convert Select

EdUnify - Services - AcademicHistoryService (SO...

aka **Midlands Tech Academic History Web Service** [permalink](#)

Categories: *Not categorised yet* [View the comments on this service](#)

Annotations: 5 0 5 0

**Overview** **Operations (4)** **Monitoring**

**Provider:**  
[mtconline-midlandstech-edu](#)

**Location:**  
Columbia, UNITED STATES

**Submitter / Source:**  
 [Stephen Wheat](#) (1 day ago)

**Base URL:**  
<https://mtconline-midlandstech-edu/axis2/services/AcademicHistoryService/>

**WSDL Location:**  
<http://www.openeai.org/live/services/ahs/midlandstech.wsdl>

**Documentation URL(s):**

<https://wiki.openeai.org:8401/display/participants/Academic+History+Web+Service+Collaboration> by [Stephen Wheat](#) (1 day ago)

[Login to add a documentation URL](#)

**Tags (2)**  
academic history | student transcript  
[Login to add tags](#)

**Ratings by Members (0)**

	Average	Your Rating
Documentation	★★★★★ (0)	--

[Log in to rate](#)

**Favoured By (0)**  
No one

**Similar Services (0)**

Internet | Protected Mode: On 100% 6:24 AM

# Operations a SOAP Service

The screenshot shows a web browser window with the following elements:

- Address Bar:** `https://demo.edunify.pesc.org/services/2#operations`
- Page Title:** EdUnify - Services - AcademicHistoryService (SOAP) [Provided by: mtconline-midlandstech-edu] - Internet Explorer provided by De
- Navigation Bar:** File, Edit, View, Favorites, Tools, Help
- Search Bar:** Google search bar with a search button.
- Toolbars:** Share, Print, Sign In, Convert, Select, and other utility buttons.
- Page Content:**
  - Overview Operations (4) Monitoring** (Active tab)
  - Annotations:** 5 icons, 0 arrows, 5 users, 0 globe.
  - Introduction:** "These are the SOAP operations available for the SOAP variant of this service. Click on each one to get more information and to annotate."
  - Quick Browse:** [academicCalendarQuery](#) [academicHistoryQuery](#) [pingQuery](#) [statisticsQuery](#)
  - academicCalendarQuery:** 1 input | 1 output, No description(s) yet, Tags on this SOAP Operation: None
  - academicHistoryQuery:** 1 input | 1 output, No description(s) yet, Tags on this SOAP Operation: None
  - pingQuery:** 1 input | 1 output, No description(s) yet, Tags on this SOAP Operation: None
  - statisticsQuery:** (Title only visible)
- System Tray:** Internet | Protected Mode: On, 100% zoom, 6:25 AM.

# Details of a REST Service

EdUnify - Services - CollegeTransfer Course Import Authentication (REST) [Provided by: services - Internet Explorer provided by

https://demo.edunify.pesc.org/services/3

File Edit View Favorites Tools Help

Google Search Share Sidewiki Bookmarks Check Sign In Convert Select

Favorites Philadelphia Phillies Sprin... Suggested Sites Web Slice Gallery

EdUnify - Services - CollegeTransfer Course Impo...

Getting Started About Us Contact Us

Sign up Sign in

Search: Go! Home Services Register a Service Providers

Home » Services » CollegeTransfer Course Import Authentication

**CollegeTransfer Course Import Authentication** REST 15 0

No alternative names [permlink](#)

Categories: Not categorised yet [View the comments on this service](#)

Annotations: 3 0 3 0

**Overview** Endpoints (3) Monitoring

**Provider:**  
[services-collegetransfer-net](#)

**Location:**  
UNITED STATES

**Submitter / Source:**  
 [David K. Moldoff](#) (1 day ago)

**Base URL:**  
<https://services.collegetransfer.net/CourseImportService>

**Tags (2)**  
CollegeTransfer | Course Import  
[Login to add tags](#)

**Ratings by Members (0)**

	Average	Your Rating
Documentation	★★★★★ (0)	--

Internet | Protected Mode: On 100% 6:19 AM

# End Point Services

The screenshot shows a web browser window with the address bar displaying `https://demo.edunify.pesc.org/services/3#endpoints`. The browser's address bar and menu bar are visible at the top. The main content area is titled "EdUnify - Services - CollegeTransfer Course Import Authentication (REST) [Provided by: services - Internet Explorer provided by]".

The page has three tabs: "Overview", "Endpoints (3)", and "Monitoring". The "Endpoints (3)" tab is active. In the top right corner of the content area, there are statistics: "Annotations: 3", "0" (with a document icon), "3" (with a person icon), and "0" (with a globe icon). A button labeled "Add New Endpoints" is located in the top right corner of the main content area.

The main content area contains a yellow box with the text: "What are endpoints ?" followed by a paragraph: "A REST service has a collection of different endpoints that service consumers can access to get various data/functionality from the REST resources of the REST service. These endpoints are, hence, simple URLs to the REST resources. A resource can be accessed via the different HTTP methods (GET, POST, PUT, DELETE, etc)."

Below this box is a "Quick Browse:" section with three links: [GET /Authenticate](#), [GET /ReceiveCourse](#), and [GET /Register](#).

The page lists three endpoints:

- Endpoint: GET /Authenticate**  
URL: `https://services.collegetransfer.net/CourseImportService/Authenticate?callback=callback&institutionId=institutionId&password=password&username=username`  
Description: *No description(s) yet*  
Tags on this endpoint: *None*
- Endpoint: GET /ReceiveCourse**  
URL: `https://services.collegetransfer.net/CourseImportService/ReceiveCourse?c=credits&e=enddate&g=grade&n=number&p=prefix&r=term&s=startdate&t=title&u={u}&y=year`  
Description: *No description(s) yet*  
Tags on this endpoint: *None*
- Endpoint: GET /Register**  
URL: `https://services.collegetransfer.net/CourseImportService/Register?callback=callback&email=email&firstName=firstName&lastName=lastName&password=password&username=username`

The browser's taskbar at the bottom shows the Windows logo, Google, EdUnify - Services - ..., and Microsoft PowerPoi... The system tray in the bottom right corner shows the time as 6:22 AM and the date as 6/22/2010.

# View Full Details of a Service

Click on a service's title in the listings to view the full details of a service...

**Alternative names** (points to the breadcrumb trail: [WSDb](#) > [Services](#) > [WSDbFetchServerLegacyService](#))

**Display name** (points to the service title: **WSDbFetchServerLegacyService**)

**Viewed and favoured counts** (points to the statistics: **416** views, **1** favourite)

**Latest monitoring status** (points to the green status icon)

**Drill down into the operations of a service** (points to the **Operations (7)** tab)

**Latest monitoring history and breakdown of the different monitoring tests** (points to the **Monitoring** tab)

**Tags (from users, providers, automated means and from other registries)** (points to the **Tags (16)** section)

**Favourite this service if you like it** (points to the **Favourited By (1)** section)

**Similar services that you can use based on this service** (points to the **Similar Services (37)** section)

**The URLs needed to use the service** (points to the **Documentation URL(s)** section)

**Information about the service (by users, providers, automated means and from other registries)** (points to the **Description(s)** section)

**You need to log in to contribute information** (points to the **Cost** section)

**You will be credited for any information you provide** (points to the **Free** cost entry)

**Annotations: 121** (points to the annotation count)

**Documentation URL(s)**: <http://www.ebi.ac.uk/Tools/web/services/services/0bdfetch>

**Description(s)**: WSDbFetch: Database entry retrieval using entry identifiers (see <http://www.ebi.ac.uk/Tools/web/services/services/0bdfetch>)

**Cost**: Free



# Check it out

- <https://demo.edunify.pesc.org>
- Join the Task Force Workgroups
- Track our Progress
- Most important, look at the services you can offer that could be published and advertised

