



## SIFA and PESC – Leveraging the Power of Interoperability for A Comprehensive Educational System

To address the needs of student data enterprise wide, the Schools Interoperability Framework Association (SIFA®) and the Postsecondary Electronic Standards Council (PESC) acknowledge each other's core competencies and functionalities and will collaborate for data needs that overlap between pK12 and postsecondary education. This agreement clarifies the roles of each organization and sets a new paradigm for the entire education community.

### Partnership Rationale

Unique challenges for data interoperability exist within and between pK-12 and postsecondary education. While the data should focus on the student at the various levels, complexities for each educational setting arise. As we move towards a more comprehensive, systemic educational system within the United States, these two technical standard setting organizations, along with the U.S. Department of Education, understand the need to collaborate, ensuring that all educational data interoperability needs are met. One of the essential elements that is critical to the statewide longitudinal data systems identified by the Data Quality Campaign is the “ability to match student records between the pK-12 and higher education systems.”

### Partnership Purpose

It is vital to acknowledge that SIFA's core competency is within pK-12 schools and PESC's core functionality is geared towards postsecondary institutions. Given the similar nature of the SIF Specification and the PESC Standards, and the desire to leverage the work of each organization, SIF and PESC will work together to generate bi-directional comprehensive records exchanges between pK-20 and postsecondary institutions.

The initial focus of the partnership will be:

1. Formation of a collaborative work group with participating members of both organizations to analyze and align the standards as appropriate.
2. Creation of a proof-of-concept for electronic records exchange between pK-12 and higher education utilizing both the SIF Specification and PESC High School XML Transcript.
3. Review the possibility of posting all specifications and standards in a single XML Registry and Repository for the education community.
4. Identifying other short-term opportunities to address data flow needs between schools and postsecondary education.
5. Developing a long-term action plan for collaboration between SIFA, PESC and the U.S. Department of Education. This action plan focuses on interoperability between the comprehensive landscapes of educational applications, which requires that any overlapping data elements match.

This initial communication includes a brief overview of each organization as well as a formal intent to accomplish the initial foci listed above. Leveraging the prior and future work of each organization will only make the implementation of specifications and standards stronger. SIFA and PESC recognize that the intended audiences are different and therefore require unique specifications and standards; however, there is the common understanding and acknowledgement that leveraging these established specifications and standards, where applicable, will further enable the vision and mission of each organization.

## **Background**

Education in the United States has typically been segregated between the needs within and between institutions of higher education and within and between pK-12 schools. A growing trend exists to bring these two sectors together to work toward comprehensive pK-16 or pK-20 systems. Numerous impetuses for this systemic view are apparent including preparing students for college and work and holding the entire educational system accountable against one common infrastructure. According to a report by the Education Commission of the States (2002) the charge for this type of system must be student-focused, comprehensive, and lead to the improvement of student flow and increased student achievement through improved collaboration and coordination across education levels.

This convergence is becoming more apparent from a systemic perspective, particularly from a data needs viewpoint. As more students leave high school and enter institutions of higher education, a need for a seamless data exchange between these systems exists. There are data formats and associations that exist to enable the seamless exchange of this data to occur. Interoperability to enable this exchange is fundamental to reduce data entry, increase data quality and decrease the time to exchange records.

Two such organizations, the Schools Interoperability Framework Association and Postsecondary Electronic Standards Council, generate technical standards and specifications to enable interoperability between educational applications. SIF, the specification developed by SIFA, focuses on the development of data objects and a secure Web-based infrastructure, Service-Oriented Architecture (SOA), for exchanging those objects. This enables interoperability between educational applications for pK-12 schools. PESC has similarly focused on interoperability between educational applications for higher education.

As each Association celebrates its tenth anniversary in 2007, it is important to focus on the established work accomplished by both, to outline the developing partnership and collaboration opportunities and to make clear to the marketplace the role each entity plays in “systemic interoperability” for education.

## **SIFA**

Since 1997 the Schools Interoperability Framework Association has been defining the technical blueprint for interoperability between schools’ educational applications. These collaboratively defined data model, infrastructure and data objects have been generated uniquely for schools, districts and states by end users and vendors. The SIF Implementation Specification is an open standard that any technology providers or schools can develop to and implement. The specification development process gathers the various stakeholders, from end users to developers, to ensure accurate identification of issues and solutions development for data requirements in today’s educational landscape. With over 400 members, SIFA’s vision has been to enable schools

to better utilize technology in a manner that leverages the promise and capabilities of interoperability between disparate applications.

The Data Model portion of the SIF Implementation Specification defines the XML structure within the context of schools for assessment, data warehousing, food services, grade book, HR/finance, infrastructure, instructional services, library automation, professional development, special programs, student information services, student record exchange, transportation and vertical reporting. In addition, SIF defines the SOA for guaranteed message delivery of data interoperability using defined infrastructure and architecture protocols. Finally, the SIF Reporting Web Services Specification was introduced in the October 18, 2007 to enable web services outside of a SIF implementation to interface and request data as needed.

Other SIFA Activities include:

- Third party validated Certification Program
- National pK12 Data Model Development
- Technical Assistance supplier for federal Longitudinal Data Systems Grant Program

## **PESC**

On August 18, 1997, 29 representatives of 16 higher education associations, administrative software vendors, the U.S. Department of Education, institutions, student financial aid lenders, secondary markets, guaranty agencies and servicers gathered at the National Center for Higher Education in Washington, D.C. to explore the creation of a partnership to promote and facilitate the use of standards for data sharing. At that time, several major factors relating to standardization were emerging and the higher education community had reached the point where centralized organization was needed. The conclusion of that meeting resulted in the agreement to form the Postsecondary Electronic Standards Council (PESC).

On August 4, 2000, the PESC Board of Directors founded the Standards Forum for Education. XML development and applications were emerging in all industries, but PESC identified an absence of any single organization responsible for developing XML business standards for the postsecondary community. The community embraced the Standards Forum for Education and together worked to develop and produce the first PESC approved standard, the XML Postsecondary Transcript, in July of 2004. PESC continues to govern all EDI transaction sets already developed, is converting those transactions sets to XML, and is developing a number of other transactions in XML as well. In addition, PESC hosts a number of national meetings and conferences each year and is tracking, educating, and training the higher education community on other important issues related to technology and standards, such as web services and electronic authentication.

PESC has successfully created the environment envisioned in 1997 and now, with its largest Membership in its history, continues to serve the needs of the higher education community. As the benefits of standards are realized, the need for more standards increases along with the needs for proper information, education, and training.

## **Additional Information**

- United States Department of Education – <http://www.ed.gov>
- SIFA – <http://www.sifinfo.org>
- SIF Implementation Specification – <http://www.sifinfo.org/sif-specification.org>
- PESC – <http://www.pesc.org>

– PESC Standards – <http://www.pesc.org/info/approved-standards.asp>

## References

Education Commission of the States (2002). *The Case for P-16: Designing an Integrated Learning System, Preschool Through Postsecondary Education*. Washington, DC, Education Commission of the States. <http://www.ecs.org/clearinghouse/34/99/3499.pdf>

## About SIFA

**SIFA** is a unique, non-profit collaboration composed of over 400 schools, districts, states, the U.S. Department of Education, international government agencies, software vendors and consultants who collectively define the rules and regulations for educational software data interoperability. The SIF Implementation Specification enables diverse applications to interact and share data efficiently, reliably, and securely regardless of the platform hosting those applications. SIFA has united these education technology end users and providers in an unprecedented effort to give teachers more time to do what they do best: teach. For more information, visit <http://www.sifinfo.org>.

## About PESC

**PESC** is a non-profit, community-based, umbrella association of colleges and universities; professional and commercial organizations; data, software and service providers; and state and federal government agencies. PESC's mission is to lead the establishment and adoption of data exchange standards in education. The goals of the mission are to enable the improvement of institutional performance and foster collaboration across educational communities in order to lower costs, improve service, and attain system interoperability. For more information, visit [www.pesc.org](http://www.pesc.org).