

School Districts and State Education Agencies have long understood the importance of ensuring unique student record identification across time, location and source, but have struggled to achieve and then maintain unique identities of students. The eScholar Uniq-ID<sup>®</sup> for Students system delivers a fully developed and proven system to collect student identification data, match, de-duplicate and assign identifiers. This includes identifying and managing identifiers throughout the students' academic career across schools, districts, and states. eScholar Uniq-ID<sup>®</sup> for Students is the most widely deployed state-wide student identification system and the only product which enables tracking of student identifiers on an interstate basis.

eScholar's powerful web-based application for assigning unique student identification numbers operates at the district and state level. eScholar Uniq-ID<sup>®</sup> for Students system can be implemented as a stand-alone product or as a component of SIF or Web Services standard infrastructure. The eScholar Uniq-ID<sup>®</sup> for Students system provides the most accurate unique student record identification capability found anywhere.

## Overview

The technology and techniques employed in the eScholar Uniq-ID<sup>®</sup> for Students application have been developed and perfected through many state-wide implementations. eScholar has done extensive work cleansing and de-duplicating records of millions of students across thousands of eScholar data warehouse and unique identifier implementations. This product has been chosen and deployed by nine state education and two federal agencies – covering more than 2,600 districts – as the comprehensive solution for uniquely identifying and tracking student data.

The eScholar Uniq-ID<sup>®</sup> for Students system assigns a unique student identifier that can be used to track student records across time, geography and the wide variety of systems in which student data is found. In addition to assigning ID's to new students as their records are added, the system provides an easy interface for users to identify students who have already been included in the system but may be registering for the first time in a new location, district or higher education institution.

## System Functionality

The eScholar Uniq-ID<sup>®</sup> for Students system assigns a unique numeric identifier to each student and maintains that ID with that individual's data across time, location and institution. The identifiers are randomly assigned, never duplicated and not constructed based on any algorithm related to the student identification attributes. The system utilizes student directory information (First Name, Last Name, Date of Birth, etc) for matching. Since these student attributes are often similar to those of other students, the system will provide a list of registered students who

potentially match the attributes and allow an authorized user to choose an existing ID or have the system assign a new one.

To perform the vital matching process, the system takes advantage of hundreds of matching techniques including Soundex, Edit Distance, Nicknames and many others. In addition, the system has the ability to resolve variations of given names (for example, Jack = John, Bill = William, etc). Through the matching of millions of student records eScholar continues to refine this process, ensuring that the techniques used provide the greatest possible precision. Our meticulous attention to the matching model results in minimal deployment costs, while maximizing the resultant data quality.

### **Managing Student Identifiers**

One of the most important functions of an identification system should be to minimize the number of duplicate and shared identifiers. A duplicate is an individual who has more than one identifier. A shared identifier is one that has been assigned to more than one individual. Regardless of the cause of duplicates and/or shared identifiers, some small fraction of the student records registered in the eScholar Uniq-ID® for Students system can be duplicates and/or shared identifiers.

The eScholar Uniq-ID® for Students system provides easy interfaces for administrators to find, research, and repair duplicates and shared identifiers. When duplicates are found, a linkage will be created between the duplicate and the actual identifier. This makes it possible to integrate historical information that may have been linked to the duplicate. Identifiers generated by the student application will not be reused, even if they are determined to have been assigned in duplicate. When shared identifiers are found, an administrator can separate the students who are sharing the identifiers, using an online interface to determine which individual should retain the identifier at issue and which students should be assigned brand new identifiers. History can also be assigned to separate IDs.

eScholar Uniq-ID® for Students Version 7.0 incorporates a new Alias ID feature which allows the eScholar Uniq-ID® for Students system to retain a record of all local identifiers and/or alternate identifiers submitted to the system in one table. Each time a new Local Identifier or Alternate ID is submitted with the student record, the eScholar Uniq-ID® for Students system will insert this information into an Alias ID table with a link to the unique State ID. This allows states to begin tracking identifiers from various systems, including those from other states, This allows data to be more easily integrated and tracked across time and source. An Alias ID data mart is provided as part of this feature to enable administrators to track and report on multiple IDs.

eScholar Uniq-ID® for Students Version 7.0 also enables record-level updates to student information based upon a system-wide source system reliability score. Administrators configure and define reliability scores for source systems that are authorized to upload data. The

reliability score is used during processing to determine if the incoming record has the “authority” to update an existing record. Only records meeting the authoritative source criteria will be able to apply updates. By utilizing this functionality states can submit data from multiple source systems but only apply changes in data when the data comes from an authoritative source.

## Mode of Operation

The eScholar Uniq-ID<sup>®</sup> for Students system can be operated in both batch and interactive modes. Batch mode is useful for bringing entire districts into the system. Each district uploads a file of student directory information (student name, birth date, etc.) to the system or via Automatic File Processing to a secure server location. The authorized users then receive a listing of possible matches (near matches) against existing students where positive resolution is not possible. Once the near matches are resolved, the system will return the records with the unique identifier.

Interactive Mode is available to users through a web-based interface, Web Services, or SIF. The web-based interface is useful when students are registering in a district for the first time. The administrator can enter student directory information and quickly determine if this student has previously been provided an identifier. If not, they can assign the student an identifier on the spot. The interactive mode also includes Web Services and SIF. Web Services expose eScholar Uniq-ID<sup>®</sup> for Students system functionality to other systems developed by the client or other vendor. The eScholar Uniq-ID<sup>®</sup> for Students system currently supports five Web Service functions: ID Assignment, Near Match Lists, Near Match Resolution, Search by Student and Search by Batch Info. These services combined allow users to submit student directory information, assign unique identifiers, review near matches, provide a near match decision, and to receive an assigned ID.

In addition to assigning identifiers, authorized users can search for students via Student Search or Batch Search. Student Search is used for single student searches, while Batch Search allows for multiple student searches in one file. The Batch Search capability enables administrators to perform a complete analysis on the returned records to determine if any of the near matches are matches. The Batch Search component can be used to search for existing students for the purposes of identifying false drop-outs across districts or states and provide missing students, and/or identifiers to be supplied to testing vendors

## Other System Features

- Configurable system properties
- Configurable authorization
- Flexible authentication

- Claiming for students moving between districts or schools
- Synchronization with other data sources
- Pending Near Match reporting at the state, district and school levels

### *Why eScholar?*

- The leader in education data management, providing successful statewide solutions for 11 SEAs, supporting over 3,500 school districts and over 12 million students across the country.
- Focused exclusively on the education data management industry since 1997.
- Comprehensive services, training and support programs to ensure customer success.
- An established, active user community allowing access to best practices, experience, and support from peers nationwide

Today, our products have become the recognized standards in the student and staff identification and educational data warehousing markets. The eScholar Complete Data Warehouse has become indispensable to local and state education agencies for integrating and managing the vast quantity of information they collect on students, programs, teachers and much more. The eScholar Uniq-ID for Students and eScholar Uniq-ID for Staff are the leading products for generating, assigning, and managing statewide unique student and staff identifiers. For more information, contact Sales at [sales@escholar.com](mailto:sales@escholar.com) or (877) 328-2969.

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