

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

## Overview

The Alaska Student Identifier System (ASID) is designed to assign unique student ID numbers to students in the Alaska public school system.

The system is fully Internet based, and all user interaction with the system occurs on the Internet. There are two main modes of operation:

1. Manual Mode – where an operator logs onto the system to enter student information and obtain a valid student ID number.
2. Batch Mode – where an operator logs onto the system and submits a batch file containing multiple records and receives response files containing feedback.

Both of these modes are available to all districts and may be used interchangeably.

To obtain the unique numbers, the AutoID capability of the MS SQL Server database is applied. The numbers generated are 32-bit integers, for viewing cast into human readable 10-digit numeric fields, left-padded with zeros.

The main purpose of the system is the prevention of potential duplications. Mary A. Gonzales, born on 10/13/92, is not necessarily unique. There could be another such person in the state, however small the chance of that. The system helps the operator resolve possible conflicts and allows clarification of the existing student ID number, in the event it is already defined in the system.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

## Technologies

The back-end database used by the system is Microsoft SQL Server 7. The system will also run on a SQL Server 2000 database if the state upgrade at some point in the future. The database is designed to be fully relational. The web server used is Microsoft IIS. The applications code is developed in Microsoft ASP using a combination of VBScript, JavaScript and HTML. All computing is performed on the server, with results being served to the client for display and reporting purposes only.

The system is designed to use the latest version of Microsoft's Internet Explorer or Netscape' Navigator. All web pages are designed around a minimum screen resolution of 800x600. A higher resolution can be used to minimize scrolling.

Files used for the batch interface are comma and double quote delimited text files only.

The system is hosted at the Alaska Department of Education.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

## User Interface

### *Login Page*

Before a user is allowed access to the Student ID web site they must log on using a previously defined user name and password. To login, the user enters these items in the login screen and clicks the **Login** button.

If the user enters a valid username password combination, a welcome splash screen is displayed containing the following information:

Hello John Smith  
Welcome to the Alaska Student Registration System.  
Date: January 1, 2002  
District: Anchorage

If the user name and password combination is not found in the system, access to the system is denied and the operator is warned with an error message:

“Invalid User Name or Password - please try again or  
contact your System Administrator if you need help!”

If the user account is locked out (not currently active), a warning message is displayed to the user and access to the system is denied.

Users cannot change any part of their account information (name, user name or password). An Administrator performs this task at the Department. If there is a problem with a user login, contact information is displayed on the login screen, identifying an email address and a phone number (suggested) for the user to call. This contact information should go to a person responsible to deal with users at the Department.

The system internally tracks which Operator ID and District ID the current user belongs to during the session. These variables are used to track the operator's activity during the session until the operator logs out of the site, closes their browser or the browser session times out.

When a user executes the *Signoff* function, the session is cleared and a new login must occur.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

If the user leaves a screen idle for 20 minutes, the client session expires, and the user is forced to login again before accessing the system.

### ***Main Menu Items***

The header frame at the top of each screen contains a system menu. Each item in this menu acts as a quick link and can be used to quickly jump from screen to screen. The following items are contained in this menu:

- The **Signoff** option is used to log off of the system by canceling the current activity and returning to the login screen
- The **Assign Student ID** option is used to manually assign student IDs
- The **Student Search** option is used to search for and edit student records
- The **Batch Processing** option is used to process batch files containing multiple student records
- The **Setup Users** option is used to setup and administrator all system users
- The **Configuration** option is used to modify the current system configuration information

These menu items are always available on the screen while a user is logged on. Some of these menu items may not be displayed if the current user does not have permission to access them (depending on what security level and options have been set up for the current user).

Design Document

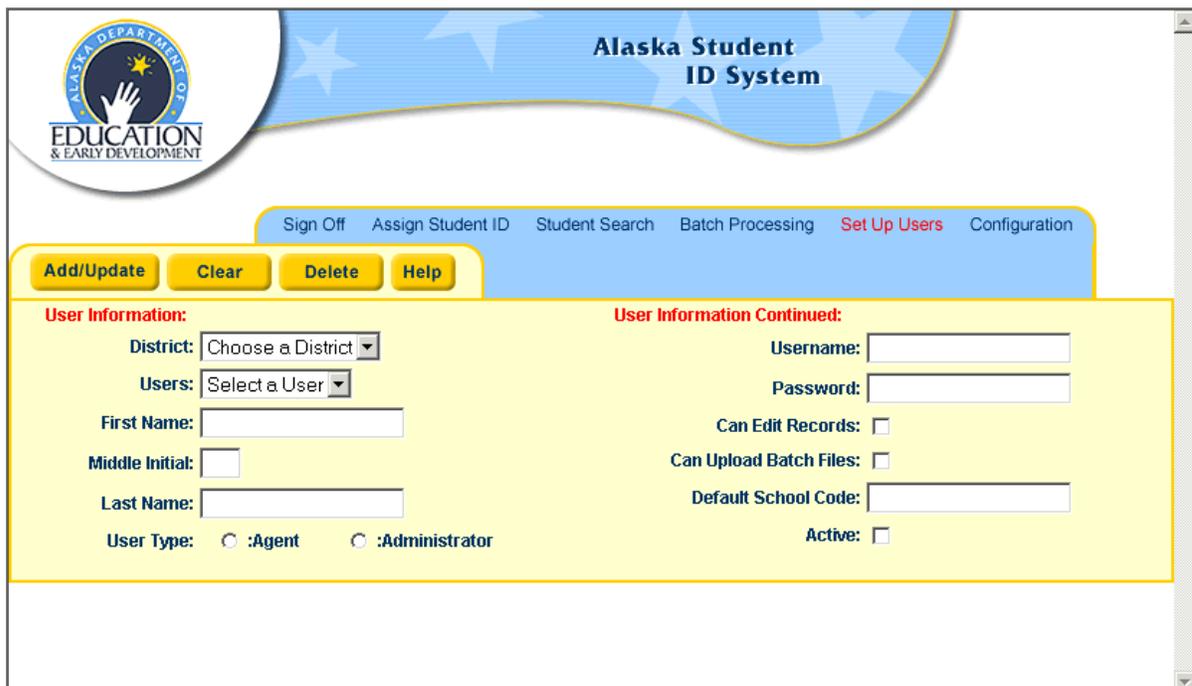
Revision 1.04b

Alaska Student ID System

04/04/2002

## Setup Users

The Setup Users screen is used to administer all user accounts in the system. An example of this screen follows:



The screenshot shows the 'Setup Users' screen in the Alaska Student ID System. The page header includes the Alaska Department of Education & Early Development logo and the system title. A navigation bar contains links for Sign Off, Assign Student ID, Student Search, Batch Processing, Set Up Users (highlighted), and Configuration. Below the navigation bar are four buttons: Add/Update, Clear, Delete, and Help. The main form area is divided into two sections: 'User Information' and 'User Information Continued'. The 'User Information' section includes fields for District (a pull-down menu), Users (a pull-down menu), First Name, Middle Initial, Last Name, and User Type (radio buttons for Agent and Administrator). The 'User Information Continued' section includes fields for Username, Password, Can Edit Records (checkbox), Can Upload Batch Files (checkbox), Default School Code, and Active (checkbox).

The **District** pull-down is used to specify the school district that the user is assigned to.

The **Users** pull-down contains a list of all current users (active or inactive depending on which was selected) belonging to the specified district. When a user is selected from this list, the edit area of the screen is filled in with selected user information.

The **First Name**, **Middle Initial** and **Last Name** fields contain the users name.

The **User Type** radio button is used to set the user as an Agent or an Administrator.

The **Username** and **Password** fields are what are used to log onto the system.

The **Can Edit Records** checkbox allows this user to edit student records when set.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

The **Can Upload Batch Files** checkbox allows this user to upload batch files to the server

The **Default School Code** is used to pre-fill the school code field for manual data entry.

The **Active** checkbox is used to designate the user as active in the system. If this checkbox is not set, the user will not be allowed to log onto the system.

The **Add/Update** button updates the user record in the database. If a record had been previously selected from the Users pull-down, the button will be labeled **Update**. If a new user is being added from a blank form, the button will be labeled **Add**.

The **Cancel** button discards all changes made to the record and refreshes the screen to the state defined in the database.

The **Clear** button clears all fields on the screen and un-selects the current user record

The **Delete** button is used to selected user. This button is not displayed unless a user record is selected from the Users pull-down.

Design Document

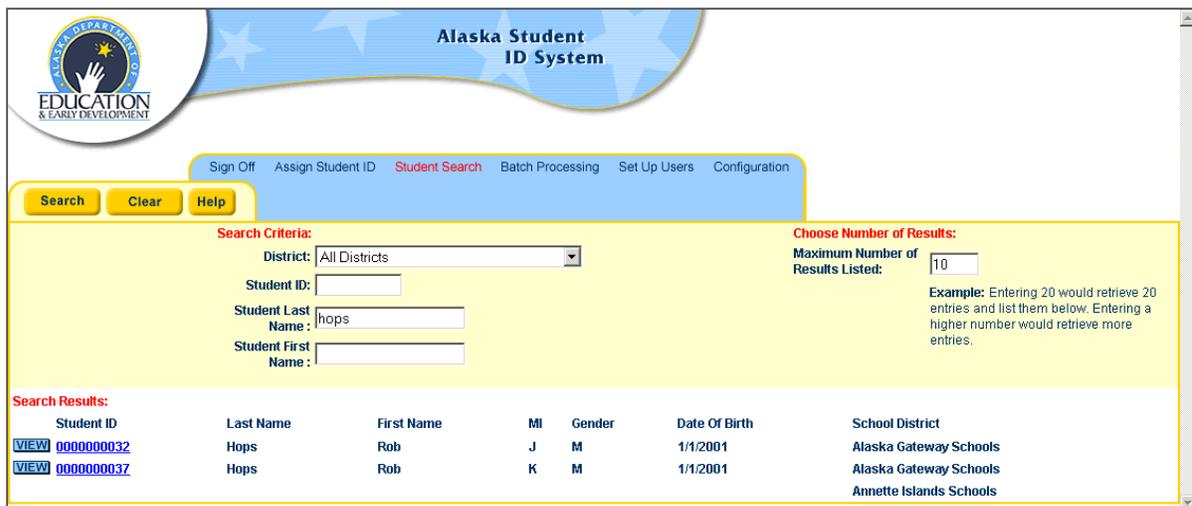
Revision 1.04b

Alaska Student ID System

04/04/2002

## Student Search

The **Student Search** screen is used to search for and edit student records. An example of this screen is as follows:



Student ID	Last Name	First Name	MI	Gender	Date Of Birth	School District
<a href="#">VIEW</a> 000000032	Hops	Rob	J	M	1/1/2001	Alaska Gateway Schools
<a href="#">VIEW</a> 000000037	Hops	Rob	K	M	1/1/2001	Alaska Gateway Schools
						Annette Islands Schools

The top portion of the screen contains the search criteria used to locate student records. This information includes:

The **District** pull-down is used to select the desired school district for the student. This pull-down defaults to the district the current operator is assign to. There is also an option in the pull-down to search the entire state.

The **Student ID Number** edit is for the student's 10-digit student ID number (exact match required)

The **Student Last Name** edit is for the student's last name. A wildcard character (“%” the percent sign) can be used on the end of this field. For example, entering “Jo%” would search for all students whose first name began with the two letters “Jo”.

The **Student First Name** edit is for the student's first name A wildcard character (“%” the percent sign) can be used on the end of this field. For example, entering “Sm%” would search for all students whose last name began with the two letters “Sm”.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

The **Maximum Number of Results Listed** is used to control the maximum number of search results displayed on the screen. This value defaults to 10.

Once the user has entered data for the search criteria above, the operator presses the **Search** button on the screen. A search is executed for the criteria supplied in an AND function (meaning all resulting records must include matching data from all search fields that contained data).

The bottom of the screen contains the search results list. After a search is performed, all matching records are displayed in the results list. If a student belongs to multiple school districts and the user selects "All Districts" from the District drop-down, then each school district that a student belongs to will be displayed in the search results.

Each item displayed in the results list contains a **View** button that can be used to bring up the read-only Student ID pop-up window. If the user has edit permissions, the Student ID field contains a hyper-link that can be used to bring up the Student Edit screen.

Design Document

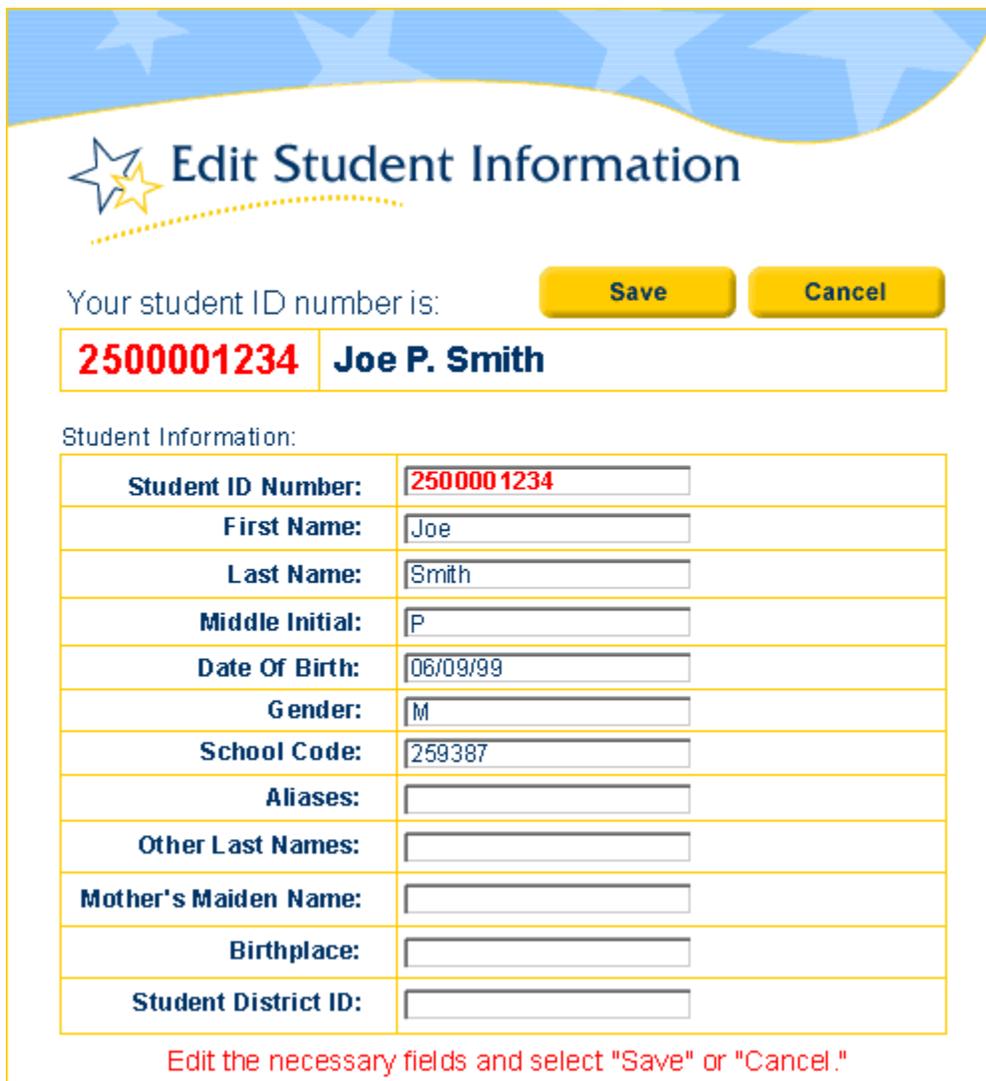
Revision 1.04b

Alaska Student ID System

04/04/2002

### Student Edit Screen

The Student Edit screen is used to edit an existing student record. An example of this screen is as follows:



Your student ID number is:

**2500001234** **Joe P. Smith**

Student Information:

<b>Student ID Number:</b>	<input type="text" value="2500001234"/>
<b>First Name:</b>	<input type="text" value="Joe"/>
<b>Last Name:</b>	<input type="text" value="Smith"/>
<b>Middle Initial:</b>	<input type="text" value="P"/>
<b>Date Of Birth:</b>	<input type="text" value="06/09/99"/>
<b>Gender:</b>	<input type="text" value="M"/>
<b>School Code:</b>	<input type="text" value="259387"/>
<b>Aliases:</b>	<input type="text"/>
<b>Other Last Names:</b>	<input type="text"/>
<b>Mother's Maiden Name:</b>	<input type="text"/>
<b>Birthplace:</b>	<input type="text"/>
<b>Student District ID:</b>	<input type="text"/>

Edit the necessary fields and select "Save" or "Cancel."

Note: The Student ID number is a read-only field and cannot be changed.  
Only administrators can only modify the School Code.

The **Save** button on the Student edit screen is used to update the database with the data entered in the form.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

The **Cancel** button is used to abandon any changes made to the student record.

The **Delete** button is used to permanently delete a record from the school database. Note that this button is *only* available to a user assigned as a state programmer. It will be hidden from all other users.

Design Document

Revision 1.04b

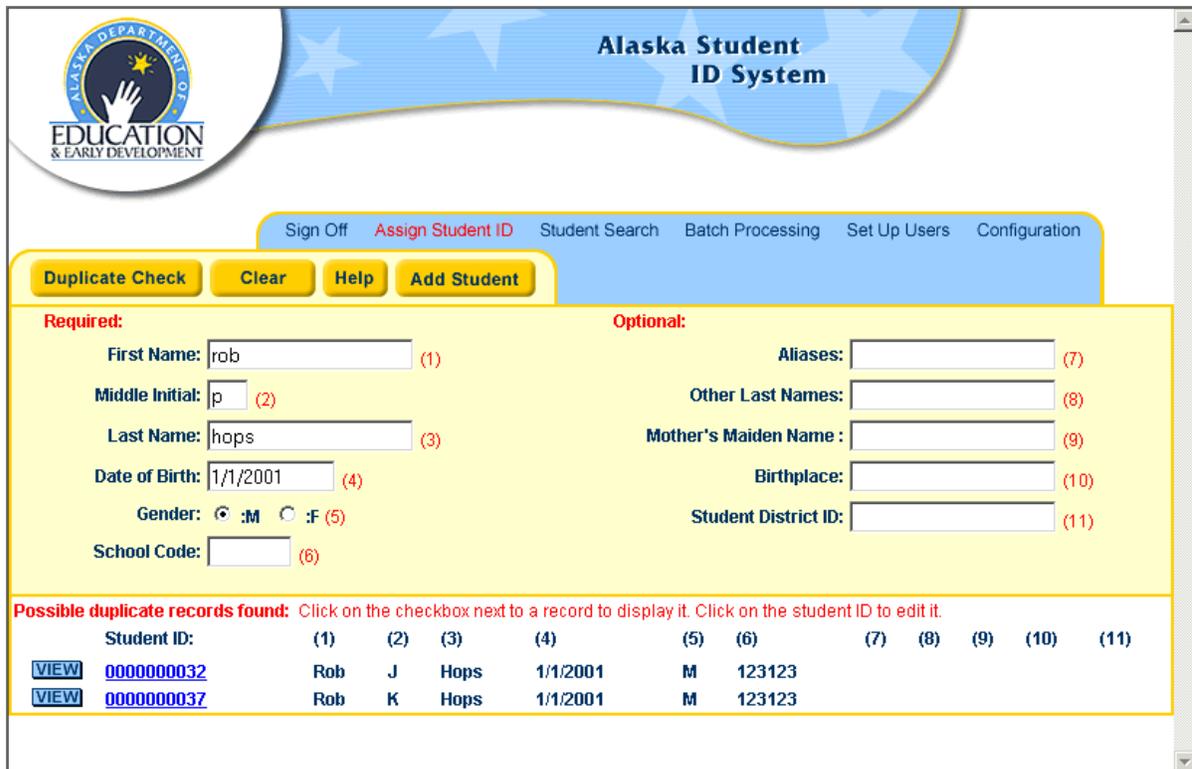
Alaska Student ID System

04/04/2002

## Assign Student ID

The Assign Student ID page is the main data entry screen. All manual entry for new student records is done on this screen, one student at a time. This screen is also used to help identify and resolve potential duplicate records entered manually or uploaded in a batch file.

An example of the Assign Student ID screen is below:



**Required:**

First Name:  (1)

Middle Initial:  (2)

Last Name:  (3)

Date of Birth:  (4)

Gender:  :M  :F (5)

School Code:  (6)

**Optional:**

Aliases:  (7)

Other Last Names:  (8)

Mother's Maiden Name:  (9)

Birthplace:  (10)

Student District ID:  (11)

**Possible duplicate records found:** Click on the checkbox next to a record to display it. Click on the student ID to edit it.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<a href="#">VIEW</a>	<a href="#">000000032</a>	Rob	J	Hops	1/1/2001	M	123123				
<a href="#">VIEW</a>	<a href="#">000000037</a>	Rob	K	Hops	1/1/2001	M	123123				

The buttons at the top of the screen are used to control activity on the screen. These buttons are described below.

The **Duplicate Check** button is used to query the database for potential duplicate student records that match the information entered in the form.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

The **Clear** button is used to clear all of the fields on the data entry form and removes all items from the duplicates list.

The **Help** button is used to display the help screen for this page.

The **Add Student** button is used to create a new record in the database for the student data entered in the form.

The center portion of the screen contains the form used to enter student records. The left side of the form contains the mandatory fields required to add a new student. The right side of the form contains the optional fields that may be used to further identify a student. All fields in the required section of the data entry form must be filled in before a record can be checked for duplicates or added to the system.

The bottom of the screen is used to display a list of potential duplicate records found in the system. Each of these items contains a **View** button that can be used to bring up the read-only Student ID pop-up window. If the user has edit permissions, the Student ID field contains a hyper-link that can be used to bring up the Student Edit screen.

## Manual Entry

When entering this screen for manual data entry, all of the fields in the data entry form and the duplicates list are blank and the **Add Student** button is hidden. The operator must fill in all of the fields in the required section of the form and may fill in the fields on the optional portion of the form.

After the form is filled in, the operator clicks on the **Duplicate Check** to query the database for potential duplicate records. Before the database is searched, the system “cleans” the data according to the Clean Algorithm section of this document.

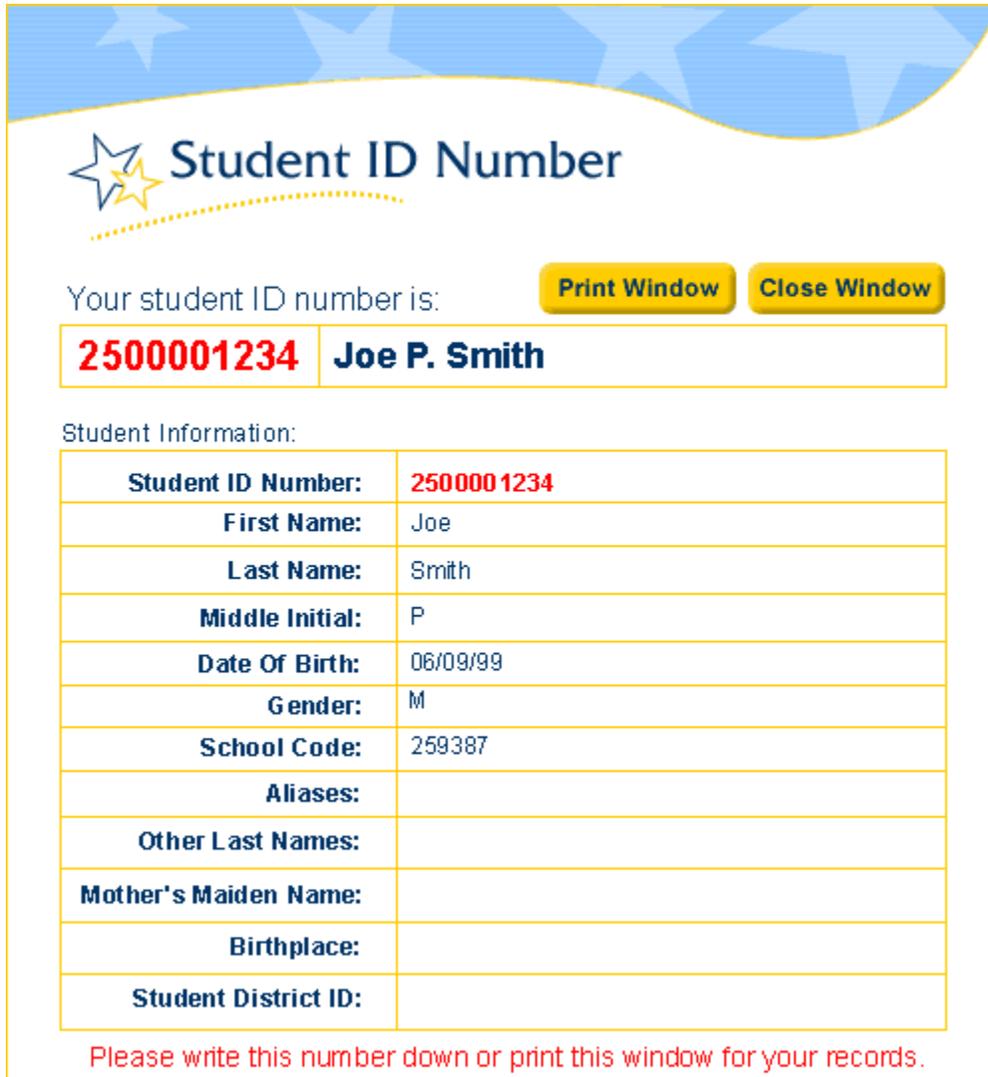
If the system finds no potential duplicate records (according to the Search Algorithm section of this document), a message is displayed on the screen indicating that no matching records have been located and the **Add Student** button is displayed. The user may then create a new student record by clicking on the **Add Student** button. When this button is clicked, a new record is created in the database and a Student ID pop up window similar to the one below is displayed on the screen:

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002



**Student ID Number**

Your student ID number is: **Print Window** **Close Window**

**2500001234** **Joe P. Smith**

Student Information:

<b>Student ID Number:</b>	<b>250000 1234</b>
<b>First Name:</b>	Joe
<b>Last Name:</b>	Smith
<b>Middle Initial:</b>	P
<b>Date Of Birth:</b>	06/09/99
<b>Gender:</b>	M
<b>School Code:</b>	259387
<b>Aliases:</b>	
<b>Other Last Names:</b>	
<b>Mother's Maiden Name:</b>	
<b>Birthplace:</b>	
<b>Student District ID:</b>	

Please write this number down or print this window for your records.

The **Print Window** button is used to print out a hard copy of the pop up screen on the default system printer.

The **Close Window** button closes the pop up window and returns to the previous screen.

### Duplicate Records

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

If any potential conflicting records are detected during the duplicate check, they are displayed in the duplicates list at the bottom of the screen.

At this time, the operator has four options:

1. The operator can decide to cancel the activity by clicking on the **Clear** button. All data will be discarded and the form cleared.
2. The operator can decide that none of the potential records in the duplicate list match the current student and can add a new record by clicking on the **Add Student** button.
3. The operator can decide that one of the potential records in the duplicate list is a match for the student data entered by clicking on the checkbox button in the left most column of the desired record. When this button is clicked, the Student ID pop up window is displayed on the screen with the detailed student information filled in.
4. The operator can decide that one of the potential records in the duplicate list is a match, but needs to be updated (for example, the name is spelled incorrectly) by clicking on the underlined hyperlink portion of any field in the results list. When a hyperlink is clicked, the Edit Student screen is displayed in a pop up window, and the record may be updated. This option is only available if the current operator has permission to edit records enabled for their user account. If they do not, the duplicates list does not contain edit hyperlinks.

### **Batch Upload Correction**

This Assign Student ID page may also be used to correct potential duplicate records discovered during a batch upload. When this page is invoked in this manner, all of the fields in the data entry form are filled in with the data uploaded in the batch file and are set to read only and the **Duplicate Check** button is also hidden (not needed since duplicates have already been detected during the batch processing). The operator then decides how to handle the duplicate in the same manner as when manually entering records. When the conflict has been resolved, the operator is returned to the Batch processing screen.

Design Document

Revision 1.04b

Alaska Student ID System

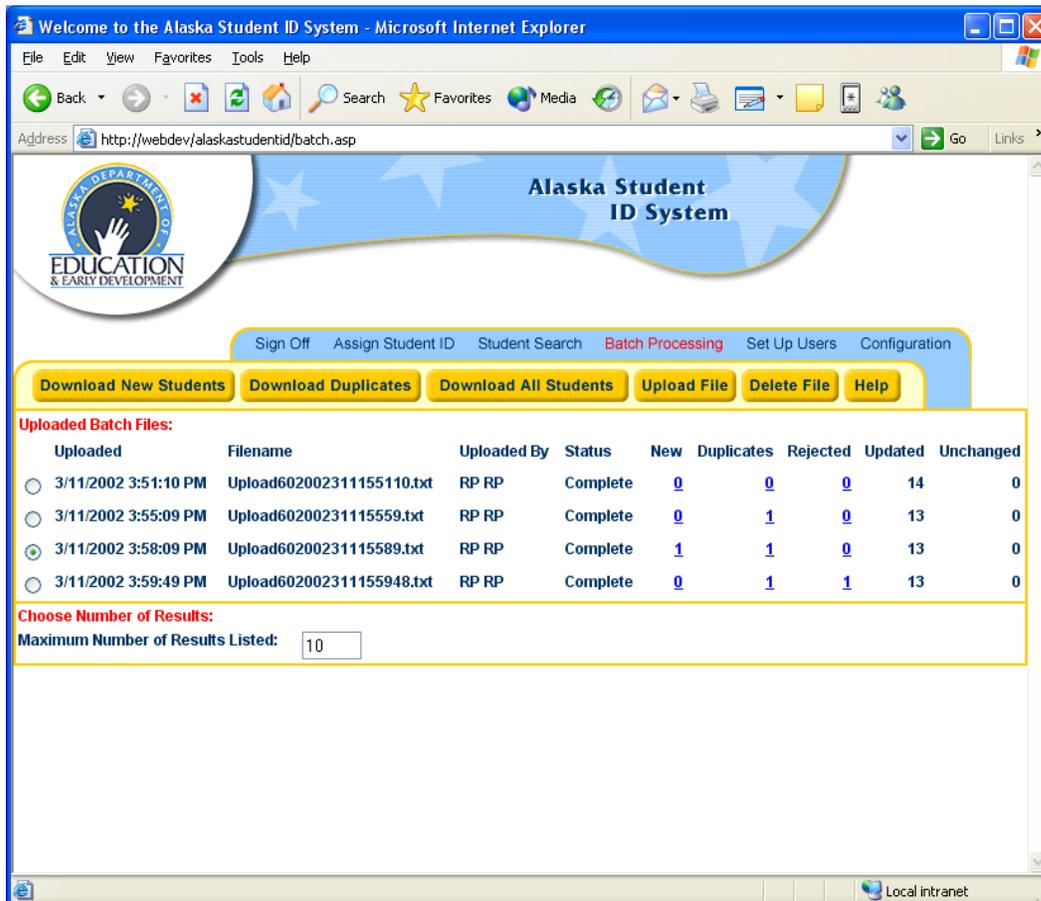
04/04/2002

## Batch Processing

The Batch Processing screen is used to perform batch file transfers between school districts and the web server. This screen is used to:

- Upload batch files to the server for processing
- Correct potential duplicate records detected during the batch file processing
- Download an updated batch file with the newly assigned Student Ids filled in for all new records
- Download a text file with a list of all potential duplicate records for a given batch file
- Delete previously completed batch files from the system

An example of a Batch File Administration Screen is as follows:



Address: <http://webdev/alaskastudentid/batch.asp>

Alaska Student ID System

Sign Off Assign Student ID Student Search **Batch Processing** Set Up Users Configuration

Download New Students Download Duplicates Download All Students Upload File Delete File Help

**Uploaded Batch Files:**

Uploaded	Filename	Uploaded By	Status	New	Duplicates	Rejected	Updated	Unchanged
<input type="radio"/> 3/11/2002 3:51:10 PM	Upload602002311155110.txt	RP RP	Complete	0	0	0	14	0
<input type="radio"/> 3/11/2002 3:55:09 PM	Upload60200231115559.txt	RP RP	Complete	0	1	0	13	0
<input checked="" type="radio"/> 3/11/2002 3:58:09 PM	Upload60200231115589.txt	RP RP	Complete	1	1	0	13	0
<input type="radio"/> 3/11/2002 3:59:49 PM	Upload602002311155948.txt	RP RP	Complete	0	1	1	13	0

**Choose Number of Results:**  
Maximum Number of Results Listed:

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

The buttons at the top of the screen are used to control activity on the screen. These buttons are described below.

The **Download New Students** button is used to download an updated batch file from the server. This file contains all new students and resolved duplicate records from the batch file. When this button is clicked, a popup screen is displayed to the user with a hyperlink to click that displays a file save dialog box. After selecting the file name and destination directory, the batch file is downloaded to the client computer.

The **Download Duplicates** button is used to download a text file containing a list of all potential duplicate records that have not been resolved on the system for the selected batch upload. When this button is clicked, a popup screen is displayed to the user with a hyperlink to click that displays a file save dialog box. After selecting the file name and destination directory, the duplicates file is downloaded to the client computer.

The **Download All Students** button is used to download a text file containing ALL records that have EVER been entered for the district. When this button is clicked, a popup screen is displayed to the user with a hyperlink to click that displays a file save dialog box. After selecting the file name and destination directory, the file is downloaded to the client computer. For normal day-to-day batch file download operations, the **Download New Students** and **Download Duplicates** options should be used.

The **Upload File** button is used to upload a new batch file to the server for processing. When this button is clicked, pop up screen with a browse button is displayed on the screen. The browse button invokes a file selection dialog box that allows the user to select the desired batch file from a local directory. Clicking on the OK button will upload the file to the server for processing.

The **Delete File** button is used to delete a batch file from the server when it is no longer needed. When this button is clicked, a warning dialog is displayed to the user to verify that the file should be deleted. If the user answers affirmatively, the batch file is purged from the system and the screen is refreshed with an updated batch file list.

The **Help** button is used to display the help screen for this page.

Under the activity buttons is a list of all batch files that were uploaded by users in the school district to which the currently logged in user is assigned. Batch Files are selected by clicking on the radio button to the left of each record in the list.

Each item in the list contains the following data:

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

- **Uploaded** - the date and time the batch file was uploaded.
- **Filename** - the name of the batch file on the client computer
- **Uploaded By** - the name of the person that uploaded the batch file
- **Status** - the status of the batch file (pending or completed)
- **New** - the number of new student ID records created in this batch
- **Duplicates** - the number of possible duplicate records that have not been resolved
- **Rejected** - the number of records in the batch upload that already had student ID numbers assigned or that contained file layout errors such as birth dates in an improper format (the birth date format must be MMDDYY or MMDDYYYY without any delimiters)
- **Updated** - the number of records that were changed by the upload
- **Unchanged** - the number of records that were already in the system with no change.

The New, Duplicate, and Reject columns contain hyper-links that can be used to display the detailed records associated with the batch.

If the New Students hyper-link is clicked, a summary list of the new student records added during the batch upload is displayed at the bottom of the screen.

If the Duplicates hyper-link is clicked, a summary list of all records with possible conflicts detected during the batch file processing is displayed at the bottom of the screen. Each record in this section contains a hyperlink that can be clicked on to resolve the potential duplicate. When one of these hyperlinks is clicked, the Assign Student ID screen is invoked and pre-filled with the data contained in the upload record. If the conflict is resolved (by either selecting an existing record or adding a new record in the Assign Student ID screen), the screen is refreshed with the updated batch results. If the conflict is not resolved, the screen remains unchanged.

If the Rejected hyper-link is clicked, a summary list of the rejected student records added during the batch upload is displayed at the bottom of the screen, along with a brief description of why the record was rejected (i.e. invalid birth date, invalid gender, etc.).

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

## ***System Configuration***

The System Configuration currently contains a screen used to set up the name, phone number, and e-mail address of the person that is displayed on the screen when a user has trouble logging onto the web site.

Field / Prompt	Control	Description
Contact Name	Edit	The name of the contact person
Contact Phone Number	Edit	The phone number of the contact person
Email	Edit	The email address of the contact person

The **Save** button is used to update the database with the data entered in the form.

The **Cancel** button is used to abandon any changes made to the system configuration.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

## Database

### Student Table

The table tblStudent contains all working data for student information.

Column Name	Data Type	Length
StudentID	int	4
FirstName	varchar	35
MiddleInitial	varchar	1
LastName	varchar	35
DateOfBirth	smalldatetime	4
GenderID	int	4
SchoolCode	varchar	6
Aliases	varchar	50
OtherLastNames	varchar	50
MotherMaiden	varchar	50
BirthPlace	varchar	50
UpdateTime	smalldatetime	4
OperatorID	int	4
UpdateTypeID	int	4

The StudentID is the registration number generated. We use the SQL Server AutoID number. It is formatted as a zero-padded 10-digit number to the user interface in all cases. Internally, it is an integer.

FirstName, MiddleInitial, LastName, DateOfBirth and GenderID are used to perform duplicate checking and are required as input fields.

SchoolCode is also required as an input field, but it is not used for duplicate checking.

Aliases, OtherLastNames, MotherMaiden, and BirthPlace are all fields in the optional category. The users may or may not populate these. If populated, they may help in the resolution of duplicates.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

UpdateTime and OperatorID are hidden fields but maintained by the system. The OperatorID is the operator who created the record or last updated it. If the update was performed by a batch upload, this field contains the id of the operator who submitted the batch file.

UpdateTypeID contains a key in the lkpUpdateType table that contains the method that the record was last updated (initial batch update, subsequent batch update or manual update).

### Student District IDs Table

The table tblStudentDistrictIDs keeps maintains a list of all school district Ids assigned to a student.

Column Name	Data Type	Length
StudentDistrictIDsID	int	4
StudentID	int	4
SchoolDistrictID	int	4
StudentDistrictID	varchar	35

The StudentDistrictIDsID field is an auto-number field.

The StudentID field is the state assigned student ID.

The SchoolDistrictID is the school district that the Student District ID belongs to.

The StudentDistrictID field contains the ID assigned to the student at the local school district.

### Operator Table

The table tblOperator keeps track of valid system operators.

Column Name	Data Type	Length
OperatorID	int	4
OperatorTypeID	int	4
SchoolDistrictID	int	4
FirstName	varchar	30
LastName	varchar	30
UserName	varchar	30
Password	varchar	30

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

Active	int	4
CanEdit	int	4
CanUpload	int	4
DefSchoolCode	varchar	6

The system tracks all operators by ID. The OperatorTypeID defines the operator's capabilities and rights. The SchoolDistrictID identifies where the operator works.

The FirstName and LastName are shown to the user. The UserName is what the user uses to log into the system. We suggest using first initial, last name as the combination as shown. The password is echoed on the screen with asterisks when a user logs in. However, in the administrator interface, where the password is set up, the administrator can see the password.

Active is defined to be 0 or 1. = 0 inactive, 1 = active. Operator records are never deleted to maintain referential integrity with the *Students* table.

The CanEdit field is used to allow a user to edit existing records in the system.

The CanUpload field is used to allow a user to perform a batch upload to the server.

The DefSchoolCode is a default school code that will be used to pre-fill the School Code field when manually creating student records, reducing data entry and potential typing errors.

### Lookup Operator Types Table

The table lkpOperatorTypes contains a list of the valid operator types defined in the system.

Column Name	Data Type	Length
OperatorTypeID	int	4
Description	varchar	50

Operator types are used to determine capabilities of the users. The OperatorTypeID is set upon login and hidden from the user. This is only internal. However, the user interface to setup operators shows this as a pull-down for the administrator.

The operator types defined are:

0 = Agent (this is a person who works at the school district. He or she can perform manual updates or batch updates)

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

1 = Administrator (this person works at the Department. He or she can perform manual updates or batch updates, but can also perform the administrative functions of the system, like setting up of operators)

2 = Programmer (this is not a public access operator. This person can do all of the above as well as perform system configuration tasks). Only one such operator should be in the Department.

### Lookup Districts Table

The table lkpDistrict contains a list of all school districts currently defined in the system.

Column Name	Data Type	Length
SchoolDistrictID	int	4
DistrictCode	char	2
DistrictName	varchar	50

This table is designed to define the districts. Since DistrictIDs are used in Alaska, and districts seem to recognize their own DistrictID, we will continue to use just the ID as a two-digit number on the user interface. If in the future we want to populate a pull down control with the descriptions, we can do that.

### Batch File Table

The table tblBatch contains one record for each batch file that has been uploaded to the system.

Column Name	Data Type	Length
BatchID	Int	4
SchoolDistrictID	Int	4
BatchStatusID	Int	4
OperatorID	Int	4
UploadTime	Smalldatetime	4
UploadFileName	varchar	128

The SchoolDistrictID is used to identify the school district where the file was uploaded from.

The BatchStatusID field contains the current processing status for this batch upload.

The OperatorID field contains the ID of the operator that uploaded the batch file.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

The UploadTime field contains the date/time that the file was uploaded to the server.

The UploadFileName contains the name of the file on the operator's computer as it was uploaded.

### Batch File Detail Table

The table tblBatchDetail contains a record for each student in a batch file that has been uploaded to the system.

Column Name	Data Type	Length
DetailID	int	4
BatchID	int	4
StudentID	int	4
FirstName	varchar	35
MiddleInitial	varchar	1
LastName	varchar	35
DateOfBirth	smalldatetime	4
GenderID	int	4
SchoolCode	varchar	6
Aliases	varchar	35
OtherLastNames	varchar	35
MotherMaiden	varchar	35
BirthPlace	varchar	50
StudentDistrictID	varchar	35
BatchDetailStatusID	int	4

The DetailID is an auto-number field.

The BatchID refers to the batch file that contained the uploaded record.

The BatchDetailStatusID contains the status of this individual record in the batch upload process.

The StudentDistrictID field contains the local school district's student ID number.

All other fields exactly match the fields in the Student Table.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

## Algorithms

### *Clean*

In order to eliminate obvious data discrepancies, all fields are cleaned and filtered before they are sent to the database. The following checks are performed:

1. First and last names are stripped of leading or trailing blank or tab characters
2. First and last names are stripped of any double quote characters
3. Middle initials are only one character, no punctuations
4. If there is no middle initial, insert a blank character as the middle initial
5. Date fields are confirmed to be of valid date format before being stored

String match operations for search purposes are performed without case sensitivity.

### *Search*

The system is designed to search the entire database every time a student record is submitted via the manual interface or the batch interface. A SQL Server stored procedure is used to perform the search. The search algorithm in the can be refined and updated in the future, if needed.

The fields included in the duplicate check are:

1. FirstName
2. MiddleInitial
3. LastName
4. DOB
5. Gender

A four out of five perfect match check is executed, and any matching results are collected as possible duplicates.

Show all records where

<b>FirstName and MiddleInitial and LastName and DOB</b>	or
<b>FirstName and MiddleInitial and LastName and Gender</b>	or
<b>FirstName and MiddleInitial and DOB and Gender</b>	or

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

**FirstName and LastName and DOB and Gender  
MiddleInitial and LastName and DOB and Gender**

or

Match a record in the database.

String match operations for search purposes are performed without case sensitivity.

Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

## File Formats

### ***Batch Files***

Batch files are used to upload student records to the central web server. Batch files may contain a combination of new and existing records. New records are records that do not contain student Ids (described below). Existing records contain previously assigned Student Ids.

If an existing record is uploaded in a batch file, the system will compare all fields and if any changes are detected, the student's record is updated in the database.

Batch files may be named any valid client side text file name. These files are renamed and date stamped for internal tracking by the server as they are uploaded to track who and when the file was uploaded.

Batch files are ASCII text files. Each record in the file is delimited by an ASCII carriage return and linefeed. An ASCII comma (',' ) character is used to delimit fields within each record. Each field in the file is enclosed by ASCII double quotes.

Each record uses the following format:

<sid>,<did>,<first>,<mi>,<last>,<unused>,<dob>,<g>,<sc>,<alias>,<other>,<maiden>,<bp>,<dn>

Where:

<b>Field / Prompt</b>	<b>Description</b>	<b>Length</b>
<sid>	Student id	10 or Empty
<did>	School district ID	2
<first>	Student first name	Up to 35
<mi>	Middle initial	1
<last>	Last name	Up to 35
<unused>	Unused	Empty
<dob>	Student date of birth in format (mmddy or mmddy)	6 or 8
<g>	ASCII 'M' or 'F' (male or female)	1
<sc>	The 6-digit school code	6



Design Document

Revision 1.04b

Alaska Student ID System

04/04/2002

<alias>	Child alias	Up to 35
<other>	Other last name	Up to 35
<maiden>	Mother's Maiden Name	Up to 35
<bp>	Birth Place	Up to 50
<dn>	District number	Up to 35

An example of a batch file follows:

```

"0000002241","50","Joe","J","Smith","",,"03071991","M","501007","Joey","Jones","",,"Anchorage","321000123"
",,"50","Sally","T","Fletcher","",,"102292","F","501008","",,"Dixon","",,"Fairbanks","321000124"

```

In the examples above, the first record is an existing record with an ID of 0000002241. The second record is a new record and has no ID assigned as of yet.

### **Duplicate Records File**

The Duplicate Records File is a free form ASCII text file that contains one or more student records submitted to the system for processing. These files contain the student record submitted along with possible matches already defined in the system.

An example file is as follows:

Student Record In Question:

```

Joe      J Smith      12/20/89      M      259387      O'Leary Anchorage

```

Possible Duplicates:

```

0000107661      Joey      J Smith      12/20/89      M      259387      O'Leary Anchorage
0000102456      Joe      J Smith      07/15/92      M      259387      Barnes Fairbanks

```

---

Student Record In Question:

```

Jim      T      Jones      11/11/91      M      212344      Fairbanks

```

Possible Duplicates:

```

0000004361      James      T      Jones      11/11/91      M      212344      Fairbanks

```

---