

SSD Online Services

by
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1. INTRODUCTION

The Services for Students with Disabilities (SSD) is the department responsible for providing reasonable accommodation to students with documented disabilities. Each term, SSD serves approximately 500 students and receives hundreds of requests for various services. These services range from alternative testing, alternative formats, notetaking, classroom relocation, and requests for tables and chairs to be placed in the classrooms. The number of requests has been growing steadily and in order to provide accommodations on a timely basis, SSD had to find an efficient way to handle students requests. In 2002 alone, the department handled requests for various accommodations in 300 classes. The process was very stressful and tedious.

This paper reports on a SSD's effort to create a web application to reduce the numbers of hours required to manually process accommodation requests. This application focused on two areas where SSD believed it was possible to increase the productivity of the service coordinators and promoting SSD ease of requesting accommodation to students. The two areas are automation of various processes and web accessibility.

Term	2004-2005		2005-2006	
	Requests	Classes	Requests	Classes
Summer	157	129	145	111
Fall	1045	643	1120	670
Winter	984	629	1176	719
Spring	922	589	934	611
Total	3108	1990	3375	2111
Average	984	620	1077	667

Table 1. Total requests made by students during the academic year of 2003 – 2006.

Prior to the integrated database, SSD student workers played a large role in helping to ensure that students received the services they requested. Student workers had to check, at least twice, to ensure that the data in the Access database matched the class schedule (paper) submitted by students. Often, there were a number of mistakes made during data entry that caused students to not

receive the services in a timely manner. This was serious, because it could potentially put SSD and/or OSU in position that could be subjected to a complaint or lawsuit.

The SSD web application was first released in the winter of 2003. The application contained only functions for organizing student's alternative testing requests. The process was relatively simple. It involved three types of users: students making requests, the Alternative Testing Coordinator, and student test proctors hired by SSD.

This program successfully reduced the amount of paper utilized and increased the efficiency of the program. Based on results of a significant reduction for time spent, SSD saw the opportunity to improve

and change the way students requested all services. The new database permitted students to monitor their own requests. Therefore, students would develop self-advocacy skills that will serve them well at the university and beyond. For these reasons, SSD proposed a new way to integrate all these services into one database.

2. RELATED WORKS

The initiative of building an application that is capable of managing thousand of customer requests has been around since the wide use of the internet.

In fact, five years ago, SSD started using Microsoft Access 2000 to track student information and accommodation requests. Each term, students had to come to SSD and submit their class schedule. SSD staff entered student's schedules into the database. To notify an instructor regarding student requests for accommodation, SSD staff had to manually send a notification letter to the instructor. The most tedious part for SSD staff was to create an email from a template, filled with various students' eligibility. SSD staff had to individually craft an email that pertained to services for which student was eligible to receive and requested for the class. Assuming that there were no errors in entering the students' request, this process could take up to five minutes for each email. There were approximately 500 classes each term.

On top of emails sent to the instructors, the student who requested a proctor for a test had to pick up a contract form available only at the SSD office and returned it to SSD staff after the instructor agreed to have SSD proctor the class exam. Those steps were only to set up a contract between a student and an instructor. There were more processes involved in finding a room and assigning a proctor.

If the student requested more than one service, there would be more steps that had to be completed by the SSD staff and student. Each service maintained its own database or spreadsheets. If there was a case where a service needed to be cancelled, the student often forgot to contact SSD.

In summary, there was so much time spent in manually processing accommodation requests each term that SSD could not keep up with the requests. As a result, a student might not have accommodation that would allow equal access to higher education. Oregon State University could be subjected to number of complaints or even lawsuits for failing to provide reasonable accommodation.

It seemed beneficial if SSD could find a solution that would automate most of its processes and encourage students to utilize services provided by the department.

At that time, there was no program in existence that could manage all of the services SSD provided. SSD Online Services was the proposed system. This system was designed to maintain student profiles, manage class registration, and all necessary support services. In the U.S. higher education schools, these services are common to any department that serves students with disabilities.

3. SSD ONLINE SERVICES

In the previous sections of this paper, we have described problems that have to be addressed to develop this application: the database, the user interface, and features of the application.

3.1 The Database

There are two categories of tables in the database: tables that maintain layout of the forms and tables that contain users and requests data.

3.1.1 Tables for Custom Forms

In order to maintain a sustainable application over a period of time, some of the forms in this application can be customized to expand the services offered or to add additional information for the user profile.

These tables are:

- *Access Control* [Control] keeps all the information about the current term, registration term, registration function, department contact information, and standard email signature.
- *Disability* [DSB-Data]. This table maintains type of disabilities.
- *Eligibility Group* [EGB-Data] and *Eligibility Type* [EGB-List]. An eligibility group is usually managed by a coordinator. For example: Alternative testing group maintains several eligibility types, such as: 1.50 extra times or room alone.
- *Custom Email* [EML-Data]. This table keeps all letters sent out by the application. An administrator is allowed to add or change the letter sent out to instructors, students, or employees.
- *Employee Type* [EMP-Type]. This table maintains types of employee positions, job descriptions, and minimum pay rates.
- *Email Inquiry Type* [IQT-Data]. This table manages type of inquiries submitted to SSD and can direct them to appropriate coordinator or the director of the department.

- *Help Template* [HLP-Data] and *Help Pages Link* [HLP-Link]. Administrator can create help information and link them to a page.
- *Registration Notes* [NTS-Data]. Some students might require additional notes in the notification letter. This table keeps the types and descriptions of additional notification.
- *Special Categories* [SCB-Data]. Some students might belong to certain groups, such as: Veterans, Education Opportunities Program (EOP), Distant Learning, and Commission for Blinds.

3.1.2 Tables for Store Data

These tables store all user profiles and requests and group according to the type of services.

3.1.2.1 User Database

User database is the most essential part of this application. It stores user information and almost all groups of services are related to this table.

- *Employee Data* [EMP-Data] maintains types of responsibility a user held that include individual pay rate. All changes will be recorded under [EMP-Log].
- *Student Data* [STU-Data] maintains student profile, such as: eligibility, type of disability, special categories, and documentation. Same as [USR-Data], all changes will be recorded under [STU-Log].
- *User Email* [USR-Email] saves all email sent from the application.
- *User Data* [USR-Data] maintains basic user profile, such as: name, type (student, employee, or both), gender, email, university ID, and address. Any modification made by staff or updated by the user will be stored into separate table called [USR-Log].

3.1.2.2 Registration Database

This section records students' requests for services every term.

- *Class Data* [CLS-Data] stores class information obtained from the OSU Banner system.
- *Instructor Data* [INS-Data] stores the instructor email address. The system will automatically save instructor email when a notification letter is sent out.
- *Registration Data* [REG-Data] records students' requests for services. It stores current and cancelled services, request to change services (when it has been approved by staff), and whether

notification letters have been scheduled or sent. All modification to the services will be recorded under [REG-Log].

3.1.2.3 Alternative Format

Along with Deaf and Hard of Hearing Services, these services are the new addition to the new application. There are eight tables to manage all the media collection (tapes, audio files, e-text, and Braille).

- *Class Link* [ALF-Link]. It records classes that link to the collection database. For example: Book A is used by two classes; therefore, there are two links created. All changes will be recorded under [ALF-LinkLog].
- *Checkout* [ALF-Checkout]. This table records the status of the media for students. All changes will be recorded under [ALF-CheckoutLog].
- *Collection Database* [ALF-Collection]. It stores all collection that SSD previously produced or ordered. It includes books and class notes.
All changes will be recorded under [ALF-CollectionLog].
- *Employee Assignment* [ALF-Assignment]. This table is intended to record reader assignment or order from a library. For example, part of Book A is read by a reader and the other part is ordered from a state library; therefore, there is two assignments to this collection. All changes will be recorded under [ALF-AssignmentLog].
- *Media* [ALF-Media]. This table records any item (tapes, CD, or e-text) received per each assignment.

3.1.2.4 Alternative Testing

Alternative testing database has been around for three years. The design of the database is very mature and straight forward.

- *Contract Template* [ATS-Template]. It manages template for a testing contract. It consists of 10 different types of questions that can be modified by coordinator.
- *Exam Requests* [ATS-Exam]. It stores detailed information about an exam, such as time, date, type (quiz, midterm, or final), and location of exam. All changes will be recorded under [ATS-ExamLog].

- *Testing Contract* [ATS-Contract]. Every student is required to create a testing contract with an instructor. This table stores all procedures where the exam should be picked up or dropped off and other information related to in-class exam. All changes will be recorded under [ATS-ContractLog].

3.1.2.5 Deaf and Hard of Hearing

This service is also called *DHOH*. There are only three tables under this category, which are:

- *Employee Assignment* [DHO-Data]. It stores assignment for transcribers, interpreters, and captioners. All changes will be recorded under [DHO-Log].
- *Available Work Time* [AVL-Data]. Any employee works under this coordinator is required to fill their available time for each term.

3.1.2.6 Notetaking Services

Almost one year younger than the alternative testing database, the notetaking database was launched 18 months ago. This database will include a better tracking system and allow system to create one invoice for a notetaker who takes notes for multiple class sections.

- *Agreement* [NTK-Agreement]. This table identifies whether a notetaker has reached an agreement with student on how the note should be delivered. The notetaker has to turn in the signed agreement to the SSD office. Without the agreement, SSD will not continue providing notes to the student.
- *Class Link* [NTK-Link]. This table is designed to link classes to an invoice. The notetaker will receive one invoice for each class section. For example, there should be only one invoice for a notetaker that may take a note for classes in section 1 and 2. All changes will be recorded under [NTK-LinkLog].
- *Notetaker Class* [NTK-Class]. Each term notetaker will register their classes into the database. Then, the coordinator will assign notetaker to a class if student has requested notetaking services for the same class.
- *Notetaker Contract* [NTK-Contract]. In the new system, a notetaker is required to sign a contract every year before the month of January. All changes will be recorded under [NTK-ContractLog].

- *Notetaker Files* [FILES]. Notetaker will be able to submit scanned or typed notes into the database. This will allow students to download the files through SSD Online Services.
- *Notetaking Invoice* [NTK-Invoice]. It stores notetakers' assignments. This database records agreement between student and notetaker, the amount paid to the notetaker. All changes will be recorded under [NTK-InvoiceLog].
- *Tracking Download* [DOWNLOAD]. It records whoever downloads the submitted files from the database.

3.1.2.7 Tracking Other Services

This section is intended to create a way to track services that are outsourced outside the department. For example, request for class relocation, table, or chair.

- *Tracking Assignment* [OTH-Data]. This table directly relates to the registration table. It contains information to track whether the request has been sent or completed. All changes will be recorded under [OTH-Log].

3.2 The User Interface

Through extensive modification over three year's period, we eventually settled on a design in which each web page is divided into three major sections. It is important to have a standard view page across the application. It should be simple and easily managed. Accessibility is an integral part of this application. This application should cater to all users including user that rely on alternative keyboard or voice input to navigate links and form control [1]. Therefore, it is very important to create page that is designed to create a sensible flow for the text reader. Each page is marked with numerous anchors to guide low vision students to reach to places where they intend to visit. There are five main anchors:

- *StartOfPage*: indicates the start of each page.
- *NavigationBar*: indicates the start of navigation bar.
- *MainContent*: indicates the start of main content of each page.
- *Error*: when the system finds an error on user input or action, it will redirect the text reader to read from the list error descriptions instead of the beginning of the page.
- *Current*: indicates current requests for services for the term.

In addition to anchors, each page is equipped with keyboard access key, also known as **AccessKey**. List of AccessKey:

- B: beginning of the page.
- E: start of page error description.
- F: main content of the page.
- H: help section of the page.
- N: a link to go to next result page.
- P: a link to go to previous result page.
- R: a link to directly go to search result.
- S: submit current form.
- T: indicates page title.

Although there are only a small number of images, each image contains alternative text. Every input control also contains a title (similar to alternative text to image) to guide user to identify the input control.

3.3 Development, Testing and Integration

SSD staff had the experience using the previous version of SSD Online Services. Using SSD staff inputs on how to improve their productivity, each section was developed based on their requirements. Each section was carefully designed to fit the requirement and to eliminate similar functions in two or more separate files.

Since all program versions were developed by one person, I used an iterative development process. The iterative process allowed me to take advantage of what I had learned in the earlier development and re-used parts that were important in the new system. I started with a subset of the requirements and incrementally developed subsequent requirements until the full system was implemented. Modularization of functions is very important to avoid creating two functions that perform the same functionality. At the end of each subset, I performed a testing to ensure that the system would meet the requirements and can be integrated to the rest of the system. SSD Online Services will be tested simultaneously at Oregon State University and Linn-Benton Community College on August 2006.

3.4 The Features

3.4.1 Custom Paging

Custom paging is the most improved of all previously built functions. It is carefully crafted and it is the standard for any DataGrid throughout the application. This paging mechanism is accessible to anyone who uses the system. In the earlier version of this application, I applied Microsoft .NET Framework built-in paging for the DataGrid. It was really difficult to navigate throughout any pages. There are numerous advantages compare to Microsoft .NET Framework built-in paging; they are:

- Compare to Microsoft version, user has the three choices when using the custom paging. User can select *View All* to view all result in the same page (system prohibits to view all data if there are more than 500 results returned). User is allowed to choose page which s/he wishes to visit. Lastly, user can use next and previous links to review the search result.
- Built-in access key for low vision students. Access key N redirects user to the next result page and access key P redirects user to the previous result page.
- Universally built and there is no additional functions required to handle the paging.

To activate this feature, user needs to include a file called PagePanel.aspx and call a function initializePage(...) to initialize the DataGrid.

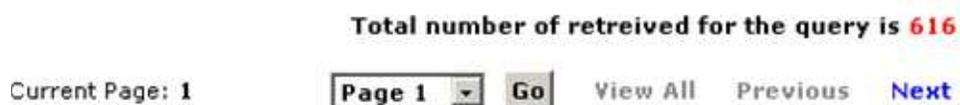


Figure 1. Custom paging header for each DataGrid table.

3.4.2 Help Panel

This is one of the newest features of the application. To activate this feature, an administrator needs only to create a new entry in the table. When the application assigns a new session to a client, the application creates a hash table of available help pages in the database. When each page is initialized, the system will check whether the hash table contains help for the specified page. If yes, the system will create a link where it will redirect user to the specified help section.

For example, administrator is interested to create two help information on how to login and how to change password. The problem is that administrator wants to place both help information at the home page and includes only how to change password in user profile section. There are two processes that have to be completed.

First, administrator will add two new help templates.

List of Help Page That is Currently in Used:

Help Title	Status	Edit	Info
How to Change Password	Active		
How to Login?	Active		

Add New Help Template to Database

View List of Pages

Figure 2. List and create help entries that can be attached to any pages.

Second, Administrator will create a link that contains both templates for the home page (*index.aspx*).

Help Template

Page Name* :

Help Templates* : How to Login? How to Change Password

Status* :

Figure 3. Attaching help entries to specific page.

For the second link, administrator will only check *How to Change Password* for *profile.aspx*. Whenever a new session is assigned, the system will update the content of the hash table including *index.aspx* and *profile.aspx*. When a user visit a page, *index.aspx* or *profile.aspx*, the system will create a link on the help section of the page that allows user to get help. For *index.aspx*, there will be two help sections, which are how to login and how to change your password.

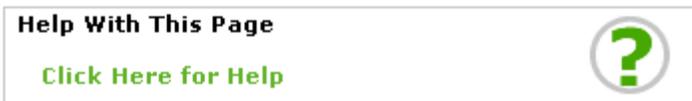


Figure 4. If a page has help entries, help panel will be visible to user.

3.4.3 Custom Forms

Other distinctive features are these custom forms. There are four custom forms in the application, which are *Disability Form*, *Eligibility Form*, *Employee Type*, and *Special Categories*. Anytime there is a new type of disability or a new type of accommodation for student, administrator can easily modify forms without having programmer present. Any changes to the form are effective immediately.

List of Disability Types Under This Department:

Description	Acronym	Status	Edit	Info
ADD or ADHD	ADD	Active		
Cerebelum Palsi	CBP	Active		
Cerebral Palsy	CLP	Active		
Deafness or Hearing Loss	HEA	Active		
Diabetes	DIA	Active		
Head Injury	HDI	Active		
Learning Disability	LED	Active		
Orthopedic	ORT	Active		
Psychological	PSY	Active		
Seizures	SEZ	Active		
Speech	SPC	Active		
Visual	VSL	Active		

Figure 5. List of disability types for the current application.

Student's Disability

Primary Disability*:

If A Student Has Other Type of Disability, Select All That Apply to the Student:

<input checked="" type="checkbox"/> ADD or ADHD	<input type="checkbox"/> Cerebelum Palsi	<input type="checkbox"/> Cerebral Palsy	<input checked="" type="checkbox"/> Deafness or Hearing Loss
<input type="checkbox"/> Diabetes	<input checked="" type="checkbox"/> Head Injury	<input type="checkbox"/> Learning Disability	<input checked="" type="checkbox"/> Orthopedic
<input type="checkbox"/> Psychological	<input type="checkbox"/> Seizures	<input type="checkbox"/> Speech	<input type="checkbox"/> Visual

Figure 6. List of disability types while entering or modifying student's profile.

3.4.4 Custom Emails

Each term SSD sends out approximately 6,000 automatically generated emails per year to faculty, students, and employees. Administrator is allowed to modify letters that are sent out automatically by the system. Administrator can change the return address of the email, subject of the email, header and footer of each email message, the type of email, and email signature. The template also supports HTML format email by replacing “<” with “[” and “>” with “]”. When sending email in batches, system will retrieve the specified template before sending the email out to optimize the processing time.

Email Template

Return Address*:	<input type="text" value="Disability.Services@oregonstate.edu"/>
Email Subject*:	<input type="text" value="Notification of Academic Support Services"/>
Header Text*:	<input type="text" value="Based on faculty requests, Services for Students with Disabilities (SSD) provides notification regarding a student with disabilities enrolled in the course noted above.
[BR][BR]Please carefully read the information pertaining to the specific accommodations for this student listed below. Your prompt response, if requested, will ensure that OSU is in compliance with Federal Statutes.
[BR][BR]"/>
Footer Text:	<input type="text" value="[FONT COLOR='FF0000'] [STRONG]Important Link[/STRONG] [/FONT]: Faculty Guidelines for Accomodating Students with Disabilities
[BR][BR]If you want to learn more about working with students with disabilities, please visit:
[A HREF='http://www.washington.edu/doi/Faculty/']
http://www.washington.edu/doi/Faculty/[/A]
[BR][BR]Thank You,"/>
Email Type*:	<input type="text" value="Registration"/>
Email Signature:	<input type="text" value=""/>

Leave Blank to Use Default

Figure 7. Specifying an email template in HTML.

Registration

From: **Disability.Services@oregonstate.edu**

To: **Haris.Gunadi@oregonstate.edu**

Subject: **[SSD] Gunadi, Haris - CS 151.001 Notification of Academic Support Services Spring 2006**

CS 151.001 - Spring 2006

Based on faculty requests, Services for Students with Disabilities (SSD) provides notification regarding a student with disabilities enrolled in the course noted above.

Please carefully read the information pertaining to the specific accommodations for this student listed below. Your prompt response, if requested, will ensure that OSU is in compliance with Federal Statutes.

Important Notice: The information in this letter is strictly confidential!

Haris Gunadi has supplied Services for Students with Disabilities (SSD) with documentation that qualifies student for the services indicated below.

The purpose of providing accommodations is to ensure that the student has an equal opportunity in the class. However, the University is not required to modify any essential requirements in the program of instruction or to provide accommodations when the request poses an undue hardship. If you have questions regarding issues of requirement or hardship, please contact the Director of SSD at 541-737-3669.

It is student's responsibility to contact you to discuss accommodations. Please respect student's right to confidentiality and limit your discussion of student's disability or accommodations to private conversations with him/her. It is student's decision whether to share specifics about student's disability.

Specific accommodations the student is eligible to receive:

Test

Important Link: Faculty Guidelines for Accomodating Students with Disabilities

If you want to learn more about working with students with disabilities, please visit: <http://www.washington.edu/doi/Faculty/>

Thank You,

Test

NOTICE: This email (including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C._2510-2521, is confidential and may be privileged information. If you are not the intended recipient, please be aware that any retention, dissemination, distribution or copying of this communication is prohibited. Please reply to the sender that you have received this message in error, then delete it. Thank you for helping to maintain privacy. This email may contain confidential student information. Further disclosure may be a violation of FERPA. Do not forward or copy this message.

Figure 8. Preview of the email template.

3.4.5 Barcoding

This barcode is created to reduce the number of clicks required to access an assignment. The length of the barcode is 15 characters. The first character identifies the type of the assignment; for example: B means books for alternative format requests.

The barcode web service was obtained from <http://www.codeproject.com/cs/webservices/wsbarcode.asp> and was created by Rui Miguel Barbosa [2]. The code is free to be used in any website. The code is originally designed for Windows application and it has been modified to work with this application. The web service generates a JPEG image and it uses Free3of9 (Code 39) fonts to draw the barcode.

Currently, barcodes will be applied on services that are heavily used and inquired by students. They are

- Alternative format assignment sheet for reader.
- Alternative testing exam instruction sheet.
- Notetaking invoice for notetaker.
- Notetaking agreement for student.

Barcode provides a faster solution to get information out of the database. Instead of numerous attempts to search for an invoice or instruction sheet, SSD staff can scan the barcode and let the system re-direct the user to the appropriate page. In this system, the barcode contains 1 character corresponding to the type of barcode and 14 randomly generated numbers as an identification number. The barcode field is located on the main page of the SSD staff page.



The screenshot shows the top navigation area of the SSD staff page. On the left, there is a 'Home' link and a 'Page: Overview Section' indicator. On the right, there is a 'Help Section' with a link 'Click Here for Help With This Page' and a question mark icon. Below this is a horizontal menu with tabs for 'Overview', 'My Profile', 'Mailbox', 'Administrator', 'Student', 'Notetaker', 'Reader', 'Transcriber', and 'Interpreter'. The 'Overview' tab is currently selected. At the bottom of the screenshot, there is a form with the label 'Enter or Scan The Barcode:' followed by a text input field and a 'Submit' button.

Figure 9. Barcode field located on the overview page (visible only to SSD staff and administrators).

Example of barcode produced by the web services:



Figure 10. An example of a barcode generated from the web services.

3.4.6 Tabs

Each user will have various tabs on the page. There are three tabs that are standard to everyone, which are *Overview*, *My Profile*, and *Mailbox*. The rest of the tabs are generated based on user types and employee types. Other security feature included to each page is page permission. When each page is initiated, the system performs background check to verify user eligibility to access a page. User eligibility is obtained when the user login the system and the profile is saved under a session.

Home

Page: Overview Section

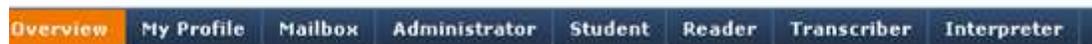


Figure 11. An example of link tabs.

3.4.7 Mailbox

Mailbox was created to eliminate SSD staff from manually transferring each student emails to a specified folder. This database will retain all email generated by the system. User can find a specific email type or can be sorted by the term or type of the emails.

3.4.8 User Service Center

The newly improved user service center mainly focuses on the speed of SSD staff to obtain or modify user information. It is divided into four separate sections. They are:

- *User Profile at Glance.* This section allows SSD staff verifies student's information when a student calls SSD office. It can be used to determined student last attempt to access the system.
- *User Profile.* SSD staffs can edit or view user information including username and password. For added protection, SSD staffs login information will not be shown at any time. SSD staffs also can track changes to the user profile, find all emails related to user, user login activities, and add follow up notes for the user.

- *Student Functions.* This section is available if user is a student. SSD staff can modify or track student profile, and check the status of student accommodation.
- *Employee Functions.* This section is available if user is an employee. SSD staff can modify employee access to the system. For added protection, administrator and SSD staff options are available only to administrator.

Profile: Haris Gunadi

User Profile At Glance	User Profile Functions
<ul style="list-style-type: none">User Type: Student and EmployeePhone Number: (541) 738 - 8770Account Status: ActiveFail Attempt(s) to Login: NoneLast Access Location:<ul style="list-style-type: none">IP Address: 127.0.0.1Time: 5/21/2006 [6:52:50 PM]Profile Last Modified:<ul style="list-style-type: none">By: Haris GunadiTime: 5/19/2006 [9:56:38 AM]	<ul style="list-style-type: none">View User ProfileEdit Main ProfileManage Username and PasswordSend User EmailArchive This User ProfileView User Login ActivitiesView Previous Profile EditorsView All Emails Sent to UserUser Internal Notes
Student Functions	Employee Functions
<ul style="list-style-type: none">Account Status: ActiveView Student ProfileEdit Student ProfileEdit Student EligibilityView Previous Profile EditorsAdd or View Current Student RegistrationsView Student's Registrations Record	<ul style="list-style-type: none">Account Status: ActiveView Employee ProfileEdit Employee ProfileView Previous Profile Editors

Figure 12. An example of user service center page.

Profile: Haris Gunadi

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Please select all applicable services for the student below:

Alternative Format

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Books On Tape | <input type="checkbox"/> Braille | <input checked="" type="checkbox"/> E-Text |
| <input type="checkbox"/> Enlargement | <input type="checkbox"/> Test For LBCC | |

Alternative Testing

- | | | |
|--|--|--|
| <input type="checkbox"/> Calculator | <input checked="" type="checkbox"/> Computer (for Testing) | <input checked="" type="checkbox"/> Extra Time 1.50x |
| <input checked="" type="checkbox"/> Extra Time 2.00x | <input checked="" type="checkbox"/> Oral | <input type="checkbox"/> Quiet Location |
| <input type="checkbox"/> Reader | <input type="checkbox"/> Scribe or Typist | <input type="checkbox"/> Spell Checker |
| <input type="checkbox"/> Wheelchair Access | | |

Classroom Access

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Accessible Computer | <input checked="" type="checkbox"/> Accessible Fieldtrips | <input checked="" type="checkbox"/> Chair |
| <input type="checkbox"/> Classroom Relocation | <input type="checkbox"/> In Class Service Animal | <input type="checkbox"/> Preferential Seating |
| <input checked="" type="checkbox"/> Table | | |

Deaf and Hard of Hearing

- | | | |
|--|---|---|
| <input type="checkbox"/> Alternative Learning Device | <input type="checkbox"/> Interpreting | <input type="checkbox"/> Interpreting (ASL) |
| <input type="checkbox"/> Interpreting (English) | <input type="checkbox"/> Interpreting (PSE) | <input type="checkbox"/> Real Time Captioning |
| <input checked="" type="checkbox"/> Real Time Transcribing | | |

Notetaking Services

- | |
|--|
| <input checked="" type="checkbox"/> Notetaking |
|--|

Others

- | | | |
|---|---|---|
| <input type="checkbox"/> Additional Notification to Faculty | <input type="checkbox"/> Advance Notice for Papers | <input checked="" type="checkbox"/> Classroom Assistant |
| <input checked="" type="checkbox"/> Flexibility (Attendance or Deadlines) | <input type="checkbox"/> Lab Assistant | <input type="checkbox"/> Library Assistant |
| <input checked="" type="checkbox"/> Overhead Copies | <input checked="" type="checkbox"/> Priority Scheduling | <input checked="" type="checkbox"/> Reduced Course Load |
| <input type="checkbox"/> Room Alone | | |

Figure 13. An example of eligibility profile for a student.

Profile: Haris Gunadi

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Please fill out the following form as accurate as possible, asterik (*) means that the field is *required*:

Student's Disability

Primary Disability*: **ADD or ADHD**

If A Student Has Other Type of Disability, Select All That Apply to the Student:

<input checked="" type="checkbox"/> ADD or ADHD	<input type="checkbox"/> Cerebelum Palsi	<input type="checkbox"/> Cerebral Palsy	<input checked="" type="checkbox"/> Deafness or Hearing Loss
<input type="checkbox"/> Diabetes	<input checked="" type="checkbox"/> Head Injury	<input type="checkbox"/> Learning Disability	<input checked="" type="checkbox"/> Orthopedic
<input type="checkbox"/> Psychological	<input type="checkbox"/> Seizures	<input type="checkbox"/> Speech	<input type="checkbox"/> Visual

Admission and Campus Location

First Term Admitted to SSD as Student*: **Spring** **2004**

When Admitted to SSD, Student is: **Currently a Registered Student at OSU**

Corvallis Campus: **Yes**

Distant Education (e-Campus): **Yes**

Cascade Campus: **Yes**

Student Academic Standing and Housing Information

Department: **College of Engineering**

Standing: **Graduate**

Housing: **Off Campus Housing**

Special Categories

Select All Special Categories That Apply to the Student:

<input checked="" type="checkbox"/> Commission for Blinds	<input checked="" type="checkbox"/> Division of Vocational Rehabilitation
<input checked="" type="checkbox"/> EOP/SSS	<input checked="" type="checkbox"/> Veterans

Figure 14. An example of student profile for a user.

Profile: Haris Gunadi

[Back to Service Center](#)

Employee Position(s)

Status:

Hiring Date: Format: 12/31/2005

Abbreviation: Example: **HNG** for **Haris Gunadi**

Please select at least one employee type for this user:

<input checked="" type="checkbox"/> Administrator	\$ <input type="text" value="0.00"/>	<input checked="" type="checkbox"/> Closed Captioner	\$ <input type="text" value="16.00"/>
<input checked="" type="checkbox"/> Editing (Transcriber)	\$ <input type="text" value="11.50"/>	<input checked="" type="checkbox"/> Interpreter	\$ <input type="text" value="23.00"/>
<input checked="" type="checkbox"/> Notetaker	\$ <input type="text" value="34.00"/>	<input checked="" type="checkbox"/> Reader (General)	\$ <input type="text" value="8.12"/>
<input checked="" type="checkbox"/> Reader (Technical)	\$ <input type="text" value="8.00"/>	<input checked="" type="checkbox"/> SSD Staff	\$ <input type="text" value="0.00"/>
<input checked="" type="checkbox"/> Student Worker	\$ <input type="text" value="4.00"/>	<input checked="" type="checkbox"/> Testing Proctor	\$ <input type="text" value="7.25"/>
<input checked="" type="checkbox"/> Transcriber	\$ <input type="text" value="23.00"/>		

Employee Email Signature

```
Haris Gunadi
Graduate Research Assistant
Oregon State University
http://ssd.oregonstate.edu
```

Figure 15. An example of employee profile for a user.

3.4.9 Uploading List of Classes

Before the student requests their accommodations, an administrator has to upload a class list to the database. Currently, system accepts any tab-delimited text file. There are 20 columns of data that are required for the system to upload. There are four steps involved in uploading classes; they are:

- SSD staff has to specify the location of each column entry. System can save the columns layout for future use.
- SSD staff is responsible to retrieve data from the Banner to get a list of classes for a specified term.

- The system verifies the number of columns and previews selected data to the user. SSD staff can randomly choose the data to verify the columns. User has to confirm the entry before it continues to the next processes.
- System retrieves current class information and stores it in the session. Then, it compares against one submitted by the SSD staff. It locates data that needs to be inserted and updated. Before it enters the information into the database, system will request final confirmation to staff. Compare to the earlier version, current system processes three times faster and it reduces the numbers of queries to the database by 99%.

Step 1 - Ensuring Appropriate File Format

1. Use Hummingbird, to extract the class list for a specific term.
2. Once the data is retrieved, make sure the column number for each field in the file is matched.
3. If you choose a new layout, the system will save it automatically.

<input type="text" value="1"/> Schedule Term	<input type="text" value="2"/> Course Registration Number
<input type="text" value="3"/> Course Subject	<input type="text" value="4"/> Course Number
<input type="text" value="5"/> Course Section	<input type="text" value="6"/> Course Title
<input type="text" value="7"/> Minimum Credit Hours	<input type="text" value="8"/> Maximum Credit Hours
<input type="text" value="9"/> Start Date	<input type="text" value="10"/> End Date
<input type="text" value="11"/> Start Time	<input type="text" value="12"/> End Time
<input type="text" value="13"/> Session	<input type="text" value="14"/> Course Type
<input type="text" value="15"/> Class Days	<input type="text" value="16"/> Campus
<input type="text" value="17"/> Building Name	<input type="text" value="18"/> Room Number
<input type="text" value="19"/> Instructor Name	<input type="text" value="20"/> Instructor ID

Saving Your Columns Layout

Save Column Layout
Warning: Your column layout will saved into database despite any error occurred.

Step 2 - Submitting a File

Figure 16. Administrator can specify a layout for the submitted file.

3.4.10 Registration

When the university registration begins, SSD recommends students to request accommodations after registering with the university. There are three steps needed to complete the procedure.

First, administrator goes to Access Control to allow students to register for the appropriate term.

Registration Control Form

Current Term:	<input type="text" value="Fall"/> <input type="text" value="2005"/>
Registration Term:	<input type="text" value="Fall"/> <input type="text" value="2005"/>
Lecture Type Class Code:	<input type="text" value="A"/>

Figure 17. Registration control form.

For a low vision student, system only allows one class CRN (Course Registration Number) entry at a time. It is intentionally designed to allow a low vision student navigate through the website easily.

Student Preferences and Privileges

List View: **Recommendation:** List is recommended for students with visual disability

Non Lecture Classes: **Recommendation:** By Pass is recommended for students with visual and hearing disability

Figure 18. Specifying preferences and privileges for a student.

Summary of Classes Registered This Term [Would You Like to Add More Class?](#)

Select Term:

List Classes: [View All Registration Details](#)

- [12333 - BA 275.002 QUANTITATIVE BUSINESS METHODS](#) [Status: ACTIVE]
- [12132 - BI 211.045 PRINCIPLES OF BIOLOGY](#) [Status: ACTIVE]
- [11111 - CSS 440.001 WEED MANAGEMENT](#) [Status: ACTIVE]
- [12312 - ENGR 407.011 SEM/MECOP/INDUST/MANUFACT ENGR](#) [Status: ACTIVE]
- [12222 - PH 104.019 DESCRIPTIVE ASTRONOMY](#) [Status: ACTIVE]
- [12323 - PH 212.013 GENERAL PHYSICS WITH CALCULUS](#) [Status: ACTIVE]

Figure 19. List of registration for students.

Add Registration - Step: Entering CRN Numbers

[Back to List Class Registration](#)

Current Registration Term:

Enter Your Course Registration Number(s) below:

Proceed

Figure 20. Adding a course registration number (CRN) into the database for low-vision student.

Add Registration - Step: Entering CRN Numbers

[Back to List Class Registration](#)

Current Registration Term:

Enter Your Course Registration Number(s) below:

Proceed

Figure 21. Adding a course registration number (CRN) into the database.

Second, student enters CRN number according to the class schedule. Many times students enter all CRN numbers in their schedules and request accommodation for non-lecture classes. If the system finds that there is one or more non-lecture class, system will ask student question if student really need accommodation for the class. In the student profile, SSD staff can allow student to by pass this question if it is deemed to be appropriate; i.e. low vision student.

Add Registration - Step: Non-Lecture Courses

[Back to List Class Registration](#)

Please review this classes, SSD usually does not accomodate non-lecture classes. If you still want to proceed with these classes, please meet with SSD staff to discuss your accomodation for the following classes.

Please Note: Please be advised that your request will not be approved until you meet with SSD Staff.

The Number of **Non-Lecture** Classes is **1**

Course: OAGU 288.001

Figure 22. Reminder student that SSD usually does not provide services for non-lecture classes.

Student only can request accommodation that student is eligible to receive. However, if the Director of SSD permits student to receive this accommodation temporally, SSD staff can go to the database to add the temporary accommodation for student. Only SSD staff will be able to view all requestable accommodations and have the options to approve the registration instantly or queue notification email to instructor.

Please select your services for the following classes:

Course: OAGU 288.001 - OS/AOYAMA GAKUIN UNIVERSITY	Non-Lecture	
Instructor: Primak Paul A		
Email Address: Currently Not Available		
Student Eligibility List:		
<input type="checkbox"/> Alternative Testing	<input type="checkbox"/> Real Time Transcribing	<input type="checkbox"/> Chair
<input type="checkbox"/> Notetaking Services	<input type="checkbox"/> Table	<input type="checkbox"/> E-Text
<input type="checkbox"/> Books On Tape		

Figure 23. List of eligibility for student.

Please select your services for the following classes:

Course: OAGU 288.001 - OS/AOYAMA GAKUIN UNIVERSITY	Non-Lecture		
Instructor: <input type="text" value="Primak Paul A"/>	Find Email		
Email Address: <input type="text"/>			
Student Eligibility List:			
<input type="checkbox"/> Alternative Testing	<input type="checkbox"/> Real Time Transcribing	<input type="checkbox"/> Chair	
<input type="checkbox"/> Notetaking Services	<input type="checkbox"/> Table	<input type="checkbox"/> E-Text	
<input type="checkbox"/> Books On Tape			
Other Services:			
<input type="checkbox"/> Library Assistant	<input type="checkbox"/> Real Time Captioning	<input type="checkbox"/> Braille	
<input type="checkbox"/> Lab Assistant	<input type="checkbox"/> Interpreting	<input type="checkbox"/> Enlargement	
<input type="checkbox"/> Additional Notification to Faculty	<input type="checkbox"/> Classroom Relocation	<input type="checkbox"/> Test For LBCC	
Available Actions:			
<input type="checkbox"/> Approve Registration	<input type="checkbox"/> Notification Letter	<input type="checkbox"/> Early / Late Notification Letter	<input type="checkbox"/> Send Now

Figure 24. List of eligibility for student (administrator access).

3.4.11 Alternative Formats

Alternative Formats is one of the last two parts that needs to be integrated with the database. Alternative Format contains the most tables in the database. OSU Bookstore agrees to share some of its resources to eliminate SSD staff hours in retrieving books for each class. OSU Bookstore provides a link for SSD to get book information from its database. The process to accommodate student requests involves four important steps.

- SSD Staffs requests book list from OSU Bookstore website.

List of Books from Bookstore

Add	Con	Book Title	ISBN	Edition	Author	Publisher	Req
	<input type="checkbox"/>	BI 103 CLASS NOTES		Fall 2005	STAFF	OSU PRINTING...	Yes
		HUMAN BODY	0789479885		BAGGALEY	DK PUBLISHING	Yes

Figure 25. List of books from bookstore.

- When a book is not available in SSD database, SSD staff has the option to add the book to the database. If it is available in SSD or processed previously for another class, SSD staff can link the class to the book by creating a connection.

List of Book(s) and Class Note(s) Linked to the Class

Book Title	ISBN	Edition	Publisher	Status	Info
BI 103 CLASS NOTES		Fall 2005	OSU PRINTING...		
HUMAN BODY	0789479885		DK PUBLISHING		

Figure 26. Connected books to a class.

- When it is connected, SSD staff can find the review the progress of the books. If the type of request has not been fulfilled, SSD staff can create an assignment. There are four types of assignments; they are: in house audio recording, outsource the assignment (obtain tapes or CD from Reading for Blind and Dyslexic), E-Text production, and enlargement.

Current Requests

Select Term to View Request: **Fall** **2005** 

Student Name	Course	Books On Tapes	E-Text	Enlargement
Gunadi, Haris	CSS 440.001	Cancelled	Requesting	Requesting
Gunadi, Haris	CSS 540.001	Requesting	Requesting	
Onq, Caryn	CSS 440.001	Cancelled		

Current Assignments

Reader	Type	Status	Assigned	Updated By	Info
Gunadi, Haris	In-House	Completed	4/27/2006	Gunadi	
Gunadi, Haris	Enlarge	In Progress	5/17/2006	Gunadi	
In-House E-Text	E-Text	In Progress	5/10/2006	Gunadi	
State Library	Outsource	Completed	4/28/2006	Gunadi	

Add Assignment

Add Assignment for This Book: **- Select Type of Assignment -** 

Figure 27. List of requests and current assignment for the current book.

- Each assignment has a barcode as identification. When the assignment is completed or ordered material arrives, the barcode can be used to directly transfer user to the appropriate pages.

Assignment

Assigned To: [Gunadi, Haris](#)

Source: **In-House Audio Recording**

Assigned Date: **04/27/2006** **Warning:** Incorrect Date will not be Updated

Additional Note:

Assignment Status: **Active**

Assignment is Complete [Completed on **5/16/2006**]

Location of Media:

Pick Up Location: **Student Box**

First Entered: **4/27/2006 11:04:11 AM** [By [Gunadi, Haris](#)]

Last Updated: **5/16/2006 2:34:41 PM** [By [Gunadi, Haris](#)]

HUMAN BODY



B51323068719091

Figure 28. Assignment sheet for reader.

- When the reader brings tapes to SSD office or ordered material (E-Text) arrives, SSD staff or employee has to put the materials in the student box and update the assignment appropriately. Available means that the book is available for student to pick up. Check-out means that the book has been checked out by student.

Books On Tape Request

Title	Q	Gunadi, Haris CSS 440.001 Cancelled Have Receipt History	Gunadi, Haris CSS 540.001 Active Have Receipt History	Ong, Caryn CSS 440.001 Cancelled No Receipt History
C: ALL	10	Check Out	Check Out	Select
C: 1-3	4	Check Out	Check Out	Select
C: 4-7	6	Available	Available	Select
P: 200-300	4	Check Out	Check Out	Check In
C: 5-8	1	Check Out	Check Out	Available
C: 1-5	4	Check Out	Check Out	Available
C: 20-30	10	Select	Select	Select
C: 15-30	3	Available	Available	Select

Important Note: You have to make sure that tapes are available before student can check them out.

[Update](#) [Add Media](#)

Figure 29. List of student who requests for the books.

- System will send email notification to student to pick up the materials. Student can track their requests through the system.

To track hundred of assignments each term will not be an easy task. Therefore, there are a number of queries created to assist coordinator to track assignment that has not complete or finds out materials that have not been picked up by the students.

3.4.12 Alternative Testing

Alternative Testing is the first version of SSD Online Services. There are three major improvements over how contract is created from a template, how student modifies the exam request, and what proctor sees on the page.

Contract is the essential part of requesting alternative testing accommodation. It is an agreement between instructor and student on how exam should be processed. In order to allow student to enter a contract, SSD staff has to approve student registration and mail notification letter to the instructor. Then, the student is required to meet with instructor to create a contract. To ensure this, the instructor will be notified when contract is entered and the instructor is required to approve the request before student can enter or request exams. In the Access Control, administrator can determine whether a contract needs approval from instructor.

Administrator can create a contract template that will be effective immediately. The process of creating a contract involves five steps:

- Disable access to submit a contract. You can prevent student access from entering a contract while you are creating a new contract or editing current contract. It is not recommended to edit a contract while the term is progressing.

Alternative Testing Control Form

Allow Contract: **Yes**

Contract Approval: **By Pass**

Enforce Request Rules: **Yes**

Allow Testing Request: **Yes**

If student is allowed to enter a contract and administrator will not be able to modify the contract.



Figure 30. A warning when trying to update a contract template.

- Administrator has to specify type and possible answers for each question in the contract. First line is a question and the rest are possible answers. There are three types of questions; they are: radio buttons, check boxes, and list of text boxes. On each question, administrator can select whether the question can be included with the instruction sheet.

For radio button (always required student to choose one answer):

Template 1: Type: **Radio Buttons** ▾

May the student take the exam at an alternate time in the event of a time conflict?
 No
 Yes[R] [T]If Yes, when: [/T]

Print Selected Items to Assignment Sheet? Yes

Figure 31. An example of how to specify radio button type question.

For the radio button, [R] means that the student is required to enter additional information.

1. May the student take the exam at an alternate time in the event of a time conflict?

No

Yes*

If Yes, when:

Printable: **No**

Figure 33. A preview of radio button type question.

For check boxes (not required to select):

Template 6: Type: **Check Boxes** ▾

Please specify exam instructions
 Open book
 Open notes
 Note card
 Calculator[T]Additional Instruction: [/T]

Print Selected Items to Assignment Sheet? Yes

Figure 34. An example of how to specify check box type question.

6. Please specify exam instructions

Open book

Open notes

Note card

Calculator

Additional Instruction:

Printable: **Yes**

Figure 35. A preview of check box type question.

For text boxes (only those required to need to be filled):

Template 5: Type: **Text Boxes** ▼

Drop off instructions

Drop off location (the department office is preferable): [R]

Additional drop off instructions:

Print Selected Items to Assignment Sheet? **Yes**

Figure 35. A preview of text box type question.

5. Drop off instructions

Drop off location (the department office is preferable): **Required Field**

Additional drop off instructions:

Printable: **Yes**

Figure 36. A preview of text box type question.

- Administrator has the chance to review the template.
- Once submitted, administrator can select which template can be used for the current term.
- In the Access Control, administrator has to allow student to enter contract.

After selecting a template, student can enter the contract. To create a contract and a request a test, the complete steps as follow:

- Student selects an appropriate contract.

Alternative Testing Contract - Step 1

List of Available Contract:

Figure 37. Step 1 for selecting an appropriate class.

- Student fills out a contract with instructor presence.

Alternative Testing Contract - Step 2

PH 212.013 - GENERAL PHYSICS WITH CALCULUS

1. May the student take the exam at an alternate time in the event of a time conflict?

No

Yes*

If Yes, when:

2. If clarification is needed during an exam, what should the student do?

Write the question in the margin of the exam

Answer the question and email the professor or stop by office hours afterward

Other*

Specify:

Figure 38. Step 2 for answering contract questions.

- Instructor has to select who will provide the exam location and select types of exams in the class.

Alternative Testing Contract - Step 3

PH 212.013 - GENERAL PHYSICS WITH CALCULUS

Who Provide the Location of the Exam?

Specify Exam Length

Important Note: Do not **MULTIPLY** the minute for student.
If you left the field **BLANK** or **ZERO** (0), it means that the type of exam **will not be offered** in the class.

How long will **students in the classroom** be allowed for each quiz, midterm, and final?

Quiz: Midterm: Final:

Instructor Contact Information

Instructor Phone Number: - -

Additional Information or Comment for Contract:

Figure 39. Step 3 for specifying instructor contact information and exam types.

- Student may request exam now or at later time. In the past, students often forgot to request their exams after entering a contract. Now, the student can enter the exams while entering the contract with the instructor.

Alternative Testing Contract - Step 4

PH 212.013 - GENERAL PHYSICS WITH CALCULUS

Schedule Your Exam

Exam Type:

Exam Date: For example: enter 06/05/2006 for June 5 ,2006

Exam Time: : For example: select 13:00 (Military Time) for 1 PM

Services:

<input type="checkbox"/> Computer (for Testing)	<input type="checkbox"/> Extra Time 1.50x
<input type="checkbox"/> Extra Time 2.00x	<input type="checkbox"/> Oral

Additional Note:

Figure 40. Step 4 for entering your exam requests.

- Student confirms the contract. If instructor approval is required, system will send an email with a link that instructor can click to approve the contract.
- SSD Staff will review student contracts and make sure contract is approved. After 48 hours, administrator can override the contract and system will send email notification to instructor.

- SSD Staff will approve student request and assign exam location. An email notification will be sent to student.

CSS 440.001-WEED MANAGEMENT

Schedule Your Exam

Cancel Request **Back to List**

Exam Type: **Quiz**

Exam Date: **06/29/2006** For example: enter 06/05/2006 for June 5 ,2006

Exam Time: **07 : 00** For example: select 13:00 (Military Time) for 1 PM

Services:

- **Computer (for Testing)**
- **Extra Time 1.50x**
- **Extra Time 2.00x**
- **Oral**

Additional Note: **Test**

SSD Staff Function

Assign Room:

Approve This Request

Edit This Request

Back to List

View Contract

Figure 41. Approving student request for testing by specifying the exam location.

- Proctor can request assignment for the approved exam. It is determined based on first come first served basis.

List of Available Exams

SBJ	CRS	SEC	Type	Date	Time	Length	Location	Assign Me
CSS	440	001	Midterm	6/27/2006	07:00	100	Test	Assigned
CSS	440	001	Midterm	6/28/2006	07:00	50	Test 2	Requested
CSS	440	001	Quiz	6/29/2006	07:00	100	Kerr Admin 202	Assign Me

Figure 42. Viewing available and assigned assignments (proctor view).

- Exam will be assigned to a proctor at SSD staff discretion. SSD staff can view proctors who want to be assigned.

SSD Staff Function

Assign Room:

Select Proctor:

Student Name	Requested Date
Gunadi, Haris	6/27/2006 12:25:32 AM

Figure 43. Assigning proctor for the exam request.

- When a proctor is assigned, email sent to a proctor to confirm the assignment.
- A day before the exam, instruction sheet will be printed out and exams will be picked up accordingly.

After a request is approved by SSD staff, student may still request a modification to the exam. All changes are pending to SSD Staff's approval.

CSS 440.001-WEED MANAGEMENT

Schedule Your Exam

Cancel Your Request **Cancel Pending Changes**

Changes Pending Details

- Change exam type to **Midterm** from **Final**.

Exam Type: **Midterm** ▾

Exam Date: **06/28/2006** For example: enter 06/05/2006 for June 5 ,2006

Exam Time: **07** ▾ : **00** ▾ For example: select 13:00 (Military Time) for 1 PM

Services:

<input checked="" type="checkbox"/> Computer (for Testing)	<input type="checkbox"/> Extra Time 1.50x
<input type="checkbox"/> Extra Time 2.00x	<input checked="" type="checkbox"/> Oral

Additional Note: **Test**

Update Exam Request **Back to List**

Figure 44. Modifying an approved exam request (student view).

CSS 440.001-WEED MANAGEMENT

Schedule Your Exam

Cancel Request **Back to List** **Cancel Pending Changes**

Changes Pending Details

- Change exam type to **Midterm** from **Final**.

Approve Pending Changes

Exam Type: **Midterm**

Exam Date: **06/28/2006** For example: enter 06/05/2006 for June 5 ,2006

Exam Time: **07 : 00** For example: select 13:00 (Military Time) for 1 PM

Services:

- Computer (for Testing)**
- Oral**

Additional Note: **Test**

Figure 45. Modifying an approved exam request (staff view).

3.4.13 Deaf and Hard of Hearing

Along with Alternative Formats, Deaf and Hard of Hearing application is finally integrated into the system. The coordinator of the services under this category manages interpreting, real time transcribing, and real time captioning requests. The coordinator can view student requests all term or weekly. Some classes start later and/or end earlier than other normal lecture classes; for example: classes in summer have different start times. This function is to help coordinator to assign appropriate employee for the requests. Each staff works under this coordinator is required to enter work schedule. The process to enter a work schedule is easy as one click. Employee clicks on the appropriate cell of the table to identify the availability. Then, the coordinator will assign employee based on the work availability.

Please Select Your Available Work Time:

Select Another Term: [\[Click Here if You Want to Clear All Your Choices\]](#)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0700							
0730							
0800							
0830							
0900	CSS 440.001 CRPS 122	ANS 121.010 SPAV 101	CSS 440.001 CRPS 122		CSS 440.001 CRPS 122		
0930	CSS 440.001 CRPS 122	ANS 121.010 SPAV 101	CSS 440.001 CRPS 122		CSS 440.001 CRPS 122		
1000		ANS 121.010 SPAV 101					
1030		ANS 121.010 SPAV 101					
1100							
1130							
1200							
1230							
1300							

Figure 47. List of available work time for transcriber and interpreter.

The coordinator can view all the services requested in the *Master List* by term or by week.

Term: | Service: Range:

View Only:

Monday Tuesday Wednesday Thursday Friday Saturday Sunday

Services: **Real Time Transcribing** Current Term: **Fall 2005**

Schedule From: **11/21/2005 To 11/27/2005** [Previous Week](#) [Next Week](#)

Time	Monday				Tuesday					
0900	ANS 311.001	FST - SCD	CSS 440.001	HNG - FST	ANS 121.010	HNG	NE 531.001		PH 411.010	SCD
0930	WITH 109		CRPS 122	HNG - FST	SPAV 101	HNG	RC 104C		WNGR 302	
1000	PH 205.001					HNG				
1030	WNGR 153					HNG				
1100										

Figure 48. Master form for viewing requests for the current term.

Class Information

Title: **ANS 311.001 - PRINCIPLES OF ANIMAL NUTRITION**

Instructor: **Mueller Chad Jason**

Location: **WITH 109**

Schedule: **0900 to 0950 [Days: MWF]**

View:

Real Time Transcriber

Student Name	Last Updated	Status	Ir
Gunadi, Haris	Tuesday, April 25, 2006 1:26 AM	Active	

Employee Schedule

Time	Monday	Wednesday	Friday
0900			
0930	First Transcriber		First Transcriber

Assignment

Time	Primary	Secondary
0900	<input type="text" value="First Transcriber"/>	<input type="text" value="Second Transcriber"/>
0930	<input type="text" value="- Select From List -"/>	<input type="text" value="- Select From List -"/>

Additional Note: (To Be Viewed By The Employee)

Figure 49. Assigning staffs to the class.

3.4.14 Notetaking Services

Notetaking database has existed for almost two years and there are five areas of improvements in the new system. There are:

- The coordinator will be able to modify the contract through a template.

Notetaking Services Control Form

Allow Invoice: Yes

Payment Type: **Per Credit** **Money** Compensation:

Important: Enter dollar amount if you choose money as the compensation type

Contract Contents: **Notetaker Responsibilities:**

- [li]Notetakers need to contact assigned student(s) within one week of the notetaking assignment.[BR][BR][/li]
- [li]Notetakers are expected to honor all information that is confidential regarding student(s) with disabilities.[BR][BR][/li]
- [li]Non US Citizen: Students applying to become a notetaker will need to show proof of Social Security card and Visa.[BR][BR][/li]
- [li]Arrange for a substitute to take notes if you will be absent from class.[BR][BR][/li]
- [li]Adhere to the schedule for delivering notes per the notetaker/student

Current View:

- A. Notetakers need to contact assigned student(s) within one week of the notetaking assignment.
- B. Notetakers are expected to honor all information that is confidential regarding student (s) with disabilities.
- C. Non US Citizen: Students applying to become a notetaker will need to show proof of Social Security card and Visa.
- D. Arrange for a substitute to take notes if you will be absent from class.
- E. Adhere to the schedule for delivering notes per the notetaker/student contract.
- F. All Notetakers are responsible for providing SSD with current contact information; failure to do so may result in delayed payment.
- G. All notetakers are responsible for informing the Notetaking Coordinator if a notetaker is not needed in the class (i.e., complete notes posted on Blackboard). PowerPoint slides without complete class notes are not an acceptable form of notes and do not meet the required contract terms for notetaking.

Figure 50. Modifying a notetaking contract.

- Student who is interested to become a notetaker can easily sign up through the new system without visiting the SSD office.
- Notetaker will be able to sign an electronic contract through the new system. To make the process simple, notetaker will have to sign a new contract each year to provide a service for the following year. For resident and non-resident aliens, the contract will be approved pending students visit to the SSD office to show prove of visa.

Notetaker's must carefully read and sign this form electronically before receiving access to the Online Services or being assigned as a notetaker.

Full Name: **Haris Gunadi**
University ID: **930 - 281 - 480** Phone: **(541) 738 - 8770** Email: **Haris.Gunadi@oregonstate.edu**
Local Address: **A202 Kerr Administration Building, Corvallis, OR, 97331**
Contract Year: **2005**

Citizenship: **Resident Alien**

- Responsibilities:
- A. Notetakers need to contact assigned student(s) within one week of the notetaking assignment.
 - B. Notetakers are expected to honor all information that is confidential regarding student(s) with disabilities.
 - C. Non US Citizen: Students applying to become a notetaker will need to show proof of Social Security card and Visa.
 - D. Arrange for a substitute to take notes if you will be absent from class.
 - E. Adhere to the schedule for delivering notes per the notetaker/student contract.
 - F. All Notetakers are responsible for providing SSD with current contact information; failure to do so may result in delayed payment.
 - G. All notetakers are responsible for informing the Notetaking Coordinator if a notetaker is not needed in the class (i.e., complete notes posted on Blackboard). PowerPoint slides without complete class notes are not an acceptable form of notes and do not meet the required contract terms for notetaking.
- Compensation:
- A. Payment is \$34 per credit hour, i.e., a notetaker will be paid \$102 for a 3-credit class and \$136 for a 4-credit class. Classes with associated labs and recitations will NOT be paid for unless the notetaker is specifically requested to take notes by the Notetaking Coordinator.
 - B. If a notetaker is taking notes for four or more students in a class, the notetaker will receive an additional \$50 for every fourth student, i.e., 3-credit class, three students = \$102; 3-credit class, four students = \$152.
 - C. Once you have earned \$600 you become responsible for taxes and other costs associated with being a private contractor (please read guidelines in the Notetaker handout). If you need to pay taxes and/or other costs OSU will send a 1099 form by the end of January.
 - D. If a student drops the class or the notetakers performance is not meeting the needs of the student, the notetakers pay will be prorated from the day the student drops the class or when services are cancelled.

I understand that I am contracting with Oregon State University to provide class notes to students with disabilities. I understand my responsibilities and agree to provide notes according to the above contract. I have read and agree to adhere to Oregon State University's terms of payment as a Personal Services Contractor.

Enter Your Last Name: **Gunadi**

First Entered on: **Monday, May 29, 2006 2:08:13 AM** Last Updated on: **Monday, May 29, 2006 5:55:24 PM**

Figure 51. An example of signed notetaker contract.

- Each notetaker will receive one invoice for all classes linked to the invoice. This is to avoid paying same notes for two different sections of the classes.

- Notetaker will be able to submit an electronic copy of the notes and it will be available instantly to the students.

Files Submitted

Submit File:

Description:

List Files Submitted Previously:

File Description	Date Posted	Posted By	Link
Test	6/5/2006	Gunadi	Get File
Test	6/5/2006	Gunadi	Get File
Test	6/4/2006	Gunadi	Get File

Figure 52. Submitting note files for the current class.

Aside from the new improvement, notetaker will follow the same process to complete the cycle. The processes consist of:

- Notetaker signs an electronic contract each year.
- Notetaker enters classes into the database.
- When a notetaker is matched, notetaker will have to confirm the assignment.

Dear Notetaker,

We are pleased to inform you that you have notetaking assignments for **BA 275.002**.

Please login to SSD website as soon as possible to print out the Notetaker/Student Agreement.

You will need to contact the student(s) you are taking notes for to set up a time to meet to sign the Agreement.

IMPORTANT - PLEASE READ BELOW CAREFULLY

- **Click YES means I would like to take notes in this class** if you are still enrolled in this class and would like to take notes. By clicking this link you will be assigned as a notetaker and will need to meet with your student(s) to complete the notetaking agreement
- **Click NO means I would not like to take notes in this class** if you have either dropped the class or do not feel that you could take notes in the above mentioned class.

Agreement is due on **Monday, June 12, 2006**.

Payment: You will be paid in Full for your notes.

To obtain **agreement** or student(s) contact information, please visit <https://secure.oregonstate.edu/ssd/online/index.aspx>

Services for Students with Disabilities
A202 Kerr Administration Building, Corvallis, OR 97331
Phone: 541-737-4098 (Voice), N/A (TDD)
Email: Disability.Services@oregonstate.edu

Figure 53. An example of confirmation email sent to notetaker.

- Notetaker will contact students to agree on the method and the time which the notes will be delivered.

CSS 440.001

Fall 2005

CONFIDENTIAL



112345678901234

**OREGON STATE UNIVERSITY
SERVICES FOR STUDENTS WITH DISABILITIES
NOTETAKER/STUDENT AGREEMENT**

Notetaker: Haris Gunadi

Student Name:	Haris Gunadi	BOX: 111
Student Email:	Haris.Gunadi@oregonstate.edu	
Notes will be delivered: (please check all that apply)		
<input type="checkbox"/> Immediately after class	<input type="checkbox"/> To SSD office and place in student box	<input type="checkbox"/> Post on SSD Website
<input type="checkbox"/> Other: _____		
Notes will be given to the student:		
<input type="checkbox"/> MWF by _____	<input type="checkbox"/> TR by _____	
<input type="checkbox"/> Other: Indicate day of the week and time: _____		
Student Signature: _____	Date: _____	

As a notetaker contracted with Oregon State University's Services for Students with Disabilities, I agree to comply with the location, date, and time for the delivery of notes for the student and course identified above.

Notetaker Signature: _____ Date: _____

NOTETAKERS:

- Notetakers are to provide detailed notes for SSD students. The date, class title, and student's file number should be listed at the top of the first page of notes.
- The notes must include more than what is written on the board, overhead, or slides. The notes should include, but are not limited to: what is written, what the instructor says, what is discussed by the class, homework assignments, and due dates.

CONFIDENTIALITY:

- All information about the student you are taking notes for is highly confidential. Do not disclose any information that is given to you regarding the student, including names, disability, or contact information.
- SSD will not tell you the student's disability. You cannot ask the student questions regarding their disability. Please be sensitive to the individual's privacy.

Figure 54. An example of notetaker and student agreement.

- At the end of each term, notetaker will print out an invoice. To print an invoice, notetaker has to have at least one agreement turned in.

SPECIAL PERSONAL SERVICES INVOICE FOR CLASS NOTES



112345678901234

To: **Services for Students with Disabilities**
 A202 Kerr Administration Building
 Corvallis, Oregon 97331-2133

From: **Haris Gunadi**

A202 Kerr Administration Building
 Address
 Corvallis, OR 97331
 City/State/Zip Code

Resident Alien

OSU ID: **930 - 281 - 480**

Phone # _____

Email: **Haris.Gunadi@oregonstate.edu**

CERTIFICATION: I am an independent contractor, and I understand the tax and legal implications of this particular payment to be reported on **Form 1099** at the end of the calendar year. Oregon State University Terms of Payment for Personal Services under \$5,000 apply and I agree to those terms as stated on the attached page. By my signature hereon, I certify that I am requesting payment for taking notes in **CSS 440.001** during **Fall 2005** for the student(s) listed below:

Signature of Payee: _____

Student(s): Your signature below indicates that you received notes for the course listed above. Your signature is required in order to process this invoice. At least one student signature is required.

BOX#	Signature	Date	Agreement	Status
222	_____	_____	Cancelled	Not Sign
111	_____	_____	Active	Signed

FOR ESU OFFICE USE ONLY

I
 Banner Doc No. _____

MSA035 - MNOT - 24599
 Index and Account Code

Contact Name and Phone Number _____

Department Budget Approval _____

FOR SSD OFFICE USE ONLY

_____	1 - Credit Hour Class:	\$ 34.00
_____	2 - Credit Hour Class:	\$ 68.00
_____	3 - Credit Hour Class:	\$102.00
_____	4 - Credit Hour Class:	\$136.00
_____	4 + Students in Class:	\$50.00

Other: **Prorated [3 Weeks]**

Note: Science classes with labs are paid
 3 credit hours for the lecture and
 1 credit hour for lab.

Total Amount Approved: \$ _____

Figure 55. An example of notetaker invoice.

- The coordinator will process the invoice and notetaker will be paid accordingly.

5. Future Development

On August 2006, this system will be tested and used simultaneously at Oregon State University and Linn-Benton Community Colleges. This is a great opportunity to add additional features (minor) and fix bugs that were not found during the testing and integration processes.

This software is the first to answer problems faced by many disability offices in the higher education colleges. There is a great opportunity to commercialize this product and it is important to create an automated installation files to ease the installation process.

6. References

- [1] Chisholm, W. Vanderheiden, G. Jacobs, I. HTML Techniques for Web Content Accessibility Guidelines 1.0. World Wide Web Consortium (W3C). 2000.

Available at: <http://www.w3.org/TR/WCAG10-HTML-TECHS/#data-tables>

- [2] Barbosa, RM. *C# Barcode Generator WebService*. 2003.

Available at: <http://www.codeproject.com/cs/webservices/wsbarcode.asp>