Adaptive Technology and Accessibility Center: Final Specification

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Executive Summary

Problem Definition

The Adaptive Technology and Accessibility Center (ATAC) at Indiana University serves the IU campuses by providing students, faculty and staff with access to technologies that aid in coursework and information access. For the purposes of this project, we have focused on the blind edit process, which helps blind or low vision clients access textbooks, articles and other forms of information they may need for their jobs or coursework. Because of the way the current system is structured, the ATAC can become overwhelmed with the amount of information they need to process, especially at the beginning of the semester.

Current System

Currently, students or campus coordinators working on behalf of the students will contact the ATAC, usually through email, and provide student, class and syllabus information. However, as it is now, the information provided may not be enough for ATAC staff to fully support the students' needs, which requires the lead blind editor to spend valuable time chasing down the necessary information before beginning to process documents. The lead editor then enters the requests into a single Excel spreadsheet, which contains the title of the request, student and course information, date the request is due and each of the stages it passes through before the processed file is sent to the student. Editors can claim a request through the spreadsheet, although the claims are not based off of any formal criteria, other than perhaps the request's due date. This spreadsheet must be updated at each stage of the process before an editor can move on to the next, but because the spreadsheet can only be opened by one person at a time, editors will sometimes skip or forget this step in favor of continuing to work on the documents. If this happens, documents may be edited twice, remain unprocessed or simply be lost in the shuffle, until a student emails in a complaint. All of these emails remain in the inbox, with no organizational system, making it difficult to track students and keep records.

Recommendations

We proposed two sets of options for the ATAC, each of which would help alleviate and/or solve the problems we identified, as well as a set of universal recommendations, which we felt should be implemented no matter what. When we presented these options to staff members at the ATAC, they expressed a strong preference for one set of options over the other. We have included the other set in this report as a backup, in case it is decided that the preferred option cannot easily be implemented.

The preferred option involves creating a new web-based request tracking system for the ATAC. This system will allow students to create an account for themselves and enter their course, textbook and syllabus information, eliminating the need for multiple back-and-forth emails between the ATAC and the student before the documents can be processed. In addition, the student will be able to track the status of their documents and can mark certain documents as having higher priority than others.

On the other end of the system, the ATAC will be able to create a list of requests to be processed, with due dates when available, set formal prioritization criteria for requests, see when requests are ready for the next step in the blind edit process, track who is performing which tasks, and generate reports tracking overall statistics for the ATAC.

The second set of options involves tweaking the existing system to help the work flow a little better. This includes creating an organizational system for the email account, create a standardized intake form and procedure, creating and implementing a backup schedule, clarify the field names for the Excel sheet and create a checklist/documentation to make sure the sheet is filled out correctly and share the Excel sheet so that multiple users can have it open simultaneously.

Our universal recommendations are geared towards some organizational issues, which we feel might cause greater problems in the future if not dealt with now. We suggest documenting ATAC policies and procedures, cleaning up existing documentation to get rid of outdated information and performing continual reviews of both the email accounts and spreadsheet, to keep records as current as possible.

Cost/Benefit Analysis

An analysis of the recommendations reveals that the "universal" recommendations would come at a low cost but offer high-impact improvements that would not affect the existing practices of the ATAC. The "backup" recommendations would be slightly more costly, requiring minimal adjustments to the existing work flow, but they would address many of the common problems encountered by staff. The preferred request tracking system would require the greatest investment of time and resources, but could resolve the majority of efficiency problems observed throughout the center. We propose that the benefits to the center from any of these recommendation sets would outweigh the costs of implementation. We also propose alternatives that could lower these costs for optimal gain.

Current System

The ATAC's main goal is to provide technology solutions for IU students with disabilities. One service that the Center offers is a text editing service that modifies clients' textbooks and class documents into formats readable by audio text-reading software. Each semester, the ATAC processes a large number of class texts for clients and has sets of processes in place to effectively handle the large volume of documents that comes through the ATAC each semester.

New clients learn about the ATAC through several potential routes depending on their campus' guidelines. Different offices or professors may provide contact information to a student or directly refer them to the office. Each client's situation is different, so the ATAC anticipates a variety of means of contact from new clients. After contacting the ATAC, clients meet with a staff member for an intake meeting to determine what services and technology the ATAC needs to and can provide for them. If a client needs textbooks run through the blind editing process, she fills out a separate paper form for each book or item needed. This form is identical for each item submitted - that is, the client fills out her same personal and class information on each form. The ATAC processes these forms and begins acquiring the texts needed for that client's classes.

To keep track of the multiple texts that clients need throughout the semester, the editors use a shared spreadsheet that contains document information including due dates, documents' page counts, document titles, clients' names and campuses, and the classes for which the projects are needed. Near the beginning of a new semester, clients send their syllabi to the ATAC and the lead editor enters due dates and other document information into the shared spreadsheet to create each project entry. Sometimes, this syllabus information is incomplete and the lead editor depends on the student to update her with information as it becomes available.

One way that the ATAC communicates with clients and receives documents is through e-mail. The ATAC uses a shared Microsoft Outlook account that several people access as a workstation. People handle e-mails pertinent to their responsibilities and skills, and everyone works from the same inbox.

After the ATAC receives the textbook or article in PDF form, either directly from the publisher or database or by scanning the pages directly from the client's copy, the PDF files are moved to a server to which the entire office staff has access. From this point, the PDF needs to be OCRed (program that reads text from text documents saved as images - at the ATAC, this step is referred to as ABBYYing in reference to the software program used) and edited as a Microsoft Word document before it is returned to the client. The ATAC uses Word to edit these documents because it is a readable format with many text reading programs, and it is also readily available to IU students.

Editors check the spreadsheet to find projects that need to be completed. First, an editor sees that a project needs to be ABBYYed. After that step is complete, she notes on the spreadsheet the date on which she finished ABBYYing the document. After that, any editor who sees that the file is ready for editing can "claim" that project and edit the text. When the document is edited to the proper specifications, the editor marks the project as completed by noting on the spreadsheet the date that editing was finished. When the lead editor sees that the

document has been edited and the project is complete, she sends the document to the client through whatever channels have been specified for that individual's campus.

Images 1-3 are in-depth sequence models of these three processes. Image 4 illustrates the processes of the entire ATAC, including processes other than blind editing.

Image 1: Intake Sequence

Client requests text

Caitlin retrieves request

Textbook

Handouts, articles, powerpoints

Scott requests source from publisher

Caitlin downloads source from Oncourse, Ereserves, other library resources

Publisher sends source

Publisher does not send source

Scott requests book from client

Client brings book to ATAC

Outdated, redundant

Scott fills Intake Form

Scott makes PDF from book

Source placed in shared server

Caitlin enters request into Excel spreadsheet *A lot of information entered manually*

Image 2: ABBYY Sequence

Trigger: ABBYYer comes to work

Not triggered by request

ABBYYer chooses source to process

No formal prioritization

ABBYYer processes PDF

ABBYYer puts Word document in shared server

ABBYYER enters information into Excel spreadsheet

Image 3: Editing Sequence

Trigger: Editor comes to work

Not triggered by request

Editor chooses request to claim

No formal prioritization; sometimes choose based on length, convenience, etc.

Editor claims request in Excel spreadsheet

Spreadsheet not shared; sometimes claims not saved

Editor retrieves source and ABBYYed Word documents from shared server

Editor compares source and ABBYYed Word documents, saves edited Word document in "In Progress" folder of the shared server

Easy for editors to save over ABBYYed Word document

Editor moves finished Word document from "In Progress" to "Edited" folder

Editor updates Excel spreadsheet

Caitlin retrieves finished file

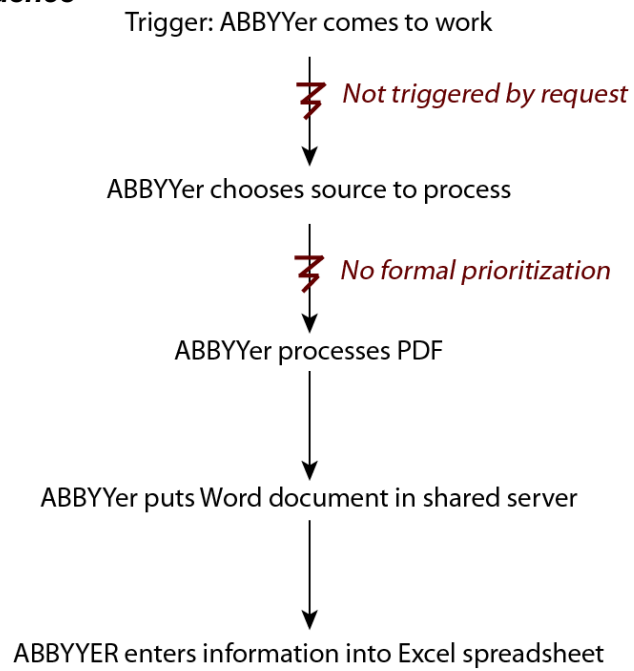Caitlin emails finished file to client

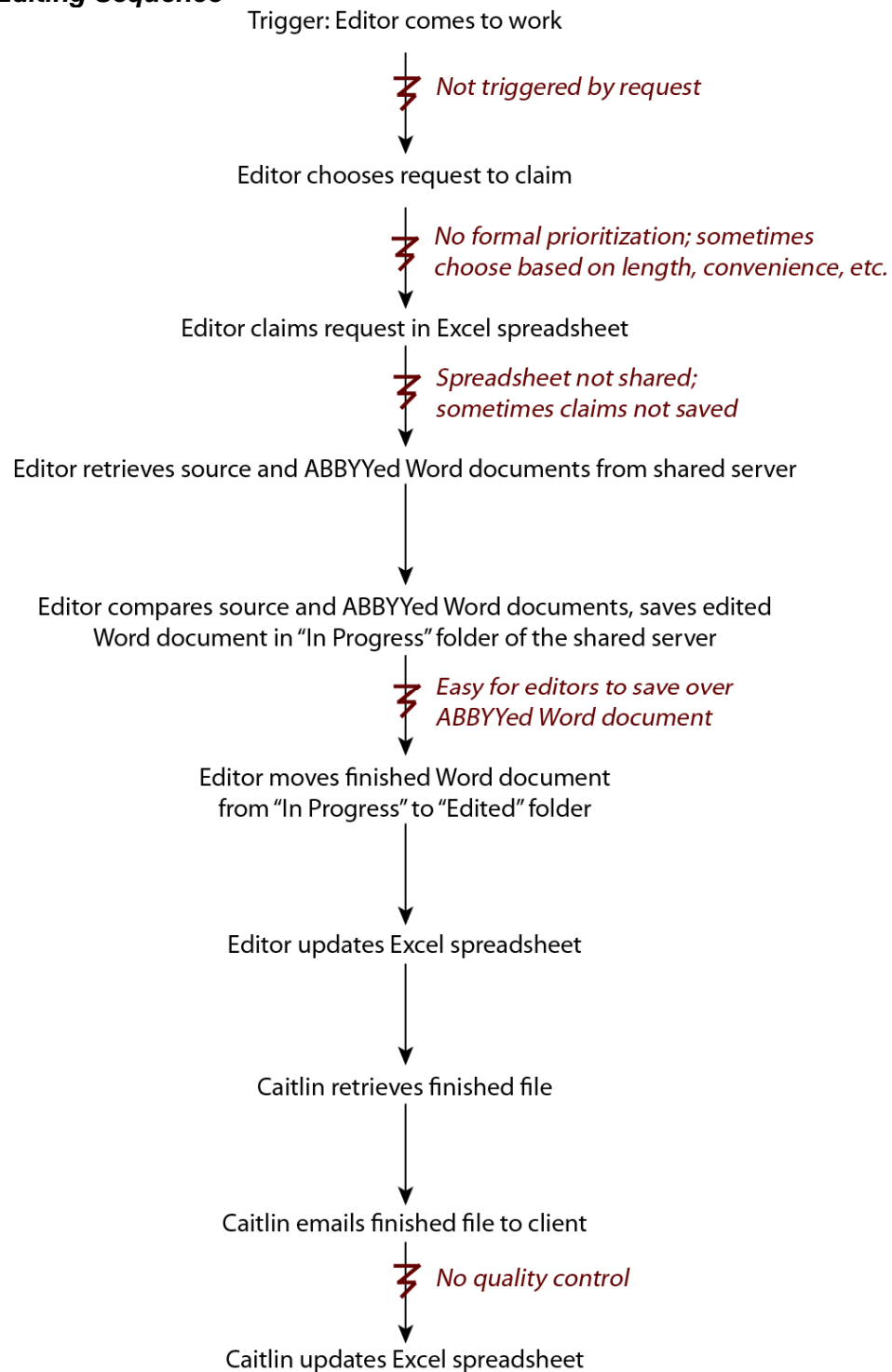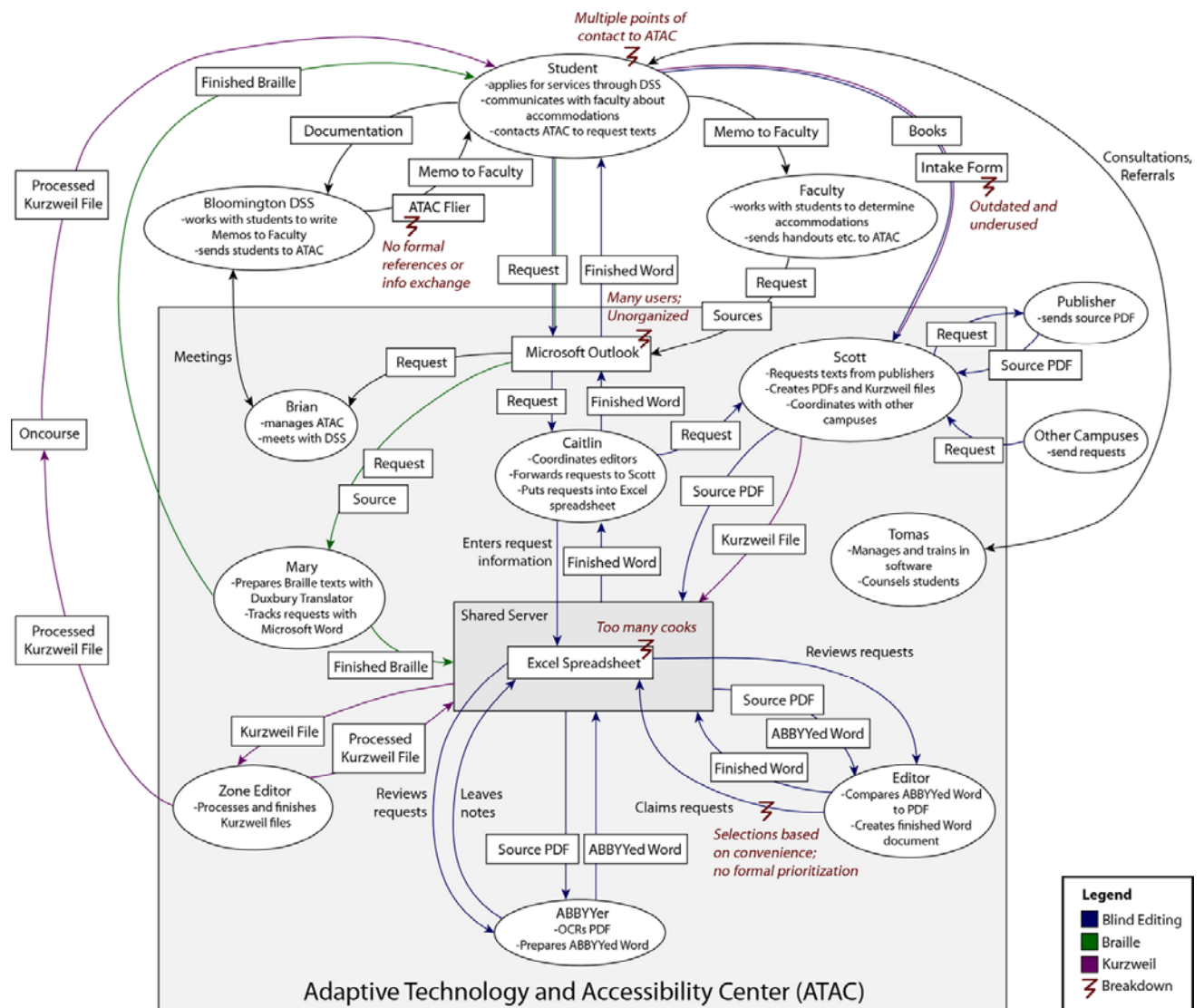*No quality control*

Caitlin updates Excel spreadsheet

Image 4: Flow Model

Many of the breakdowns noted concern communication breakdowns throughout internal ATAC processes. The shared Outlook inbox can lead to forgotten or buried e-mails, leaving client needs unaddressed. The shared Excel spreadsheet cannot have multiple simultaneous users, leading to forgotten or deleted updates to project progress and forgotten projects. The differences in how individual campuses are able to communicate with the ATAC leads to complicated correspondence that could result in misplaced or forgotten documents due to a missent file.

The ATAC also does not have formalized procedures for determining document priority other than due dates in syllabi or expressed priority from the client. Editors choose documents that have sooner due dates, but they also take document size and difficulty into account based on how much time they feel they are able to devote to the document.

Another set of breakdowns considers the human component of each step of the process. Clients submit paper forms about the texts they need throughout the semester, but these forms are redundant and time-consuming. They also generate lines and wait times at the beginning of the semester as clients rush to submit their semester information. Editors confirm that steps have been completed by manually entering dates into the spreadsheet. However, if the shared spreadsheet cannot be accessed while another editor is using it, an editor could easily forget to enter the date when the spreadsheet is available or enter an incorrect digit that is not immediately noticed. Editors can also easily save over the original ABBYYed document with an in-progress document.

Recommendations

We present two alternative sets of recommendations, both of which are intended to address the problems uncovered with varying degrees of completeness. These sets are supplemented by a set of universal recommendations, which we recommend be implemented regardless of which alternative is chosen. Because we received feedback that the request tracking system recommendation was the preferred choice, we labelled it the "preferred recommendation." The other set is thus the "backup recommendation."

Preferred Recommendation: Request Tracking System

Description

Many systems allow their constituents to log various sorts of issues that require action to be taken. These issue tracking tools encompass trouble ticket systems, change management systems, bug tracking systems, and elements of customer/constituent relationship management (CRM) systems, among others. All of these follow the following pattern:

1. A constituent places a request (for service, to log a change manage event, etc.) with a given organization
2. A representative of the organization acts upon the request, using information from the request, along with other necessary information
3. A representative of the organization marks the request as completed or unactionable (or some other status)
4. If a deliverable is expected from the request (such as a patch or an ordered product), the system oftentimes facilitates its delivery.

Such systems also have a common set of features with respect to constituent access to feedback and administrative access to system information. For example, throughout the process, the system provides feedback on the status of pending and historical requests (bug status, service request status, shipment tracking).

Following this pattern, we recommend the implementation of a request tracking system for incoming requests to the ATAC. While the following describes such a system for the blind edit process, we feel it could be extended to the Kurzweil process and other areas, such as software and hardware lending. However, the scope of our investigation did not cover these processes, so our recommendations do not touch upon them with any depth.

The ATAC request tracking system includes four different types to serve four sets of people: students, editors and OCR technicians, administrators, and external staff.

Student Views

My Profile

This view is the student's main entry point to the request tracking system. It allows students to supply information needed for contact with the ATAC. It displays the classes the student is taking and allows a student to navigate to the Add Class view. For classes that have been added, the student can place a request for an item. It also provides a link into the My Requests view.

Image 5: My Profile View

Add Class

Before an item can be requested, a class must be associated with the student. This is because the ATAC needs information, such as the syllabus, which is more properly associated with a class than each individual requested item. The student can either choose to upload a syllabus file or provide a URL to a syllabus that exists on the web. The syllabus is used by the lead editor to analyze the class requirements and determine editing priorities.

Image 6: Add Class View

Add Class

Class Information

Term: [Spring 2012 ⇕]

Department: [ENG (English) ⇕]

Course: [W131 ⇕]

Professor/Instructor: [_____]

Campus: [Bloomington ⇕]

Syllabus

Please provide a link to the syllabus or upload the syllabus file.

Syllabus URL: [_____]

or

Syllabus file: [_____] [Browse...]

[Add class]

Place Request

The place request view allows the student (or a staff member acting on the student's behalf) to place requests for the editing of a particular book, book section, article, web page, slide show, or other item. The item is associated with a particular class; in fact, this view is accessed from the record for the class as displayed on the student's My Profile page. The information requested is the basic information needed to identify and locate the item. No information about the book's relationship to the class in terms of its place in the syllabus of readings or the particular section of the book being read is recorded here. Instead, that information is entered later by the lead editor.

Depending upon how difficult testing reveals the process of requesting items to be for the student, the ATAC may elect to have staff place the requests on behalf of the students.

Image 7: Place Request View

My Requests

The My Requests view allows the student to see the requests that have been placed and to see the status of each request. There are two versions of this view, depending upon whether the lead editor has performed the task of analyzing the syllabus and entering specifics about what sections of the documents are needed and the schedule for delivering them.

Before Syllabus Analysis

Prior to such analysis, the My Requests view merely shows the class, item title, a status of "being analyzed," a check box that allows the student to mark the request as high priority, and a button that allows him or her to edit the request.

Image 8: My Requests View, Before Syllabus Analysis

My Requests

Your request has been placed.

Class	Item Title	Status	High Priority	Edit Request
ENG-W131	*Writing Analytically*	Being Analyzed	☐	Edit
ENG-W131	*Readings for Analytical Writing*	Being Analyzed	☐	Edit

Note: No more than two pending requests may be marked high priority.

After Syllabus Analysis

Once the syllabus analysis has taken place, each item that has multiple parts is split into multiple rows. The item title field contains the title but also the particular portion of the item represented by that row. The status row shows the status of that portion with respect to the OCR and editing process. In progress or delivered items cannot be edited, so the edit request button is not accessible for them.

Image 9: My Requests View, After Syllabus Analysis

My Requests

Class	Item Title	Status	High Priority	Edit Request
ENG-W131	*Writing Analytically* Chapters 1 and 2	Delivered	☐	Can't edit
ENG-W131	*Writing Analytically* Chapters 3 and 4	In progress	☑	Can't edit
ENG-W131	*Writing Analytically* Chapters 5-8	Pending	☐	Edit
ENG-W131	*Readings for Analytical Writing* Berreby, "It Takes a Tribe"	In progress	☐	Can't edit
ENG-W131	*Readings for Analytical Writing* Medhurst, "Batman, Deviance, and Camp"	Pending	☐	Edit

Note: No more than two pending requests may be marked high priority.

Editor and OCR Views

OCR Queue

The OCR Queue is divided into two sections with tables, Top Requests and Other Requests. Both tables contain the same columns: information about the items, a button to open the file (which, depending upon whether the files live on the web server or the existing file server, may initiate a download or provide a UNC path to the file), a button to provide more info on the request, and a button to mark the request as ready for editing, at which point the item would appear in the editing queue.

The Top Requests section is inspired by both Gmail's Priority Inbox feature and Facebook's Top Stories feature. Namely, it suggests important items that the editor should choose, if possible, over the items in the Other Requests section. The criteria for which items appear in the Top Requests section is set by administrators in the Change Settings view.

Editor Queue

The Editor Queue is roughly the same as the OCR Queue, with the exception that items that appear here are ready for editing, not OCRing.

Image 10: Editor Queue View

Editor Queue

Top Requests

Name	Campus	Class	Item Title	Open File	More Info	Mark Done
Susan Student	Bloomington	ENG-W131	*Writing Analytically* Chapters 3-5	Open	More	Done
Joe Parttime	Bloomington	ENG-L204	*Some Random Book* Pages 56-98	Open	More	Done

Other Requests

Name	Campus	Class	Item Title	Open File	More Info	Mark Done
Tiffany Trombonist	Bloomington	MUS-100	*Intro to Trombone* Chapters 7, 11	Open	More	Done
Joe Parttime	Bloomington	ENG-L204	*Another Book* First unit	Open	More	Done
Lorem Ipsum	Indianapolis	XXX-Y111	*Coming up with titles is tiresome*	Open	More	Done

Administrative Views

All Requests

The administrators would have a view that displays all requests and their statuses.

Analyze Syllabus

During out usability testing, it became clear that there also needs to be a view dedicated to allowing the lead editor to split up a request into its constituent parts. For example, a book may have two chapters which need to be ready for different parts of the course. Such a view would allow the lead editor to easily access the syllabus and designate what the consituent parts of a work are and assign them due dates. Since this issue came up late in the design process, we were not able to provide a mockup.

Change Settings

The change settings view allows for administrative staff to set the values of settings for the application, such as the number of allowed high priority items per student and the precedence of rules for determining which requests should be top requests.

External Staff Views

During our feedback session with the ATAC, it was mentioned that some campuses would prefer to be the ones making and maintaining contact with the ATAC. In that case, it will be necessary to construct views that look and act like the My Profile, My Requests, and Place Request page but allow for the non-ATAC staff to view and amange items for multiple students.

Accessibility Concerns

As this process caters to students with low levels of vision, any application developed to support it that faces outward toward students must be designed with accessibility in mind. Toward that goal, the system recommended above is designed to minimize the use of JavaScript in both the student-facing and internal views. JavaScript allows for dynamic manipulation of the page elements, which can confuse screen readers. This is why, for example, one chooses the type of the item before going to the place request view, so the system can present only the necessary fields and not have to dynamic change the view to accommodate a change in item type. Along these lines, we recommend that the application incorporate WAI-ARIA markup in order to make the functional aspects of the user interface clearer and to aid screen readers' interpretation of the pages. We also recommend that a team developing this system include a web accessibility expert.

Backup Recommendations

- **E-mail notifications to staff:** Once a staff member has completed a specialized task, *e.g.* entering a request into a spreadsheet or OCRing a document, send notifications to the next person(s) in the chain. To avoid "spamming" in-boxes, the notifications could be packaged as a single digest per day.
- **Share Excel sheet:** Use the built-in sharing feature of Excel to allow simultaneous access to the spreadsheet used to communicate requests to staff involved in the blind-editing process.

- **Spreadsheet checklist/documentation:** Create a checklist for OCRers and editors to make sure they have entered all of the information necessary into the spreadsheet.
- **Field name clarification:** Add comments to the field names in the Excel spreadsheet or document their intended uses in training documents.
- **Make intake form universal:** Currently, only one staff member fills out and archives intake forms for students requesting select ATAC services. This form could be updated and broadened to be applicable to all incoming requests.
- **E-mail account management:** Instead of having everyone work with a single e-mail account, create a role wherein someone checks the account and assigns a task to a given person. The e-mail is then forwarded along to the designated person. For backup, more than one person should have this role. Additionally, because this is a shared account, implement basic organization so that new, in-progress, and follow-up emails (for example) can be separated.
- **Improved backup:** The schedule, policies, and responsibilities for backing up ATAC documents should be clarified.
- **Institute provisional due dates:** In the cases in which the due date of a request is unknown, a provisional date could be substituted, subject to continual review.

Universal Recommendations

- **Continual review of spreadsheets and e-mail**: Update the existing review process to make sure that old e-mails are tended to and blank deadlines are updated on the shared spreadsheet. In the current system, the lead blind editor follows the system left by the previous lead editor; there is no formal procedure in place.
- **Documentation project:** Document the procedures and processes that take place in the ATAC (intake procedures, training, communication with students and staff, etc.).
- **Document cleanup:** Update or eliminate the outdated, unused files (particularly internal documents) on the shared server.

Cost/Benefit Analysis

Methods

A cost/benefit analysis rubric was constructed to isolate the issues that each of our recommended sets should address. These issues include:

- **Turnaround Time:** The recommendations should reduce the time between a students' initiation of a request and the point of delivery.
- **Staff Communication:** The recommendations should improve the flow of communication between staff at the ATAC regarding the status of requests, the activities of coworkers, changing priorities, etc.
- **Customer Communication:** The recommendations should improve the flow of communication to and from students and other clients of the ATAC.
- **Ease of Record Keeping and Retrieval:** The recommendations should improve the ease and speed with which staff can retrieve documentation of procedures, records of past requests, and client communications.
- **Ease of Report Generation:** The recommendations should improve the ease with which staff can consolidate data and generate reports about the services utilized by their client base.
- **Cost to Implement:** The recommendations should have a low monetary cost of implementation.
- **Time to Implement:** The recommendations should have a low time to implementation.
- **Cost of Training:** The recommendations should require minimal training of ATAC staff on new procedures.
- **Staff Time:** The recommendations should decrease the amount of time staff spend on menial tasks associated with their core duties at the ATAC.

Results

A comparison table utilizing this rubric to represent the costs and benefits of the proposed recommendations may be found below, followed by an explanation of the ratings for each:

Table 1: Cost/Benefit Analysis of Recommendations

Criteria	Universal Recommendations	Backup Recommendations	Request Tracking System
Benefits			
Turnaround Time	Unaffected	Reduced	Reduced
Staff Communication	Improved	Improved	Improved
Customer Communication	Improved	Improved	Greatly Improved
Ease of Record Keeping and Retrieval	Unaffected	Improved	Greatly Improved
Ease of Report Generation	Unaffected	Unaffected	Improved
Costs			
Cost to Implement	Very Low	Low	High
Time to Implement	Low	Medium	High
Cost of Training	Low	Low	Medium
Staff Time	Slightly Increased	Slightly Increased	Unaffected

Universal Recommendations

Since the universal recommendation set would not significantly impact the existing work practices within the ATAC, it would not affect the turnaround time of requests, record keeping, or report generation. However, the documentation project would improve staff communication, especially to new hires and between staff who do not interact on a daily basis. Customer communication may also improve through an institutionalized review process of the Outlook account and Excel spreadsheet, as potential problems or information gaps could be isolated and followed up on more regularly.

The cost to implement these recommendations would be very low, requiring only the dedicated time to follow through with proposed projects. Unfortunately, more staff time may be spent on the continual review of requests, system backups, and pruning the documents on the server in order to afford the benefits outlined above.

Backup Recommendations

The backup recommendations also minimally affect existing work practices, so none address the issue of report generation. Updates to the intake form and an established protocol of communication to the next employee in the chain of tasks could reduce turnaround time.

Organizing the Outlook account would allow staff to retrieve records and communicate with clients much more easily.

The costs of implementation for these recommendations would be low, requiring no monetary investment. The ATAC should expect to spend more time implementing and training employees on the new procedures than on the universal recommendations, and to dedicate more staff time to internal communications and the intake of requests.

Request Tracking System

The request tracking system we have proposed in the section above would address almost all of the issues impeding the efficiency of the blind editing process. As the system would handle intake, prioritization, and notification to editors, the turnaround time for requests should decrease significantly. The replacement of the Excel spreadsheet with an established database would remove impediments to staff communication and give clients real-time feedback on the status of their requests without the need for mediation. Records would be archived automatically, and reports could be generated instantly through an established program.

The cost of implementing this system is high, requiring either a significant amount of time devoted by ATAC staff or the services of an outside hire. The new system would require staff to be retrained in intake and communication procedures. This cost is the major prohibitive factor for this set of recommendations, but some alternatives are presented below to make the project feasible for the ATAC.

Implementation Alternatives

The ATAC could choose one of the following methods for implementing the custom request tracking system. They are listed in order of increasing cost, but not necessarily increasing quality of the final product.

1) Offer a student internship

Students in the School of Informatics and Computing, the School of Library and Information Science, or related disciplines could provide a semester or two of work to design and implement the system. The intern would require a background in database design and administration, working knowledge of server-side programming languages and HTML/CSS, and preferably some experience in systems analysis. ATAC staff would need to devote time to advertising for and selecting from applicants, and to overseeing the internship per the requirements of the sponsoring school. The pool of candidates willing to work without pay may be less skilled than optimal. However, this option would require no monetary cost to the center.

2) Produce the system in-house

This option would also require no additional allocation of funds to the project. On the other hand, the ATAC staff with the skills and expertise to develop this system already deal with heavy workloads, and the time sink would be substantial.

3) Purchase and adapt an out-of-the-box package

Staff could investigate existing ticket tracking systems utilized in different departments of IU or similar institutions. A suitable system may be found, for example, through the open-source Kuali applications or IU subscription software like Microsoft SharePoint. However, this option would require significant time exploring and comparing packages, as well as the skills to customize the software to fit the needs of the center. Depending on the circumstances, the labor could end up equalling the amount required to develop the system from scratch.

4) Hire a professional developer

This option would require the greatest monetary investment, but could produce a working system in the fraction of the time needed by an inexperienced intern or a staff member burdened with other responsibilities. Web developers have been recently hired at IU for $40,000-$45,000 per year, translating to a minimum $3,500 for one month's contracted work. However, we would advise budgeting up to $10,000 for the project to ensure the best local talent.

Appendix

Artifact Models

Information/Usage - Client names serve as case file folder names and designate completed project destinations. The main way to keep track of projects

Information/Usage - Listing the client's campus gives staff another way to keep track of project destinations and clients' current information

Information/Usage - Class dates serve as project deadlines (may not always match with "Date Sent to Student")

Information/Usage - "Item type," "number of chapters," and "number of pages" gives staff member an idea of how long each project may take and what possible types of formatting issues she may encounter

Information/Usage - Shows editor where to locate project source files

Information/Usage - Staff member who "ABBEY-ed" project (accountability)

Information/Usage - Staff member who blind edited project (accountability)

Information/Usage - Item titles also serve as project file names

Information/Usage - Shows the dates that projects are ready to run through ABBEY software/processing (project progress)

Information/usage - Shows the dates that projects are ready for blind editing and finished with ABBEY processing (editor picks up available projects)

Information/usage - Editing start/end dates (project progress)

Information/usage - Shows the dates that projects are electronically sent to clients (project progress)

Information/usage - Open space to comment on projects (project specific issues, client requests, anything of note about an individual project)

Breakdown - These dates are the only way to determine project priority

One breakdown is in the sheer size of the spreadsheet - approximately 700 entries (not shown here) for one semester and no formalized training on how to navigate the spreadsheet

Breakdown - Phrase "Editing Completed" ambiguous, unclear to editor

Breakdown revealed through note-text - staff members do not have preferred access to materials as posted on Oncourse

Breakdown - potential for human error in typing dates, entering incorrect digits

Breakdown - no listed class date means no known deadline. How do staff members know project priority?

What happened to the editing process here?