Alternate Format Production:

One Campus' Solution

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# Forward

The only goal of my job is to provide adaptive technology services to students. I have always held the belief that the provision of services trumps copyright every time, and have acted in ways that achieve the goal of making things accessible for our students.

This is a slippery slope, and I may lose some of you right here. But I sincerely hope not. This manual is about the whys and hows of providing alternate format to our disabled students, regardless of cost, time, effort, availability from the publisher, etc. I accept, and believe in, copyright law. As a writer myself, I know how it would feel if someone were stealing my work and giving it away for free.

I strongly believe that providing alternate format materials for disabled students is not breaking copyright law. We exercise due diligence in the acquisition and distribution of the materials we produce, and I firmly believe that we are doing the right thing, for the right reasons, and not diminishing any author's copyright by what we do.

You can, of course, judge for yourself, but I hope this manual provides valuable information as you embark on the path to alternate format production at your institution. In my opinion, we can't shirk this responsibility and wait for others to come forward to provide it. We are our students' first and last line of defense and their loudest advocates. That is a responsibility I take seriously, and it reflects in the work I do to provide alternate format for our students.

When I came to St. Louis Community College in September, 2000, I walked into a dysfunctional lab and an even more dysfunctional support system for the technology needs of disabled students. Cords were strung out across the floor, hubs were daisy-chained along the wall and 25 machines were all hooked into one overloaded port. Some machines had local printers, and some machines had limited and outdated disability-related software. The amount of work ahead of me was daunting, but my nickname wasn't "The Bulldog" for nothing.

I assessed the lab, the files, the equipment, and the mission of the department. I had the incredible advantage of being a member of the information technology department, rather than the disability services department, which gave me a much firmer footing for making changes than I'd have had otherwise. I had a giant candy-bowl of money to be drawn on, and plenty of support from both the disability services office and my own boss in the IT department. Within a few weeks I had a plan for reorganization of the services and equipment for my lab, and we were off and running in a new, more serviceable, direction.

That first year, I spent close to $400,000 in redesign of the lab, replacement of outdated equipment and software, and hiring and training of part-time student workers. I contracted to have two sound-reduced stand-alone office spaces erected for use by disabled students, and replaced all existing computers. The hubs were removed, and the lab was rewired with a brand new $20,000 switch that could handle all of the network tasks we were going to throw at it. All stand-alone printers were sent to surplus and replaced with a shiny new HP network printer that everyone could use. Ancient tape recorders were replaced with newer versions, Library of Congress tape players were sent back to Washington, incompatible keyboards, trackballs, keypads, and Intellikeys keyboards were replaced, and lasting liaisons were forged with campus staff who could best help us meet our mission. This included the print shop, admissions, learning labs, writing labs, reading labs, and the dean of students.

It was an immense but rewarding process, and at the end of 15 months, we had a completely functional lab with state-of-the-art equipment and fine-tuned processes in place to meet the needs of not only our disabled student population, but all of our students on campus. After the redesign of the lab, student use of the space sky-rocketed and continues, eight years later, to provide the highest percentage of use of any lab on campus.

In the fall of 2002, a disabled student taking a biology class desperately needed a book on tape that RFBD did not have. The student was one of those who went out of his way to ask for help, and never failed to thank those that were able to serve his needs. I muddled the problem of the needed book, and decided that we could produce the book electronically for the student. In the past, human readers had been used to read books onto cassette, but I didn't know that, so I headed straight towards a technical solution.

My solution to this student's problem was to scan his book, page by page, using WYNN (What You Need Now). Time-consuming, yes, but it worked. Once in WYNN, I edited it as quickly as I could to make sure it was as accurate as possible, then used the WYNN reader to "read" the text into a tape recorder, by hooking up a male-to-male speaker wire from the speaker output on the computer into the input port on a 4-track tape player. Ugly and slow, but it worked. At the end of this process, I had 36 tapes of *Biology: Concepts and Connections* for the student.

Of course, all I did was make more work for myself in the end. I went from providing technical services and equipment for students to providing alternate format, in the blink of an eye. By the next semester, I was doing six books this way, and by the third semester, I was up to 18 books. I had four computers running the software, hooked up to four tape recorders. It was almost Keystone Cops in my lab as I ran from computer to computer every 45 minutes, stopping the voice playback and flipping the cassette tapes over to record on the second side.

It was at that point that I realized I needed a solid, dependable method for doing books. Money for equipment was not an issue; my campus has never refused me money for equipment. I purchased a high-speed scanner, Omnipage software, and Text-to-Audio from Premiere Programming. The fourth semester I completed 30 books on CD in WAVE format, and shortly after that I made my case for additional equipment and part-time, temporary staff to complete this work every semester.

We now provide over 100 books in alternate format per semester to disabled students. This manual will outline how we do it, what we do it with, and a few metrics to show how we progress. Questions about our methods can be directed to me via email at skelmer@stlcc.edu or by phone to 314-984-7951.

1

Timelines are Everything

* Why timelines are important
* How to set an appropriate timeline
* Methods for meeting your timeline

*I have a self-imposed timeline of four days for the turn-around of an alternate format request from a student. That is a very short time to receive a request, scan a book, edit the resulting text, and convert to audio. However, after five years of producing alternate format, I have found that four days is a reasonable timeline for production. This chapter will look at why timelines and deadlines are important, and outline some methods for achieving your goal of short, accurate turnaround.*

## Why Timelines are Important

For definition purposes, timelines and book turnaround times are measured from the time we receive the request with either the book or electronic files for production. We do not start counting until then; this manual will not cover information on the acquisition of materials, other than a cursory look at it in Chapter 3.

When a student needs a book in alternate format, it is usually an "emergency." Most campus disability services offices don't get book requests until classes start. This is not necessarily the fault of the student; in our case, book lists are not available from the campus bookstore until two weeks before classes begin. The majority of our students are in their first year and have come straight from high schools that would have enabled their processes. Now they are trying to learn new procedures and processes for getting their materials, something they haven't had to do on their own before. A student who requests their books on the first day of class, in an ideal world, likes to think they can have their books immediately, or at least within a day.

A day is not even possible the majority of the time (although it can be done - more later), but as a student, what would you accept as "reasonable?" When I started producing books, I aimed for a two-week turnaround. A student presenting their request would be told that they would have their book in two weeks, or less, and would be given suggestions for meeting their alternate format needs in the meantime. But the fact is, two weeks is a very long time to be without your reading material for a class. A student can already be in a failing status two weeks into the semester if they are unable to have their materials with them.

But if they know when they are going to get the book, they can work through different methods to get through that two week waiting period. They know that in two weeks they will have their book, and all will be well. Giving that student a timeline is a guarantee to them, that if they can get through the first two weeks with alternate methods, they can survive the class and get the passing grade they desire. A timeline turns into a contract; and unless there are extenuating circumstances, that timeline should be met.

What happens when you can't make the timeline and the deadline for having the materials to the student passes? Communicate to the student about the delay, and give them whatever parts of the book are completed so they can at least get started. You can also ask for a copy of their syllabus so that you can work on the specific chapters or areas of the book they are going to need first. These simple things allay the student's fears that they won't ever have their material, and even more importantly, gives them at least something to work with.

Students often balk at the idea that their book might take two weeks to produce, and that is understandable. But in an organization where over one hundred books may be in production for a semester, and multiple students being served, that two week timeline may be as reasonable as can be expected for your organization.

Sharing your timeline with the student gives them the appropriate perspective, and hopefully patience, to wait out the production time. Setting goals is also important for you as you try to manage the processes involved in creating alternate format. It gives you a good metric to look at later to see if you are making your deadlines. Then you can adjust your timeline policies to account for what your actual deadlines end up being.

For example, my policy of a four-day turnaround is re-examined every semester using the metrics I have available to me. If we have had an average of a five-day turnaround, then that means I should be looking closer at my stated policies; do we need to adjust the time larger to account for the actual production time of a book?

Also, when I say I shoot for a four-day turnaround, I am hoping that 80% of the materials I work on will be done in that time period. The 80/20 rule for most business systems is that 80% of the issues will be resolved in an expected timeline, and 20% will fall outside the norm. If my average, according to my estimates, is a five-day turnaround, then I may not be meeting the 80/20 standard, and I need to take a good look at what is going on that may be holding us back. Are my goals too restrictive? Or are we losing time in processing, and can that lost time be recovered by increased training, elimination of duplicating or redundant parts of the process, or increasing the inventory of equipment and software to do the job?

## How to Set an Appropriate Timeline

So how do you set an appropriate timeline for your production? Several factors should be considered. How many books will you be producing in a given semester? My metrics suggest that there are more books produced for the fall semester than for the spring semester, and any summer production is limited to a handful of books. During the fall semester I may need to produce 100 books, but in the spring only 45. Knowing this information will get you started on appropriate staffing and equipment levels, as well as giving you a base metric to work with as you try to streamline processes to get the shortest time.

I stress process improvement because it is critical to how you do business. We have to be constantly improving our processes in order to stay ahead of the game. The goal should always be to do it faster, cheaper, and more efficiently. And there is no reason to believe you can't do it faster, cheaper, and more efficiently. All it takes is having a clear view of your process (how you get from beginning to end) and where in that process specific tasks can be pared down or eliminated altogether to get the shortest possible time between beginning and end.

Efficient processing will get you into that 80/20 situation that you are looking for.

Besides the number of books produced, you should also look at the types of books produced. By their very nature, science and math books are much more time-intensive to produce than novels. The layout of some books makes their conversion incredibly complex. For example, a sociology book with lots of pull-out text, colored boxes of supplemental information, and internal exercises can take twice as many hours to convert as something with simpler text. And an English book may be full of questions and spots for answers, rather than actual text, making its conversion much more difficult. The types of books you do affect how you set your timelines. If you are going to have a majority of books with a complex layout, then a four-day turnaround is probably not appropriate.

The third item to consider is the needs of the student and the final output of the alternate format. The majority of my requests come from students with learning disabilities, rather than those with visual impairments. For many of them, they simply listen to the book while they read it with their eyes. Those students get very basic, all-extras-removed MP3 files. Others simply want the text files we create, without frills, so they can use them with a screen reader. Some need files with all of the frills, tagged appropriately, and saved in Word or an accessible PDF format. All of these factors will determine how your timeline will be affected; the easiest files to make are those that come straight from the scanner as a TIFF file. The most complex are tagged PDF or xtml files.

Lastly, what equipment and staff do you have to work with? Are you able to hire part-time or temporary staff to do the work? And if you do, do you have enough computers with the appropriate software installed, plus a decent scanner, to do the work? If you have to do it yourself, then how are you going to manage the workload?

## Methods for Meeting Your Timelines

Three things factor into how you will meet your timelines: final output type of the alternate format, equipment/software, and staffing skillset.

Final output type determines how many steps the book needs to go through before it can be given to the student. Less involved output (for example, TIFF or plain text files) are easier and faster to produce; tagged PDF's take the most amount of time. Knowing what type of format your student needs can determine how you work on materials for them. The more students who need basic formats, the quicker your output will become, so knowing your students and their needs is important. This prevents unnecessary work. Oftentimes, students aren't aware of what the possibilities are, and informing them about their choices can often reduce your workload considerably.

Equipment and software are critical to the production of alternate format materials. High speed scanners and high-end OCR software is necessary for consistent, timely production. In addition, as you work with different types of outputs, you may also need a text-to-MP3 converter, CD burners, or add-ons for your word processor, in addition to Adobe Acrobat Professional software. The more high end your equipment and software, the easier your job will be. More about equipment will be covered in a later chapter.

Lastly, what can your hired staff do? What are they capable of doing, and what will be a struggle? Is it worth it to train them further in these skills, or should you just use what you have to your best advantage? More about staffing will be covered in a later chapter.

2

Hardware and Software

* Computers
* Scanners
* OCR Software
* Word Processing Software
* Text to Speech Software
* PDF Production Software
* CD Burner and Software
* Storage
* A Word About Costs and Budgets

*The majority of alternate format production in my department is MP3 files. Occasionally we'll need a tagged Word or PDF document, but generally we convert TIFF files to text and then to audio, all using computer programs to do so. This chapter will likely reflect those biases in my information.*

Gone are the days of plugging tape recorders into the speaker outputs of computers and hoping you hear the cassette click off when it reaches the end of its 45 minutes of recording time so you can flip it over for the second side. Today, everything is done on a desktop computer, and is becoming automated more and more each day. In this chapter, I will cover the equipment and software we use for production of alternate format materials.

## Computers

It is safe to say that a computer being used for alternate format production must be an ultimate machine, capable of working multiple programs with plenty of RAM left over, and loaded with basic office production software. Any machine being used for alternate format production should be separate from any normal office production work; in general, as programs are running to convert textbooks, other processes will be slowed or even halted. Microsoft Outlook is the most likely to crash on a computer running text conversion, even a high-end one. I always recommend that computers being used for alternate format production be used for nothing else at the same time; I personally work with two desktop computers, one to do conversions, one to run my standard office applications and email.

An optimum computer for use with alternate format would include an advanced, dual or quad-core processor model with at least 2 gb of RAM. I personally recommend 4 gb of RAM. RAM is cheap and shouldn't be scrimped on. In addition, a wide-screen monitor of 22 inches or better his highly recommended. When working on editing scanned textbook files, it is convenient to have a screen wide enough to see at least two windows at once, between your OCR program and your word processor. I use a 22-inch Apple Cinema Display, which is very easy on the eyes and has plenty of room for me to have multiple windows open at once.

The operating system for most of your work should be Intel-base (Windows). I have produced alternate format on both XP and Vista machines; Vista has some bugs that make it a bit quirky in some instances, but generally it works well, so don't let the newest operating system hold you back.

## Scanners

The choice of a scanner should not involve cost-cutting. High-end duplexing scanners are critical to the success of your alternate format production. Imagine trying to scan a book using a flat-bed scanner and turning each page over and scanning individually. You wouldn't be able to produce a half a book a semester with such a method.

So splurge. A decent high speed, automatic, duplexing scanner will cost from $4000 to $6000. However, such a device should work for years without any sort of maintenance; my current unit is over five years old and still runs like new. It has more than paid for itself in time savings alone.

Currently the two top leaders in the market are by Canon and Fujitsu. Both are similar in functionality, and cost. Both work with multiple computer systems and all types of books. I have used both and have no affinity for either one. Our lab uses a Canon DR5020, and I have had no trouble with it. The only drawback is that the Canon uses a SCSI connection, which is a bit slower but also uses proprietary data cards to hook to a computer.

There is, in my experience, no need for a color scanner. A black and white with gray scale will be just fine, as audio and formatting conversions have nothing to do with color. A black and white scanner is often several hundred to several thousand dollars cheaper than a color model.

Scanners come with an imaging software that will allow simple scans to a finished output, such as TIFF, JPG, or BMP. TIFFs are used for alternate format production, for the most part. The software installs easily and works seamlessly with most Intel-based systems.

## OCR Software

Optical Character Recognition, or OCR, is the basis for extracting text out of a scanned document. And OCR program "reads" through scanned documents in TIFF or BMP or JPG format and pulls out the text, blocking it as "readable" and making it available in the resulting text document.

Two premier programs exist for this part of the process. OmniPage Professional and Abbyy Fine Reader are the two most usually associated with alternate format production.

I have used both, and both have advantages. For books with many chemical equations or math examples, Abbyy is the better OCR reader. For books with standard text and pull-outs and block sets and odd formatting, OmniPage Professional is the better OCR reader. We use OmniPage Professional here, but have considered adding Abbyy Finereader as an alternative when we are working on science or math textbooks. Neither product is particularly pricy so easily fit in most campus' budgets.

## Word Processing Software

In most cases, once a scan has been completed and a file converted with OCR, the final output is not quite ready for prime time. While scanners and the OCR software are wonderful technologies that make the job easier, the final text-based output still needs considerable work before it is ready for distribution to a student. Text may be out of order, formatted oddly, have extra characters or mis-recognized words, or have entire sections missing.

Careful editing is the only solution to this problem. A human eye must survey the entire work, looking for misspellings, missing sections, sections out of place, and etc.

Microsoft Word is the program most often used for editing. It has a strong spell-checker and is the program most familiar to people doing the editing. It is a suitable editor and will do the job.

I also use Open Office, a free open-source office suite that is available for download online. Its tools are at least as powerful as Microsoft Word's, and everything one would need is available. The additional advantage is that a plugin, created by DigiLife Media and available for a nominal cost, allows you to have the styles sheet open at all times while editing a document. This is an extremely useful and time-saving function if you are encoding your text document for PDF or XTML.

Not all documents need to be encoded, however, so the purchase of this plugin should be based on need.

Other word processors that can be used include Corel WordPerfect, or even the built in WordPad on most Intel-based computers. Notepad and other stripped down word processors are not recommended.

## Text to Speech Software

I have experience with only one text to speech software. Text to Audio from Premier Assistive Technology converts any text file into an audio file, with settings you choose. You can determine the speed of the reader, the voice of the reader, how big the increments are (it is suggested that chapters be broken down into several segments for recording for ease of the listener), and what format the audio file should be. I use strictly MP3 formatting for audio files, with a provided Cepstral voice, David, at a minus 2 speed. I record in ten minute segments.

Depending on your student, you may need to change settings when recording. More detail about this process is covered in a later chapter.

Text to Audio is inexpensive and easy to use. Other programs exist, and can be found through a simple Google search.

## PDF Production Software

The latest version of Microsoft Word provides an on-board PDF converter, as does Open Office through a plug-in. This works if you have already encoded your document to recognize headings, footers, etc.

If, however, you are using a basic text document and want to create an accessible PDF document, you will have to spend time marking headings, footers, column breaks, etc. The only accurate way to do this is to invest in a copy of Adobe Acrobat Professional. This allows you to make the amendments that need to be made to the styles, and to make the PDF accessible for the student.

Fortunately, educational pricing exists for Adobe products, and Adobe Acrobat Professional is minimally priced for college campuses.

## CD Burners and Software

Depending on how you want to distribute the alternate format materials to your students, you may need to invest in a high-speed CD burner for your computer. Any appropriate burner will do, and most these days are high-speed and fully capable of producing CD's in a few short minutes. We provide our alternate format to students in the form of a CD.

When it comes to software, your choices are unlimited, and range from free to rather pricey. I use a free program called Deep Burner, available from www.deepburner.com. It burns a full CD in just a few minutes, and works in the background. It works with simple drag and drop action, lets you know when you've reached the size limit on your CD, and has a labeling plug-in. Deep Burner has an extremely small footprint, and very few bells and whistles, which may account for its quick speed. I have not found a comparable product at any price; I've been using it for five years and every new computer acquired in our lab receives a copy of Deep Burner as part of our standard core image.

In addition to the CD burner and Deep Burner program, you will also need a reliable source for your blank CD's. We have found it cost-effective to purchase CD's from a non-local vendor, rather than through our own local supply vendor. We purchase from Controlled Copy Support Systems at 800-706-2679. The cost is about thirty-six cents per CD when purchased in bulk spindles of 100 CD's.

## Storage

All of the files you create through the alternate format process take up a lot of room. Best practices note that you should keep all files that you have created through the process, in case you ever need them again. There have been plenty of times when I had to run OCR on a TIFF file a second or third or even fourth time when I made mistakes or the text did not scan properly. Having those TIFF files meant I did not have to re-scan the book, unless there was something wrong with the scan.

If you are going to store your finished materials on your hard drive, you should consider at least a 500 gb internal hard drive, if not a 1 TB drive exclusively dedicated to alternate format storage. However, best practices and my own personal recommendation would specify storage space on a server that is backed up regularly, rather than a local hard drive. Our campus has designated server space for the storage of alternate format, and was recently increased from 1 TB to 2 TB as we had used up the first TB in about two years' time. Alternate format creates several types of files, all of which are space hogs, but all of which you will want to keep for further use later. Long-term storage should be part of your planning for alternate format production.

## A Word About Costs and Budgets

It is not possible to run an alternate format operation on a shoestring budget. High-end equipment is required and cannot be replaced with less expensive alternatives without severely limiting production ability. A $6000 scanner is a hard pill to swallow, and one or more high-end computers with oversized monitors is a daunting budgetary concern.

However, the inability to pay for such items is not an excuse the Office of Civil Rights takes as a standard. Accessibility for students is a government-granted right, and college campuses have an obligation to meet these standards regardless of any budgetary concerns.

Put another way, a $6000 scanner is a lot easier budgetary item to swallow than a $50,000 OCR judgment. And the scanner's long life allows it to be amortized over many years, making it extremely cost-effective in the long run. The same is true for software.

I will cover staffing costs in a later chapter, but the same rules apply. Pay a little now, or a lot later for non-compliance.

3

Staffing

* What Kind of Staff to Hire
* Training Your Staff
* A Word About Costs and Budgets

*I work with a staff of four to six part-time temporary employees for our book production season, typically from the end of August to the middle of October for the fall semester, and early January through first of February for the spring semester. My estimates below will be based on a production schedule of 100 books over 5 weeks of activity.*

## What Kind of Staff to Hire

In the early days, I trusted no one to produce alternate format but myself. That was great when I only had six books to complete, but when the numbers rose exponentially with each successive semester, I had to start looking for alternatives.

It was suggested initially that I hire student workers for this task. I gave that the good old college try and found it considerably lacking. Student workers needed more supervision than I had time to provide, did not have the English or editing skills needed, and had no sense of urgency in their work. Books that should have taken half a day were often drug out for a week or more, while the disabled student languished in waiting for their materials.

It was immediately apparent to me that our crop of student workers, who were great at running a lab and hacking into our systems, were not capable of using Microsoft Word to edit a document with any sort of reliability or accuracy. I made my case to the dean in charge of our department, specifying that I needed experienced, mature individuals to do this work.

They didn't say no, and the next semester I had a staff of three part-time temporary workers. I had hired them directly, looking for people with desktop publishing, writing, or editing experience, and who had a proven record of good attention to detail. What I wanted were clones of myself; people who could take a book from beginning to end, working on their own and with a need for speed and accuracy. They had to have expert experience using word processors, no fear of technology, and a capacity for learning something new. Even more, they needed to have a desire for improving the process. One of the most important elements of having other people doing the work is that they find shortcuts, workarounds, and can simplify the processes for me.

The adages, "many hands make light work" and "two heads are better than one" apply completely here; surrounding myself with these talented, mature, and dedicated staff made all the difference in getting the job done in a timely manner, and streamlining our workload so that we could meet the goal of four-day turnarounds in production.

My workers are paid just over $10 an hour, and if they return semester after semester, they get yearly state-mandated raises. I have two individuals that have been with me for four years, and are being paid around $12 an hour for this type of work. They are a clerk II by our campus definition, and understand that they will be working until the work is completed, approximately 4-6 weeks depending on the workload. They work anywhere from 20 to 39 hours a week, with flexible hours to accommodate family or other job obligations. The fewer hours staff work the more staff I have to hire, so I tend to opt for staff who can work towards the high end of available hours.

The other consideration is having a consistent workforce. Staff who can come in daily are more likely to finish a book in several days, rather than the worker who can only come in twice a week and takes two weeks to finish a conversion. I like staff to be able to work a book from beginning to end, for consistency's sake, but sometimes it is necessary to shuffle materials to reach the stated goal of a four-day turnaround. More about triage and work assignments is covered in a future chapter.

## Training Your Staff

Anyone who has been a trainer or a teacher understands that you don't have to know it all in order to teach it. But when it comes to training staff to work with unfamiliar equipment and software, it is critical that you know the job better than anyone. The training will be individual to your campus, depending on your campus, equipment, software, and preferred timelines, so what I discuss here will be specific to our environment.

I try to train multiple staff at one time. If I hire three new people, I set up simultaneous training for all of them. The first book I show them will be the simplest of the lot; not a textbook but rather a novel or other "light" reading, usually from an English or history class. I start by showing them how to scan, how to OCR the resulting image files, and how to do general text editing. I do not do the whole book, but just a few chapters, while they observe. After that observation period, I leave them to their own devices, asking each one to completely produce a full chapter on their own, with the help of their fellow trainees. After they are done, I check the finished product and make recommendations and retrain where necessary. I do have a handout that lists the exact process, from scanning to OCR to text editing, that they can use as a guide. You will need to do this as well.

Once they are trained, I give them each a text to work on. I try to start with easier textbooks, then move onto more complex texts. As I see their work and understand their particular strengths and weaknesses over the next several days, I then can direct certain textbooks to certain individuals who may be more adept at one type than another.

As with any management job, knowing how to manage people and time is critical, and my best suggestion is to hire people that are self-starters, confident about their abilities and skill sets. You will have the least amount of trouble with those individuals. And don't be afraid to relieve a worker of their duties if their work cannot measure up. The end product and service to the student is too important to not take particular care in how the work gets done. You can hire, you should also be able to fire.

The work of your staff will reflect directly on you; how you hire and how you train them will be critical to the success of your alternate text production work.

For budgetary considerations, it is best to calculate the cost of the employee's salary (and any benefits - our temporary staff do not receive benefits) and the amount of time they may work. This past semester I had four people working, with a total combined hours of 650 for approximately 110 books over 5 weeks. For a salary of $10.50 per hour, the total cost for staff was $6720 for one semester.

## A Word About Costs and Budgets

Once again, a word about costs. Hiring staff costs money. Many campuses may use the excuse that there is no money, or no money to hire talented and skilled individuals to do specialized work. As with any other "we have no money" argument, I strongly disagree. I would rather do the right thing and provide services to the student, than wait for an angry student to file discrimination charges.

In our case, the money used to pay my part-time temporary staff came from a budget line that had previously been used to hire live readers to put books on tape. Since we were no longer using this budget, it was free to be reassigned to the work we were actually doing. Additionally, my student worker budget is more generous than I need (about $50,000 a year). I could have reduced student worker deployment and saved enough money to pay the conversion clerks if I needed to. There are likely those types of avenues that can be searched to provide a budget for alternate format costs for your campus, as well. The job absolutely cannot be done without staffing of some sort, and decent staffing should be considered the norm, not an impossibility.

The need for quality and dedication is why I resisted so strongly the use of student workers for this job. They do not have what it takes, and I don't have the time to train them when production is time-sensitive and we don't have any of it to waste. Do not take no for an answer. Enlist all of the forces you can to help you in getting budget monies assigned for alternate format production. The money is there, even in cash-strapped colleges, and if you put enough pressure on the right people, the issue will be resolved.

You can't afford not to take this fight on. I am passionate about what I do, and I am passionate about my students. That means that I cannot take no for an answer when it comes to providing services, and that includes providing relevant alternate format.

4

Acquisition

* A Civilly Disobedient Process
* Methods for Acquisition
* A Word About Costs and Budgets

*Acquisition of materials are purposely separated on this campus from the alternate format production portion of what we do. As with most projects, some areas are better at one thing than another. Production is handled by the Information Technology Department by the Adaptive Technology Specialist. Acquisition is handled by the secretary in the Disability Services Office who receives requests for accommodations from students. This chapter will cover the secretary's methods for acquiring materials for alternate format production.*

## A Civilly Disobedient Process

The production of alternate format materials often puts colleges into a situation where they may be breaking copyright code. Oftentimes, a publisher is non-responsive when asked for permission to create alternate format, or outright gives a "no" answer. Colleges are not an approved production entity under the Chaffee amendment, and none of the usual ADA mandates cover this type of activity.

Yet, most of us feel that service to our students trumps copyright any day. That is the attitude we take on this campus, as will continue to take until copyright law catches up to accessibility.

What does it mean, then, to be civilly disobedient? We exercise due diligence in requesting permission from publishers. We also insist that the student purchase their books and show us their receipt. No student is allowed to receive their alternate format unless they purchased their books to begin with. Once we've requested permission and assured that the student has the book, then we provide the materials as requested.

When we provide a book to a student that we did not receive permission to produce, we are walking a very thin, and possibly illegal, line. But by exercising due diligence in requesting permission and assuring that the student has purchased the book, then we have done all we need to do to assure that legal guidelines have been met. Ultimately, service to our students is the standard we have to meet, regardless of unwilling or disinterested publishers.

## Methods for Acquisition

Aside from RFBD, which is a wonderful resource, we have to depend on other places to get our raw materials for scanning. In an ideal world, we would get materials electronically straight from the publisher in the format we want it in. But we all know how often that happens. So, we have to find alternatives for getting the material in a format we can work with. In our experience, books come to us in several different ways:

* Electronic text from the publisher (MS Word or alternative) via email or FTP
* Electronic PDF from the publisher via email or FTP
* Electronic text from publisher (MS Word or alternative) via mailed CD
* Electronic PDF from the publisher via mailed CD
* Hard copy of the book from the publisher
* Hard copy of the book from the student or a faculty member
* Hard copy of the book purchased from the book store

Currently, we receive about 50% of our materials directly from the publisher in an electronic form (emailed, FTP retrieval, or mailed CD), and the other 50% a book purchased from our campus bookstore. I can hear the screaming now about the costs of buying textbooks, but be patient, I talk about costs and budgeting at the end of this chapter.

Our acquisitions person receives the requests from students for their alternate format. She has access to a simple database of books we have already produced either on our campus or one of our two other campuses. If the book is already available that way, then she sends the request to me for immediate fulfillment.

If the book is not available from existing inventory, then the request is made to the publisher for an electronic, or barring that, a hard copy of the book. A reasonable, but minimal, amount of time is set as a waiting period for response from a publisher. Many of the publishers respond quickly these days, and we know which ones we will receive an immediate response from, and which we will have trouble with. Most of the generally cooperative publishers even have online forms in place for requesting materials, which shortens the acquisition process considerably.

Websites for requesting materials include:

Cengage - www.cengage.com/permissions/accessibility (Thomson, Brooks Cole)

Pearson - www.pearsoned.com/legal/permissions.htm

Publisher Lookup - www.publisherlookup.org

Others require paper requests:

McGraw Hill

Permissions Department

2 Penn Plaza, 9th Floor

New York, NY 10121

FAX 212-904-6285

Bedford/St. Martin's

Jane Smith

Special Projects Manager

FAX 212-253-1385

jsmith@bedforstmartins.com

This is by no means a complete list, but many references can be found through these links. The Publisher Lookup service is very helpful in getting the information you need on publishers.

For cases where there is no response from the publisher, or the publisher indicates electronic text isn't available, then our last resort is to purchase the book from the campus bookstore. An SLA (Service Level Agreement) with the bookstore gets us books at cost, which is about a 12% savings on the cost of books. Books purchased from the bookstore are sent directly to the campus print shop to have their bindings removed before they come to my office for processing. The purchasing of books is the least cost-effective, but most time-saving method of getting materials for alternate format production.

## A Word About Costs and Budgets

Once again, the cost of acquiring materials for alternate format production can be staggering. However, when it comes to serving our students, a lack of money is never a good excuse. Money exists to fund these initiatives; they just have to be discovered and asked for.

There are also alternatives to creating books on your own. Many current books are now available through the Alternate Media Database as part of the High Tech Center Training Unit of the California Community Colleges. The AMX database is available to any college in the country that would like to sign up for the service. The database lists tens of thousands of books that have been produced in alternate format by campuses like mine. They have an easy-to-use request process that goes directly to the person responsible for maintaining the alternate format, and you deal directly with that provider. That provider is someone like me, just another adaptive technologist providing alternate format for students. The AMX database is located at www.amxdb.net. It is an excellent resource.

The cost for purchasing textbooks for conversion has leveled off at under $1000 most semesters, and many semesters is under $500.

5

Triage and Distribution

* Prioritization
* The Incoming Triage Process
* Mid-Process Triage
* Distribution of Finished Materials
* Administrative Tasks to Finish Up

*An organized triage and distribution system is critical to the well-being of any alternate format production process. Every situation is unique and some things work better than others depending on the environment.*

## Prioritization

Several methods of prioritizing work have been tried on our campus, but after five years, we have come up with a system that works well for us.

There was a time when trying to decide who was the neediest and most worthy was how we decided to prioritize our production. While that is great for the student who is helpful and supportive and thankful, it is really not a fair way to handle things. We also tried a method that concentrated on longer, more complex books first, and simpler books second. And we tried it the opposite way.

But in the end, first-in, first-out ended up being the fairest and most efficient method for production. Generally, students who made their requests first will receive their books first, unless there is a delay in getting the basic materials from the publisher in the first place.

## Incoming Triage Process

When requests come into my office, they are held until the electronic materials or hard copy of the book arrive. Sometimes referrals arrive after the materials have been received. Without a referral, however, production cannot begin. Since there are a variety of outputs that can be produced, it is critical for us to know what the need of the student is. Since acquisition and the referral process are handled outside of my responsibility, I have no control over how fast the materials may reach me.

Once a referral and its accompanying material arrive, a "received" date is placed on the referral. This starts the clock ticking for our four-day turnaround goal. If the materials contain a hard copy of the book to be scanned, it usually arrives with the binding already removed. Occasionally I have to send it to the print shop for removal, but I use a student worker with fast feet for this task. They usually return within a few minutes with the book cut. Books to be scanned go in a stack for the conversion clerks to access, marked "Ready to be Scanned." When it comes to electronic resources, there are other locations for those. If it is a PDF or other electronic file that requires OCR, then it is placed in the "Ready to OCR" stack, which is also where books that have been scanned, but not OCR'd, end up after scanning. If the electronic resource is a text file, then it goes into the "Text Edit" stack for editing. The last stack is "Finishing," which includes any final conversion to audio, if needed, and burning to CD for distribution.

To recap, incoming triage has four possibilities:

* Ready to Scan - for books received that have not been scanned, or only partially scanned
* Ready to OCR - the book has been scanned and is ready for optical character recognition, or the electronic file requires OCR because it is a graphic format rather than a text format
* Text Edit - scanned book has received its OCR and is ready for text editing, or the electronic file is in text/word processing format and is ready for editing
* Finishing - book has been scanned, OCR applied, text editing completed, and needs to be converted to audio (if needed) and burned to CD.

I handle the triage myself for incoming materials. Any emailed or FTP-acquired materials are downloaded by me and placed onto the server for processing by the conversion clerks, and I coordinate putting a referral with a book as it arrives. I make the decision about whether a book or file needs OCR, simple text editing, etc., and also decide if the electronic files I received from a publisher are usable for our editing process. Sometimes, the electronic version is too messy to work with, and a clean scan of the hard copy of the book is necessary. I coordinate these additional acquisitions with the secretary handling the original acquisitions. I also handle the final process, "Finishing."

Occasionally, I may direct specific books to specific clerks for production. I have, in the past, been blessed with staff with a variety of interests and advanced skills, and some handle other types of text better than others might. Since my goal is to be time-sensitive as well as quality-sensitive, then directing certain clerks to certain types of work makes sense.

## Mid-Process Triage

Conversion clerks are trained to start with whatever is at the bottom of a stack, as first-in, first-out applies in this case. I prefer that the same clerk take a book from beginning to end of the project when possible, for consistency. We don't make a preference for hard copy vs. electronic resources and I try to direct the clerks to whatever is more time-sensitive in the first-in, first-out process we are using. Sometimes this means they start with a hard copy of a book, sometimes with an electronic copy of a book.

As clerks come and go through their working hours, they must leave detailed notes about their progress. If a clerk cannot come in for several days, then their partially processed work may be passed on to another clerk for completion. This keeps the process flowing and books coming in and going out on a regular basis. The detailed notes are critical to being able to pass on materials. We use sticky notes that say what chapter they finished and what part of the process they are in (scan, OCR, edit). Books in process but not being worked on will go into the stacks of their appropriate triage (scan, OCR, or edit).

Clerks also keep a record of the time spent working on a particular book. This is accomplished with margin notes, rather than any formalized process. Currently, I'm not using this information directly for metrics and process improvements, but plan to in the future. Since my measure is "did we get it in and out in four days or less" I'm not as concerned with the hours put into it as I am with the started and completed dates.

As I mentioned before, the "Finishing" process is completed by me. A completed edited text is left in the "Finishing" stack and I then convert to audio if needed, and burn the files onto CD for distribution to the student. When I have completed the conversion and burning, I put the ending date on the referral form.

## Distribution

The alternate format, in the form of CD's, is checked out to the student like a library book. The CD's and a copy of the referral are given to our librarians, who bar-code them and put them in closed circulation. Only the student whose name is on the referral can check out the CD's, and they must be returned at the end of the semester.

It may seem odd to have the student return them, but our interpretation of copyright standards means we have to retain the materials. We re-use returned CD's until they are no longer usable. They are stored alphabetically in CD file cabinets and can be pulled on a moment's notice to fulfill a request.

Once a CD has been released to the library, an email is sent to the secretary who took the initial request for the book. She then informs the student that their materials are ready for pickup. This closes the loop on the request project, and creates a redundancy in the system so that more than one person knows what has been finished and offered for distribution.

## Administrative Tasks to Follow Up

Once the CD has been released, the request paperwork goes through several final tasks. First, I check the location and organization of the files related to the request (TIFFs, Word, Text, MP3, etc.). I check to be sure the bookinfo.txt file is there and that it is complete (more about this in the processes chapter). I enter the book title, author, ISBN, and types of formats I have available into our campus database that is shared by the other adaptive technologists on our three other campuses. Finally, I enter the book information and types of files into the AMX database so that other colleges can request the files from me if they need them.

Once these things are completed, I file the paperwork for safekeeping. I file by order finished, for the most part, although it is rare I even look back through those files later.

I also have been keeping some metrics in an effort to continually improve our processes. I record the start and end date of the production into an excel spreadsheet, that then calculates the number of working days it took to turn the book around. As I stated above, I've also started to keep a column on the same spread sheet that shows me how many actual hours the conversion clerk worked on the book. Another spreadsheet records the cost of the book (if we had to purchase it) and what we could receive if we sold the book, coil-bound and used, on the used textbook market (this only works with paperback books). This gives me an idea of where costs might be able to be recuperated later, should our campus policies change to allow us to resell the re-bound books.

These types of tasks are time-consuming, but important. First, I don't want anyone to have to create the same book that I've just created in alternate format, thus my entering the information in the AMX database. Secondly, metrics help you see where your processes might be streamlined to give you a shorter output time. Process improvements took us from four week turnarounds, to two week turnarounds, to finally, four day turnarounds. That is real progress that you would not be able to see if you weren't keeping records on points of measure.

Good information is available on process management by studying Six Sigma process improvement techniques. I highly recommend becoming familiar with this method of recording production and streamlining processes.

6

Processes

* Scanning
* Optical Character Recognition
* Text Editing
* Converting to Audio
* Burning to CD

*This is what you've been waiting for, the meat and potatoes of how we do what we do when it comes to processing books for alternate format. Much of what you will read below will be steps in a process. I will do my best to explain in detail so that you can implement some of these things in your own processes. Any questions can be directed to me at skelmer@stlcc.edu or 314-984-7951.*

## Scanning

Scanning is the first step in turning a hard copy of a textbook into alternate format that a student can use. Scanning is done the same regardless of the intended output; the changes come in the editing and converting process. We are using a Canon 5080 with the Scanning Utility 5000 software that came with it. Other scanners come with their own software.

With that being said, here we go:

1. A bit of administration should take place before you start scanning. We create four kinds of output files as a norm, and I like to set up those file locations before I start. I create a folder on my server with the title and edition of the book. You could add the author and year as well. Remember that file names can contain no punctuation other than hyphens, so some non-grammatical naming may end up occurring.
2. Inside this main book folder, create three sub folders: TIFFS, WORD, and TEXT.
3. Inside the main folder, create a notepad or text file titled "bookinfo.txt." In this file, type the full name of the book, the author(s), the edition, the publisher, the ISBN number, and the copyright date. Be sure to save this file for future information.
4. Books to be scanned must have their bindings removed to feed through a high-speed scanner. This is done with a machine called a guillotine, which works pretty much how you would expect. Our bindings are removed by our campus print shop. They already have the equipment and can do the job fairly quickly (usually while we wait). Some training of print shop staff may be required. They are reluctant to cut books, as am I, and often they will cut too close to the binding and leave glue or saddle stitching still in place. Be sure that the book is cut far enough in to remove all glue or stitching. Hard-cover books need a bigger cut than most paperback books.
5. Spend a few minutes "fanning" the pages of the book to release any static or loosen pages that my have gotten stuck together during printing or cutting.
6. Separate the book into front matter, individual chapters, and back matter. This can be done as you are waiting for the scanner to scan a previous chapter. Under no circumstances should you entertain the idea of scanning the entire book into one enormous file. You will be very sorry if you do this.
7. Place the pages in your scanner according to manufacturer's instructions, and open the scanning program that came with your scanner. Ours is the Scanning Utility 5000. Scan the front matter as TIFF format, and save it in the TIFF folder with the filename "frontmatter.tif." Scan each subsequent chapter into the same folder, giving it a title of "01ch.tif", "02ch.tif", "03ch.tif" and so on. The reason for this naming convention is that your file system is going to want to sort everything alphabetically and/or numerically. If you start with 1ch, then when you get to 10ch it will be misfiled. It is much easier to keep track of items if they are named consecutively, so be sure to put the "0" in front of the numbers 1-9 on your chapter file names. The back matter is scanned the same way as the front matter, and saved with the title of "backmatter.tif."
8. As you work, from front to back of the book, reassemble the chapters in order as you go, so that in the end the book is back to what it was before you began.
9. Be sure that when you put the chapters in the scanner, you do it consistently with the first page facing up.
10. In an effort to save paper, many publishers are now not leaving a blank page between chapters. It is not uncommon for the first page of chapter 2, for instance, to be printed on the back of the last page of chapter 1, meaning a clean start with "chapter 2" at the front of that scan is impossible. In these cases, I scan the last page of chapter 1 with the first page of chapter 2, and during the OCR process remove the extra page. This takes a bit of organization but is a timesaver down the line.

It is important to be familiar and comfortable with your scanning software. Spending time learning the ins and outs of the device and software will be important when the scanner or the software is giving you trouble. Learning prior to using the scanner will save you time later.

## Optical Character Recognition

Optical Character Recognition is the second step in the process of making accessible alternate format. OCR takes the TIFF scans you created with the scanner and extracts their text and graphics into a text-based document. We use Omnipage Professional Version 15 for OCR, and it produces Microsoft Word files as a default. You can change this default, but I like having the unburnished MS Word file before I go any further with converting it to something else. There are times when that raw Word file is useful for a particular student. The steps in running Omnipage are as follows:

1. The standard configuration for Omnipage Professional should have four large buttons beneath the menu. Those are “Start,” “Load Files,” "Perform OCR" and “Export.” Click on start. A dialog box will open allowing you to find your first file to recognize. Navigate to where your TIFF files are and open the first chapter.
2. Allow Omnipage to complete its loading and recognition of the pages. When the spell check comes up, cancel it. When it finishes recognizing the text, a dialog box will appear asking you to save the file. Cancel that as well.
3. The screen is divided into two sections. The left-hand pane shows all of the pages individually, and the right-hand frame shows the page in a larger format. If there is a third pane, showing the text view, you can close that pane.
4. The first page you are working on will be highlighted in the left-hand pane. This will help you keep track of where you are. All of your work will be done in the right-hand pane. In this pane you can delete sections that have scanned improperly, or expand sections that did not capture all of the text. A vertical row of tools between the two panes will help you do most tasks with several clicks, or a click and drag. I use click and drag to delete entire recognized sections that don’t belong, or to make it recognize sections it missed. Right-clicking on an outlined section gives you several other options you can use, like turning a graphic box into a text box, or a text box into a table box.
5. There are three main types of boxes. Graphics boxes are surrounded in green and generally need to be removed. Blue boxes are tables, that generally need to be turned into plain text. And orange/amber boxes are text, usually plain text.

This is where the required output makes a difference in how you handle the OCR. A visually impaired student that needs to have graphics, tables, and figures intact will need their document with more detailed OCR. Students that simply need plain audio files or plain text files will need their document extremely simplified. For simpler files, I remove every bit of extraneous information possible, including page numbers, headers at the top of each page, etc. For more complex output, I leave everything in for coding later using Microsoft Word.

1. Once all of your edits are complete, click your cursor in the left-hand pane and then perform ctrl + a to capture all of the pages. Click the "Perform OCR" button once more, and when it asks if you want to re-recognize the text, click yes.
2. This time, when the spell check comes up, you can choose to run it. I suggest running it and letting it find any errors that you can fix. It is not a perfect spell-checker and will not let you correct things that it doesn’t highlight, but it will give you a start on your text editing for later. Once the document is finished and gives you the “OCR Finished” message, you can then save the document into the WORD folder you created earlier. This time, the file name should be “01ch p.doc.” If you are creating audio files later, the “space p” will be important in the file name.
3. Once the Word file has been saved, you can use file, close to close the open file in Omnipage. When it asks you to save, say no. The TIFF file is already saved, and the only output from your work that you needed to save was the Word file, which you’ve done.
4. Continue with the rest of the chapters as above.
5. If you are producing the output for a visually impaired student, you should ask them if they also would like to have the front matter and back matter converted, as well. Not every student needs this, and it is extra work that may not be needed.

## Text Editing

Text editing is the meat and potatoes of the entire alternate format production process. This editing takes the most work, the most time, and the most attention to detail. With experience, this editing goes faster, but the first few times you are doing this, you will spend what seems like centuries editing a single chapter. The amount of work involved also depends on what the final output will be, and how complex the textbook itself is.

### Simple Text Output

On a simple text, like a novel or other straightforward reading, where the output is expected to be MP3 without tags or navigation, a quick, easy edit is applied. All page numbers are removed, all page headers are removed, blank lines are removed, etc. Graphics, tables, and figures are completely removed, and the only thing left are the paragraph breaks.

To accomplish this clean edit:

1. Open the OCR’d Word document in Microsoft Word.
2. From file, choose “save as” and save the file as a .txt file into the TEXT folder.
3. Close the file.
4. Reopen the file

You will see that all of the text has had its formatting removed, all tabs removed, no bolding or italics or any other extraneous formatting. It will be easy at this point to remove any remaining page numbering, page headings, extra line breaks, etc. This extremely clean .txt file is perfect for conversion to audio.

1. Page through the file to check for anything out of place; occasionally paragraphs are out of order from the OCR process, or there are blank lines between pages. Cut and paste is your friend, and all blank lines should be removed. There may also be blocked sections from the original text that fall into a place that makes listening to the book difficult. I often move these blocked sections and place them between sections or at least between paragraphs, rather than in the middle of a paragraph.
2. Watch for red underlines as you go (you should have your spell checker enabled). You can catch most problems by keeping your eyes trained for these red underlines. Practice makes perfect; the more often you do this work, the quicker it will go.
3. Save your document, saying yes when the Word dialog box asks you if you want to save in .txt format.

A simple novel or other straight forward reading can usually be scanned, OCR'd, and text edited in two or three hours. More complex books make take several days to complete. It really depends on how much needs to be moved, adjusted, removed, or otherwise changed.

### Complex Text Output

Sometimes a student needs a more complex output than plain MP3's. They may need the navigation of hearing page numbers, having graphs, figures, and tables described, and need to know when headings are different. These students usually want expanded or complex Microsoft Word files that they can use at home with their own screen readers, or on campus systems running JAWS. The more complex the book, the longer this process will take.

1. Open the OCR'd word document in Microsoft Word.
2. Move all page numbers into footers/headers space as needed. A quick way to do this is to just create a new footer with page numbers beginning where you need them to (i.e., not every chapter will start with "page 1")
3. Look through the original text and make a decision about how many heading styles you will need. Most books have no more than three, but I've seen books with five or more heading styles. You can use Word's existing styles or create new ones of your own (I use Word's existing styles to save time).
4. Highlight and apply styles to all headers throughout the document.
5. Pay attention to marked spelling errors as you go, and correct as you go. Practice makes perfect; the more often you do this work, the quicker it will go.
6. Save your document in its original WORD format when you are done.

### PDF Output

By nature, PDF output is extremely complex. If your student is looking for PDF output, you should complete the editing the same as you would for Complex Text Output. The use of styles is critical to this process, and requires close editing. I have very few students asking for this type of output, and when it is requested, I inform them that production time will at least double in order to complete the work in an accurate manner. PDF's not created properly will be of absolutely no use to the student.

Once your complex production of the Word file is completed, you can save as PDF in Microsoft Word (2007 only). Don't just click save and say okay, several settings need to be changed before you do this. On the dialog box that comes up when you save to PDF, be sure to look for the "options" button, and open the dialog box that allows you to change settings. Be sure to mark bookmarks by headings, markup for accessibility, and ISO compliant. This will give you the most accessible file using Word's built-in PDF converter.

If you are using Adobe Professional 8.0 to create the PDF (which I highly recommend), you will have to go to file, print, and choose Adobe PDF from your printer menu. Click Print, and wait for the document to be produced and Adobe Acrobat Professional 8.0 to open and show you the finished document. By default, it should be an "open" document meaning the markup is in place and the reader built into Adobe should be able to read it. You can also change security settings to lock the file down, and apply other security settings, but realize that if you do this, you will be making the document inaccessible to a screen reader.

It is possible that a student will ask for a basic PDF for use with a CCTV or other enlargement device. I try to convince them otherwise, but if this is what they want, then I produce it.

### A Word About Daisy

Our production does not include conversion to DAISY at this time. However, many of the techniques described above can be used if you are producing DAISY books for your students. You will need additional software to complete the task of turning a document file into a DAISY file. Several are on the market, the only one I've tried is the publisher series from Dolphin.

## Converting to Audio

As I mentioned before, the majority of my students want easy, simple text files with no extraneous information to bog down their listening. Learning Disabled students make up the bulk of my clientele, and they are often physically reading the book with their eyes while listening to the audio we produce.

To this end, I use the simplified text files, converting them to MP3 through Text-to-Audio from Premier Assistive Technology. This easy to use program fulfills the task I need it to, quickly, easily, and without a lot of setup.

* 1. Open Text-to-Audio, and open the first file you want to convert to audio.
	2. Be sure to go to settings on the menu and change your output location to your main file folder for the book you are working on. Text-to-Audio remembers where you were last and will over-write audio files without warning if you place them in the wrong folder.
	3. Choose your voice and speed. I use a Cepstral voice from Premier Assistive Technology called "David." I usually set the speed at minus 2. This seems to be a good speed for my students; those that would like it faster or slower usually have made their preference known ahead of time.
	4. Change the file output to MP3 if it isn't already.
	5. Put a checkmark in the "Segment the Audio" click box, and click on "Define Segment." Choose to segment by time (ten minutes) and click "Create Segments," then "Finish." You will only have to do this the first time.
	6. Continue to open files until all chapters of the book have been opened. Double-check as you go to be sure the output is MP3, and the check box for "Segment the Audio" is checked.
	7. Click the start button and watch as your files are created. You can work on other projects while this is going on, but I do not recommend you work on anything in Omnipage Pro while conversion is taking place. Both of these programs are resource hogs and may bog down your system, making it impossible to work.

## Burning to CD

As I discussed in the chapter on equipment and software, I use a free program called Deep Burner to burn CD's. I have also used my Windows XP or Vista system to burn CD's, and of course Roxio. I find that Deep Burner is the fastest, and simplest, to use.

1. Open Deep Burner.
2. Be sure the radio button for "Create CD/DVD" is selected and click "Next" in the first dialog box.
3. Click the radio button for "No Multisession" in the second dialog box, then "Next."
4. You will have a simple file window pop up. Behind it is another file window. Using the back file window, navigate to where your files are, click to select them using standard keyboard commands (ctrl + click for single files separated by other files, shift + click for multiple consecutive files, ctrl + a to select all). Drag the highlighted files to the front window.
5. If you put too many files into the window for your CD, the amount will be in red. Remove files until the amount shows in blue once again. Standard CD's hold 700 mb of information, the bottom box in the list of CD sizes in the left of that file box. (Most books take 2 or more CD's). Never break up a chapter on a CD; if a chapter has 12 segments (each 10 minutes in length), do not put the first four segments on the first CD and the other 8 on the next CD. Place only whole chapters on CD. It is easier for the student (and you) to manage if you do this.
6. Place a CD in the burner drive of your computer.
7. Click the "Burn Disk" icon on the left, and wait for Deep Burner to search for your drive. This takes five to ten seconds.
8. Click the "Burn" button at the bottom of the dialog box, and your CD will begin burning. It will eject and play a little fanfare sound when it is done burning. Burning takes about 2 to 3 minutes, sometimes less depending on how many mb you are putting on the disk.
9. If you have a labeler, you can use it to label your white-topped CD's. I don't have one, so I use a sharpie marker to mark the CD. I place the name of the book, edition, and author at the top of the CD. On the left side of the hole I indicate that this is Disk \_\_\_ of \_\_\_, filling in the appropriate numbers. On the right side of the hole I put the file type, MP3, MSWord, Text, etc.) On the bottom I indicate which chapters are included on the CD.
10. Repeat for subsequent chapters until all are on CD's.

7

Conclusion

Using the processes I've outlined in this manual, you should be able to bring your production time down to a manageable level. The most critical aspect of what I've covered is the processes, and staffing. Having hard-working, well-trained staff is key to getting materials completed in a timely manner and out to the student.

I have always taken the attitude that my disabled students deserve the same opportunities as non-disabled students, and to withhold textbooks because our processes are flawed is inexcusable. The provision of alternate format is part of what we are expected to do for our students, and I take that responsibility seriously.

It is important to note that this process won't necessarily work for everyone. Depending on the needs of your students, you may find that you are doing more complex output than I do, and your timelines may be longer because of it. This manual and the processes I wrote about are unique to our campus, and our situation, and you may need to make adjustments for your own needs.

Having said that, however, the argument that there is no money for staffing or equipment is also inexcusable. There are grants, contingency funding, capital campaigns, unused line items in current budgets, and adjustable staffing budgets that can be manipulated to further the cause of providing alternate format for students. Find your advocates and network with them in the most effective ways. The ability to "schmooze" cannot be underrated. Know who your deans and department chairs are, especially ones that may be sympathetic to the cause, and wheel and deal as necessary to get what you need. The initial outlay may be high, but the ongoing costs are small by comparison, and equipment and software can run for many years without updating. We are at five years with our current scanner, and two years with our current software. The only consumables I buy every year are the bulk CD's and sleeves, and that cost is minimal. Staffing is my biggest cost, but I have managed to overcome that, as well. You can too.

In a culture of academics, especially when you've been in academics for some time, it is easy to become complacent after hearing "there is no money for that" over and over. But there is money for it; education is one of the few recession-proof businesses. Also, the colleges that are providing the best, most up to date services will be the colleges with the full enrollments, and ergo more money to provide what is needed to all students.

Use this to your advantage; enrollment numbers are critical to administration. Anything that increases paid enrollment is going to lauded, and as we all know, we are seeing more and more disabled students every semester, many with federal or state funding to complete their education. That boost in the college's bottom line leaves plenty of room for growth in service areas within the college, including disability services and adaptive technology services.

Fight the battle. Don't give up. Don't take "no" for an answer.