

ROUGHLY EDITED FILE

ADVISORY COMMITTEE ON ACCESSIBLE INSTRUCTIONAL MATERIALS IN
POSTSECONDARY EDUCATION FOR STUDENTS WITH DISABILITIES

COMMISSION MEETING
Hyatt Regency Jacksonville
Riverfront Hotel
225 East Coastline Drive
Jacksonville, FL

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>> CHAIRWOMAN DIETRICH: I would like to call the meeting of this Commission to order, please. And just to let you know that this is being broadcast live on the Internet. So anything that you say will be heard around the world, and that includes any sort of, you know, side comments that you might make to someone else. So don't be near the microphones.

(Laughter)

>> SKIP STAHL: You may want to pull that microphone closer to you.

>> CHAIRWOMAN DIETRICH: I'm warning everybody you can't hear me. Is that good, Skip?

>> SKIP STAHL: (Indicating affirmatively.)

>> CHAIRWOMAN DIETRICH: Okay. Well, welcome, everyone. And welcome to our audience who is behind me. Which is a

little odd. Sorry, folks. I am the Chair of this Commission. I would like to start out just giving everyone a little bit of an overview of what we're going to be doing the next two days. This is actually our second in-person meeting. This is our third meeting. We had our second meeting over telephone conference call system. So I am glad to see everybody again. And some new faces as well.

The charter that we are working under was authorized in the Higher Education -- or, rather, the Higher Ed Act, Section 772. I want to go over briefly what our scope of activities and what our duties are just to keep that as a focus as we go through the next two days. So basically what we're doing at this point is we are studying. So we are creating a base of knowledge that will be shared with the legislature on issues having to do with access to instructional materials for individuals who have print disabilities. So we're looking at the barriers on the systemic issues. And then we're making recommendations -- excuse me, jet lag is catching up with me -- making recommendations for a comprehensive approach for dealing with these issues. And in pursuit of that scope, we have five specific duties that are to develop recommendations that will inform regulations and legislation.

To provide information that will support model demonstration programs. To identify best practices. To improve the effective use of these sorts of materials of instructional materials by both faculty and staff. And to modify the definitions of instructional materials authorized entities and eligible students if necessary. So these are all of the specific things that we're going to be looking at. And in developing these recommendations, we also were told to keep in mind issues about how students with print disabilities actually are able to obtain those instructional materials, whether it is feasible to establish a standardized electronic format similar to what was done with NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD]. Looking at the feasibility of establishing some sort of a national clearinghouse, repository, or file sharing network.

Looking at the feasibility of market-based solutions. And we're also encouraged to keep in mind solutions utilizing universal design, and to remember solutions for low-incidence, high-cost requests in specialized formats.

In pursuit of accomplishing these tasks, the Commission has created four task forces. Those task forces have been at work since September, and their work is ongoing. We will

hear from two of those task forces today. And I want to thank very much both Maria and Jim for being two of our task force Chairs who will be presenting today. It's a lot of work to be the Chair after task force, far more work than just being on the task force. So I really appreciate both of your times out of your very busy schedules to do that. At the end of tomorrow, we will also look at the next two task forces that are going to be really starting their work, which are being led by George and Tuck.

I think that the only other thing that I would like to say, and I have been thinking since 3:45 this morning when I unexpectedly woke up, heavens knows why --

(Laughter)

-- about how to frame things for the commission. We have a short timeframe. But I really want to encourage us not to get overly caught up in stress about the timeframe, but to reframe that for you where recognize that deadlines mean clarity. Whenever you are approaching a deadline, eventually all of the chaff falls away, and are you able to focus on this the heart of the issue, than is the heart of where we're going. So rather than focusing on, "Oh the time is short and we don't have enough time," let's focus on pairing it down to what are the essentials that we really want to make sure that we know the legislature knows about. And in doing that, I would encourage you not to look for an overly simplified solution as someone who I know well said, "As simple as possible, but not simpler." So we don't want to come up with simplistic solutions for these very complex issues.

And there may be areas where the Commission is not in consensus. And that is fine. I want to frame it that if there are dissenting opinions about anything that that is not a problem because what we want to do is to capture that information and present that so that the legislature knows these are areas where there are points of tension, there are differing needs, there are differing perspectives, because those same issues will come up if anything moves further from this report. And so having that information, knowing what those issues are, knowing both the potential for that being something that could cause issues, and also the potential on both sides of how to look at that in ways that as a Commission we've taken the time to really prepare and to consider is very valuable.

So I want to also encourage people. We have very differing levels of knowledge in this particular area. But remember that for many of you, you are speaking for a constituent

group. And so rather than having to have a complete understanding of what this means overall, what you are really looking at is how does it impact your constituent group? So I am going to really encourage you to ask any questions that you need to as we go along to ensure that you have enough knowledge and understanding of what we're talking about to be able to return to your constituent groups and explain it to them. Which may be a higher level of explanation than what you would require just for yourself to understand it. So please don't feel shy. I mean, those of us in education say, "The only stupid question is the one you don't ask, because if you have the question, guaranteed somebody listening has that question as well."

So I would now like to turn the mic over to my Vice Chair.

>> VICE CHAIRMAN WENDORF: Thank you. And good morning, everyone. I would like to pick up on a few things that Gaeir said. We know that there are diverse points of view and we want to make sure that comes out so that we have a full discovery, and everyone has a chance to discuss, to talk to make suggestions and recommendations.

We've asked that the task force Chairs who are really going to be responsible for conducting much of the meeting today and tomorrow to really do that, to bring people into the conversation so that those points of view can be identified, where they converge, and where they don't. We're asking the Chairs to begin to the best they can to give a 10,000-foot level overview of the charge for their task force so that we understand what they've been grappling with. And also as they work through the discussion, to identify those points of consensus, some provisional closure, if that's possible, and also to identify where we don't have closure. And I think this is not a meeting where absolute decisions are necessarily being made, but where we are very interested not just in eliciting information and getting evidence in place, but also identify where we agree and where we might not agree.

So they will be doing that. And then we've asked the Chairs at the end to wrap up and to really identify the next steps. And Gaeir and I will step back into the discussion with the task forces with work with CAST to identify specifically where we have points of convergence and consensus and where we don't. We think that will be

essential for setting the stage for the next piece of work of the Commission.

So now some logistics. The usual, which is we're not in the movie theater, but so you don't have a trailer to run, but we need to turn off our cell phones or at least silence them. So thanks for doing that. We're asking members to identify themselves by name and affiliation the first time you speak so that's on the record, and it reminds everyone. So please do that. And as Gaeir said, time is short, the work that we have to do long, so please do all that you can to real really focus your issues.

Dave has things, and then we'll do a roll call after you do that.

>> DAVID BERTHIAUME: Thank you, Jim. I am the executive director of the Commission, and under the advisory committee law the fancy title of designated federal official. And I wanted to say good morning and welcome, everyone. Thank you for traveling down to Jacksonville.

A couple of housekeeping items. One is regarding the agenda, the presentations that are going to be coming up later by Access Text and course mart, I am envisioning that those presentations will last an hour rather than the 30 minutes indicated on the agenda. So my sense is that we will go from at the end of those presentations and the Q&A straight into our lunch break. So I just wanted to make that clear. And in addition, I wanted to thank the guest speakers that we have who are coming here to present today, Tom Hadfield, Christopher Lee, and then in the afternoon Mike Kurdziel from RFB&D, and we'll thank Tracey Armstrong tomorrow. But I wanted to say thank you to the speakers for joining us and adding to our understanding of these issues.

The final bit of housekeeping, which is very much just pure advisory committee law type issue is that when we initially created the charter, we did not envision -- we did not call for task forces and sub-committees. So since we have vibrant sub-committees operating now, we rectified that, and I just wanted to make clear on the record that the advisory commission on accessible instructional materials in postsecondary education for students with disabilities is, in fact, using four advisory committees. We have a best practice advisory committee, that's led by Tuck Tinsley. Members include Lizanne, Andrew, and Gaeir Dietrich. Our second group is the technology group, which we will hear from later today in much more detail. Jim Fruchterman is the Chair of that task force.

Gaeir is also participating, along with Chester Finn, Stephan Hamlin-Smith, Bruce, and Mark. Our third task force is the market model task force, George Kerscher is the fearless leader of that group. Andrew is also participating on that, as well as Bruce, Ashlee, Maria, Linda, and Jim are also members of group 3. Finally, the fourth task force that we have is legal task force, which is led by Maria. They will be presenting -- or she will be presenting along with the rest of her group tomorrow. Peter is a member of that group, as well as Jim Fruchterman, Mark, Betsy, and Jim. So I just wanted to alert everyone to the Committee's use of task forces.

>> VICE CHAIRMAN WENDORF: I move that the Commission establish the task forces, and hope that there will and second to that.

>> JIM FRUCHTERMAN: Second!

>> CHAIRWOMAN DIETRICH: It's been moved and seconded. All in favor?

>> ALL: Aye.

>> CHAIRWOMAN DIETRICH: All opposed?

(No response)

The ayes have it.

>> VICE CHAIRMAN WENDORF: So on to roll call so we can get on the record who is here. And why don't we start to my left. Bruce?

>> J. BRUCE HILDEBRAND: Association of American Publishers.

>> ASHLEE KEPHART: Student at Hamline University.

>> LIZANNE DeSTEFANO: University of Illinois.

>> PETER GIVLER: Association of American University Presses.

>> BETSEY WEIGMAN: Department of Education Office for Civil Rights. I am representing Assistant Secretary Ali.

>> MARIA PALLANTE: Library of Congress.

>> JIM FRUCHTERMAN: From Bookshare and Benetech.

>> GLINDA HILL: U.S. Department of Education Office of Special Education Programs and Rehab Services. I am Alexa Posny.

>> ANDREW FRIEDMAN: Recording for the Blind and Dyslexic.

>> GEORGE KERSCHER: I am an independent on this, but secretary general of the DAISY consortium, and President of the International Digital Publishing Forum.

>> CHESTER FINN: National Council on Disabilities.

>> JOHN McKNIGHT: Assistant to Chester Finn and representing National Council on Disabilities.

>> TUCK TINSLEY: American Printing House for the Blind.

>> STEPHAN HAMLIN-SMITH: The Association on Higher Education and Disability.

>> CHAIRWOMAN DIETRICH: Of the California community colleges representing two-year colleges.

>> VICE CHAIRMAN WENDORF: And National Center for Learning Disabilities.

>> CHAIRWOMAN DIETRICH: Thank you. I would like to recognize Skip Stahl who will write the actual report of the outcome of the Commission.

Skip?

>> SKIP STAHL: Thank you, Gaeir. Let me just provide some background information. The Commission is charged with submitting a report to Congress as of September this coming year. Our goal is to have a very strong working draft by June 15th. So working backwards from that now is the time that we need to be putting text to page, or pen to paper, or however we're going to end up doing it. So we've had some considerable internal discussions at CAST as the support organization thinking about how we structure this report. Maria provided us with suggested model, and so what I would like to do, let me tell you what I hope to achieve this morning. I am going to talk a little bit about the model report, and then go through that Scott Lapinski and I put together and we batted back and forth with Dave and Liz Shook at the Department.

It's very rough. I have no major personal investment in this particular outline, and I hope that all of you look at it and say, "Oh, that's terrible. Let's rework this." That's precisely what I am looking for. And we'll take notes as we go along. The closer that we can get to firming up an outline moving forward, the analogy I use is I really want a tapestry at the end by September and not a quilt. So in order to get a tapestry it involves of pre-planning and design work hopefully from all of you. So I will shift over.

This is the Section 108 study group report. Maria, did you want to say any background before I go through this?

>> MARIA PALLANTE: Sure. This is Section 108, and that's an exception to copyright law for libraries. And Peter was actually a member of that committee, but I think like this Commission, it was convened by the Library of Congress, but like this Commission had a variety of different kinds of perspectives and experiences represented. And they obviously worked towards consensus, but the interesting thing about the model which I think that Skip will go into is sometimes where it wasn't possible, there was a mechanism in this report that allowed for a lot of complex information to be conveyed on the theory that I forgot now if it was Gaeir, Dave, or Jim, as they mentioned that sometimes that's really useful for Congress, that kind of information, just getting them to get up to speed on what was discussed as opposed to what the conclusion was.

>> SKIP STAHL: So I will make you dizzy for a moment as I scroll through this document. One of the things that I also want you to pay attention to, even though this is a PDF and not obviously the most accessible -- oops.

>> TUCK TINSLEY: We don't have that, do we?

>> STEPHAN HAMLIN-SMITH: It's like 200 pages long.

>> SKIP STAHL: So this has a very nice visual layout, a clean kind of presented information, and discrete chunks. But also as we get into beyond the table of contents, what you will see is some navigational features. So in addition to having the content layout the way we think that this Commission's report might benefit from, it also has a nice kind of visual display for navigational purposes. And one of the things that we want this Commission to determine as we move forward is what types of formats we want this report to be available in. Obviously we want it to be as accessible as possible. So I am envisioning that just as a quick technical aside, I'm envisions that we're likely to produce this in XML as a source file, and then from that probably output into PDF or word or HTML and ideally Braille as well.

So a number of different formats. So there is introductory information, roadmap to the report. There's background information which identifies the purpose, the composition, the overview. These are all kind of typical background categories. And then a category called the digital tall affect of new digital technologies. And that's pertinent to

this Commission, and it's an important consideration as well so as we go through this you will see a number of items that emerges and say, "Oh, geez, that's familiar. We've talked about that as well."

It goes into obviously because this is talking about statutory and regulatory issues, it goes into the legal landscape to begin with. And it provides some background information on Section 108 in particular. And begins to really dive into some significant detail. It also ties in under 5 here, other important related areas of law. One of the issues that we will be talking about tomorrow is the significant intersection of a number of different types of statutes, intellectual property laws, civil rights' law, education law, and where those points of collision are and where the points of alignment are so that we envision there will be a significant section in the Commission's report related to the legal landscape and related areas of law.

Overarching Themes is the third section, which really talks as Maria mentions right off the bat and identifies shared values and tensions. So what this report does is it tees up right away that as you read through this are you not going to be reading a document where everybody is in 100% agreement as to what all of the recommendations should be moving forward. But are you going to be reviewing a document that actually presents as clearly as possible the interests of all stakeholders who are involved in the report and the work of this particular Commission. So going through this I don't have to read all of these pieces. But let me just -- we've got issues and discussions, and this is where it begins to get into particular issues related to Section 108.

So set aside the content for a moment, but just take a look at this particular structure, thinking about recommendations for legislative change. This is one of the charges of this Commission as well, to make specific recommendations related to either statute or regulations, legislative. Let me move down. Conclusions, other issues, and then it goes into conclusions and next steps, and a series of appendices. So this one -- I wonder if I lost my iLinc connection. Hang on just a moment.

(Pause)

I think I may have lost my wireless connection. So I am reconnecting to iLinc. No, I'm all right. I think.

(Pause)

I will worry about that in a minute. Let me take you into the actual draft outline of the report. So when Scott and I started thinking about this particular report and how we wanted to structure it, we took some guidance from the Section 108 report that Maria had provided, and took a look at the array of documents that we had. And the one document that jumped out at us as being a significant and foundational piece I think was a document that arose in Jim's tech task force was what we referred to as the barrier's document? Is that the one that came out of tech?

>> JIM FRUCHTERMAN: (Indicating affirmatively.)

>> SKIP STAHL: And that document essentially, most of you have it in table format, but we also created it in a linearized version so that it could be Brailled and managed digitally. Essentially it identified challenges and barriers that exists for constituent groups soar end-users, for large publishers, for small publishers, and then for personnel and institutions of higher education predominantly DSS, disabled student services personnel, who were trying to find -- scrambling to find ways to fill student requests for alternate format materials. So we created a chart that essentially had those four columns, and then a number of issues related to those. And those issued ended up evolving into legal issues, market-related issues, technology issues, and best practices issues.

And so the work of each of the task forces actually was directly related to that document. And since a number of folks were constituencies contributed to that document, since that was incredibly organic and came from the Commission members was a good place to start. So I am just going to skip over this. What we're envisioning is obviously the introduction, there will be a charge, which is a recapitulation of what the charges are from the Higher Education Opportunity Act related to the Commission. We put in an entry for guiding principles. And I did that because of the work that I was involved in with the National File Format 10 years ago. It became clear that there were some guiding principles that all Commission members could agree to, and that discussions and considerations really emanated from this very high-level set of guiding principles.

And I had suggested to a number of folks that that might be something that this Commission would like to consider because it seemed to me that a number of these were evolving kind of naturally out of the discussions that were occurring at the task force level, and that as task forces were reporting back

and presenting their discussions, that you would see some similarity, and people would say, oh, gee, we came up with that in our task force as well, and those were good indicators that this, in fact, might be a guiding principle that all Commission members can agree to.

The next section is really just an overview of the process of how we -- of how decisions and discussions occurred. So that's kind of -- we did this, we did that, a breakout of the task force works, et cetera. So I will just stop there for a moment and see if there are any questions. Any questions on that early section?

>> CHAIRWOMAN DIETRICH: I am wondering would it be possible upload into our DropBox the guiding principles that you came up with for ? I am curious.

>> SKIP STAHL: Yes. I shared those with Dave. I think that -- the answer is absolutely. I would be more than happy to do that. They are pretty technical because obviously the charge was a national file format, which then became NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD]. But I will upload that because they actually can provide some suggested way of structuring. And there are, I believe, five of them. So there was a statement of guiding principle, and then under that a rationale. And that was the structure that we used.

The next section that we envisioned is really the postsecondary landscape. And that right off the bat we felt that there needed to be a clear statement of definitions of terms before moving forward into any discussions, so that there was some clarity on how these terms were being viewed by the Commission, what people generally agreed to, or at least in the context of this document, how these terms were being used. So we came up with the ones that had bubbled up, accessible instructional materials, print disabilities, students with disabilities, beneficiary class, specialized formats, low-incidence, high-cost, timely delivery, and universal design. And those are the kind of key terms that have been extracted from the recommendations that Gaeir had read through prior -- earlier this morning.

So then starting to look at --

>> VICE CHAIRMAN WENDORF: Excuse me, Skip?

>> SKIP STAHL: Yes.

>> VICE CHAIRMAN WENDORF: Just a question about that. These would be definitions of those terms sort of generically rather than sort of jumping ahead and saying this is how we

are defining them in terms of recommendation? I mean, looking at beneficiary class, for example, I mean --

>> SKIP STAHL: Right. Right. I think that in this context it's really teeing up that when this discussion began, everybody understood beneficiary class to mean this as a category.

>> VICE CHAIRMAN WENDORF: Got it. Right.

>> SKIP STAHL: So as you move through the document, there is some clarity when that term is used what it actually means.

>> VICE CHAIRMAN WENDORF: Okay.

>> SKIP STAHL: So then we went through really, again this is just an overview section of what's happening in postsecondary institutions. And this is more kind of a statistical database. But we also envision, and the one thing that is not represented here, and I think that Tuck was the one and Jim Wendorf had referenced that it would be powerful within the report to put some call-out boxes or sidebars or reference information with actual student stories so that we personalize the process of presenting statistical information and try and bring it home concretely and clearly to the best of our ability. And it may be that a call-out box or a sidebar is not the way to do it, but it's one way of actually putting quotations in alongside statistical information that actually can personalize that information and in a very succinct way.

So the background categories were postsecondary institutions, postsecondary student population, students with disabilities, again, all overview, instructional materials at this level, and accessible instructional materials at this level. We thought, again, that this was just putting a stake in the sand and saying, "These seem to be the key issues that we wanted to address."

We felt it was important to provide an analysis of the distinctions between what's happening in K-12 and what drives the activity in K-12, and the distinction between that and what's happening in the postsecondary environment. Often because there are major and national initiatives at both levels, K-12 and postsecondary, a lot of people assume that the issues and potential solutions are identical. When, in fact, that's probably nothing could be farther from the truth. So we thought it important to include that distinction.

And then the next --

>> JIM FRUCHTERMAN: Can I make a point?

>> SKIP STAHL: Absolutely. Please do.

>> JIM FRUCHTERMAN: Pass the mic, please?

>> SKIP STAHL: We apologize for that.

>> JIM FRUCHTERMAN: Something that sort of is interesting is that we're actually charged with potentially modifying the definition of three key terms, "Instructional materials, beneficiary class, and authorized entity." So one the issues we'll run into the overview, here is the definition, oops, but later on we're supposed to make recommendations and changes. So I don't know how we do that, but I want to flag that as an issue when we get to definitions since that's part of our job.

>> VICE CHAIRMAN WENDORF: And I think that I was trying to get at the same thing when I asked the question that are we dealing with generic definitions here? When you are in statute, and you leave with definitions, then how do you define a term? It makes all of the difference. So is this going to capture the status quo, or is it going to capture -- will it define the term in a way so that when we get to recommendations, if there are recommendations to change, that still make sense?

>> SKIP STAHL: I think that's a good point of discussion. What's your recommendation in terms of how we present these definitions? I mean, one is presenting the definitions right up front of these terms, a useful strategy. I mean, from a kind of practical perspective. I just felt that a lot of these terms would be permeating this document, and that they needed to be some common ground related to usage. But there are actually two possible ways of doing this. What the interpretation is, as these terms exist now, and what this Commission feels -- the manner that these terms should be defined in the future.

>> J. BRUCE HILDEBRAND: Skip, you ought to be able to finesse that.

>> SKIP STAHL: Bruce, you could use the mic, please?

>> J. BRUCE HILDEBRAND: We all write too many documents, we ought to be able to finesse that. I mean, come on. We've got 10-15 writers sitting around the table. I guarantee that we can finesse the definition saying that there are exceptions and they will refer to such and sufficient, and bingo! We can move it.

>> MARIA PALLANTE: I think I understood that you were saying that we were flagging the important concepts and definitions that we were going to be right up front so that there is a guide for the reader, as opposed to actually literally defining them. Which I think is a great idea.

>> SKIP STAHL: Okay. Any other questions at this level? We have a little projection probably with Internet, but I am not going to stop to reload it at this point.

So I went through comparison of K-12, are people comfortable with including that section? And feel that's important? I just need nods that would be good. Okay. Great. And certainly at any point if I say something and put something up here and are you like, "Why are you doing that?" You know, let me know.

>> LIZANNE DeSTEFANO: One suggestion I want to make is I like the idea of having student stories. It would be good to present other perspectives to faculty stories, maybe a student service perspective, because, again, I think that's an opportunity to educate Congress. They may not be aware of the breadth of postsecondary participation. They may not be aware of, you know, some of the issues involving how textbooks are selected at the campus level. So I think that vignettes are good, but let's broaden it beyond students.

>> SKIP STAHL: Great. Thank you very much. And publishers.

>> LIZANNE DeSTEFANO: Publishers, yeah, the whole --

>> SKIP STAHL: All the constituent groups. I'm not going to spell check at this point.

(Laughter)

As long as I know what I've got. Somebody once said if you use your hand you could download your speed.

So the next section we just tentatively entitled findings. It seemed to be generic enough, a good place to start. And what you will notice is that we've now moved into kind of the task force structure. We started with legal because we felt that that was the framework upon which all of the work of the other task forces rested, and that there were things that we needed to address. So taking our lead from the legal task forces document that was discussed on January 7th, we kind of went through and said, "Okay, we need to deal with copyright law. We need to address the influence of civil rights' law. The whole influence of permissioning and

licensing, beneficiary class, role of authorized entities, digital rights management."

And so I am going to leave that for a minute because we'll come back to this section. Technology, again, we extrapolated information from the existing -- some of the existing technology documents. And, again, all of this is opened to addition or deletion. Types of files produced. Review of files produced. Files must be in preferred formats. Number of different files. These were just items, discussion items, STEM materials, and addressing other types of AIM, video, audio, open course wear. There was a subcategory of types of files produced and how they are produced, the roles of different user groups, costliness of creation and retrofitting conversion, et cetera. It went from there into best practices.

How our AIM obtained? What's requested? How to request it. Timeliness of request. How it's effective. As I go through this and am articulating them and speaking them out loud I am thinking that we need to be careful how we present the order of the task force findings because it may be that legal should be followed by best practices, should be followed by technology. Should be followed by market. So those are thing this case am going to need some guidance on from you all. Because every time I review this outline I go through 25 different changes in my own head of shifts. And we'll be distributing this, again, too.

Best practices. So it's processes of AIM are obtained and created. Types of workflow, how they are processed and sent. Market discussion, and this is George's group. Who currently uses AIM? Limited definition about who qualifies. Worries about privacy. How our AIM obtained. And, again, these are just snippets from the document that the task forces have begun to work on. Individuals cannot directly purchase AIM. Specialized formats are not sold. The role of authorized entities. What is the market requesting? Limited knowledge of formats and potential. Lack of agreements on format. Lack of institutional requirements that are consistent. This information, the findings section, was taken directly from the barrier's document.

So we went through the barrier's document looking at each category of invested stakeholder. And just to remind you that those students, large publishes, small publishers, DSS, and usual personnel, and we re-categorized those into legal, market, best practices, and technology. So each of these entries came directly from that barrier's document.

>> ANDREW FRIEDMAN: Skip, you can run back up to the top on production piece? One thing think that think is missing for me is before you get to the definitions is the why. So what are the goals of what we're trying to achieve? If you jump right into kind of definitions and other stuff, you are not giving people the why do we exist piece of this.

>> SKIP STAHL: Okay. So that should be in this -- kind of at this level just before the postsecondary landscape.

>> ANDREW FRIEDMAN: Right. What's the problem?

>> JIM FRUCHTERMAN: It's part of it.

>> ANDREW FRIEDMAN: Is that part of our charge? We may have just glossed over it.

>> SKIP STAHL: It will be part of the charge, it's separate. But I like the idea of pulling it out actually. So let me put it in there.

Any other suggestions?

>> VICE CHAIRMAN WENDORF: Skip, you could talk about where the findings come from, and sort of connecting the process of the Commission and the task forces to the findings?

>> SKIP STAHL: Good question. I think that the findings categories, as I said, these were all taken from the barriers document. And we have a number of documents that support the barriers document. So we have information from different constituent groups. We certainly have Bruce contributed significant documents related to large publishers versus small publishers. We have some research data and survey information so that we can cite accurately that. So I felt that since the barriers document was a group consideration and contribution and a number of people had worked on that, that that was really the best place to start. So we have a lot of supported detail, and it may be as we go through the barriers document that the way that it was structured as a barriers chart is not applicable for the format in the report itself.

But we thought that was the place to start. And then to provide supporting detail. Does that --

>> VICE CHAIRMAN WENDORF: Yes.

>> SKIP STAHL: So we're still all in the kind of, you know, what did we start with category? And then we move into discussions and recommendations. And I put this line in here, stakeholders, DSS, students, faculty, large versus

small publishers as really the prime constituent groups whose needs were addressed through the various documents. This is just a reminder to me that -- of thinking about how we approach this report as we move forward. Do we address in an individual way the needs of each group? Do we interweave these? And I don't have an immediate answer for that so this is really just a reminder category. But now we get into the whole section, again, this is the section on discussion and recommendations, and we may want to just entitle it "Discussion," and save the recommendations part.

But I also felt that what was happening was the way that the task forces were being operationalized was that there was a lot of discussion, and then each task force, particularly the really active ones, technology and legal, were moving towards points of agreement and disagreements. So some bullet items were being identified. There was some consensus issues that were being clearly identified, and issues of continuing tension, and disagreement. So I included recommendations in here because it seemed to me that recommendations as well as the task forces back to the entire Commission. And are you biting your lip, Maria. I am wondering if you have something to say.

>> MARIA PALLANTE: Well, it could just be that I need more coffee.

(Laughter)

But I think intuitively, and I would label the middle piece where you have -- I think that's the discussion. And this is findings and recommendations. This whole thing is where we really get into what's going on? What's the tension? What have we been learning? What are the different perspectives? What are the different factors? And then you get down to either findings that move us forward but may not be recommendations, or we get to recommendations. It's just an intuitive structure.

>> JIM FRUCHTERMAN: I am going back to the legislation and what it asks us to do. What we've done is sort of built a report around barriers and our task forces, which is actually not the structure of what we were asked to do. And we actually aren't doing a lot of things that we're supposed to do in the draft as it's structured. So we may want to invert this and go back to essentially our charge, and make sure that we're answering every question that we were asked. And, I mean, we're supposed to come up with, you know, systemic issues, technical solutions, make a comprehensive set of recommendations. And, yes, legal and technical and

all of these things are part of it. But it's not clear just because we built the task forces around four considerations. They're like, that's like a tertiary issue in our charge as opposed to what we're actually asked to do.

>> LIZANNE DeSTEFANO: I had exactly the same reaction, and I think that the -- maybe we could leave in the sub-committee structure for the discussion group because that's where a lot of the discussion has occurred. But I definitely think in findings and recommendations we need to broaden it and not have it be bound by that structure.

>> SKIP STAHL: Okay. Scott, are you taking down some of this?

>> SCOTT LAPINSKI: Some of it. We have some iLinc issues. We're not getting sound anymore.

>> SKIP STAHL: I am going to have to continue this.

>> ANDREW FRIEDMAN: Here to me is the issue --

>> JIM FRUCHTERMAN: You need a mic.

>> ANDREW FRIEDMAN: Sorry. What's the process to meld all of the task groups together? You know, because there were good ways to come up with findings and recommendations, and they are in their silos. But if you don't put everything together and all of the findings together are you kind of left with the wrong answer when I think that that is what Jim is leading to. You are actually not answering the task force questions, or the questions that we've been tasked with.

>> SKIP STAHL: Let me offer the suggestion. Go throughout remainder of the report, because you will see that I have identified those issues. And I would admit readily they are in the wrong place. But let me go through the remainder of the outline.

>> ANDREW FRIEDMAN: Sure.

>> SKIP STAHL: And then let's go back over and address that issue.

>> GLINDA HILL: I think that you mentioned at the start you wanted to go from quilt to tapestry. So is that where you are headed?

>> SKIP STAHL: Yeah. We're still at the quilt level.

>> GLINDA HILL: That's what I am thinking.

>> SKIP STAHL: Clearly at the quilt level. I am happy to admit that. So what we did here was just, again, categorized according to the task forces. There was a

discussion relation of this task force to other task forces postsecondary landscape, what considerations were addressed in what key issues were identified? Areas of concern and response to concerns? And what has already been done? And then task force recommendations, and that recommendations could be identified as points of consensus. So we did that for legal, technology -- sorry. Best practices and market. And then came a section of a summary of recommendations, and I think that this is the point where people are feeling we want to eliminate the categories, legal, technology, market, and best practices and maybe go back to the specific charges within the Commission requirements.

What I did also here was put down a series of what the considerations -- what considerations needed to be addressed. This is clearly the wrong place for these considerations. But it was just extrapolation of the listing that we are charged with addressing specifically these items. So I am just going to go through them quickly.

>> JIM FRUCHTERMAN: They're not considerations. Those are actually the recommendations that we're supposed to make.

>> SKIP STAHL: Yes. But they are also posted as considerations in the statute. Federal regulations and legislation model demonstration programs, best practices, effective use by faculty and staff, support for copyright law, modifying existing definitions. I believe that was a considerations category. Is that the recommendations category?

>> JIM FRUCHTERMAN: I think that's recommendations.

>> SKIP STAHL: Okay. So I may have combined the two on that one. So I think we've got -- it seems to me that we have all of the pieces. The structure isn't quite right yet. So, Jim, are you seeing these in considerations?

>> JIM FRUCHTERMAN: Yeah. Yeah.

>> SKIP STAHL: Okay. Because what I discovered was as I looked through the considerations in the statutory language, that they actually relate directly to the series of recommendations that we were asked to address. So these were the six major ones.

So let's go back again to this whole notion of to what extent do we want to reflect and maintain this structure? Let me stop here. The structure of the task forces? At what point do we relinquish that structure in favor of full Commission moving forward? And what we did was we kind of did the background with the barriers, using the barriers

document as a guidance, and then went into the task force, what discussions, points of tension, and points of consensus emerged from those task forces? And then moved to a kind of full Commission overview, and that's when I read down through here where I had put in under "recommendations" went back to legal, technology, market, best practices, I don't think that's the right structure here. So my suggestion would be that we maintain the -- I am just throwing this out.

One way of approaching this is maintaining the task force structure up until the kind of summary of recommendations, and then go into a full Commission kind of approach. But I will --

>> ANDREW FRIEDMAN: It seems confusing to me. It seems at the top you actually want to put the structure around the recommendations and considerations and build the task force back into the problems that we're trying to answer. So keeping that same structure. It seems like -- and, again this is hard to do when you are not actually writing it and seeing it. But it seems like it will be confusing if you go from one format to the other.

>> SKIP STAHL: Okay. So you are recommending, Andrew that we start with a listing of required recommendations, and considerations?

>> ANDREW FRIEDMAN: I think so. And then you put our structure, the legal technology, market, best practices, you a under all of the questions. So you start melding all of the groups together. I am not sure -- it just seems to be confusing going the other way. But that's one thought.

>> GEORGE KERSCHER: The purpose -- this thing is not working. So the reason for breaking up into the smaller groups is just efficiencies. And the ideas formulated in those groups are brought forward to all of us and become part of our common understanding. So, really, these are just part of a process that we use to get to our final findings and recommendations. So I would try to break that out, you know, put it into the process piece, but break it out as soon as possible. I mean, get it out of there as soon as possible.

>> SKIP STAHL: Thank you. Jim?

>> VICE CHAIRMAN WENDORF: Dave has pointed out something to just keep in mind. And we have this handout task force groups and members. And that each of the task forces was created with certain considerations in mind. So each task force addresses certain considerations and we broke it up that way.

>> SKIP STAHL: Okay.

>> JIM FRUCHTERMAN: And, Skip, the thing that you listed as considerations is in the statute as what the recommendations are, and the task forces were setup around the considerations, which are a level below that.

>> SKIP STAHL: Got it.

>> LIZANNE DeSTEFANO: So I think as part of our process, we need to make sure that the work of the task forces is aligned with these broader issues or recommendations or considerations of what we're talking about. And then the process by which the full Commission kind of gives input into this I think we need to think about that as well. Because I believe my role on this committee is representing four-year institutions. And I am on one sub-committee, on Best Practices and working on that, but I can see a role on four-year institutions on many of the other task forces. So making sure that we have a robust process to allow that to happen.

(Pause)

>> SKIP STAHL: I know it's painful to watch me do this.

>> CHAIRWOMAN DIETRICH: Skip, I am looking at the charter here, and the first Roman numeral under objectives and scope of activities, we have specifically assess the barriers and systemic issues, technical solutions available, and then looking at improving timely delivery and quality of accessible instructional materials, and also looking at effective use of such materials, and then basically recommendations related to those. That seems like a natural breakdown to me, those four points. And if I am reading this correctly, that is what really the heart of what we're supposed to be doing.

>> DAVID BERTHIAUME: I think that the difficulty here is that we have at least three different competing guides about what we're supposed to be doing. We have the language that Gaeir just read, which is an overview language. We have the five specific recommendations that Jim Fruchterman talked about, forming regulations, supporting model program. And while we're juggling that, we have to keep in mind through all deliberations the six considerations. So we didn't get a lot of help from Congress here about exactly how to frame this but picking on what Jim, Andrew, Lizanne, I think that we need to if not in the last half-hour, we'll set time aside tomorrow afternoon to talk about this a little bit before we leave. We need to pick framework and go with it. And it's

not obvious to me exactly -- I mean, we need to check off the boxes of the recommendations.

>> LIZANNE DeSTEFANO: A three-dimensional matrix.

(Laughter)

>> DAVID BERTHIAUME: But I think that Gaeir might be on to something about the overview language of the study needs to assess the barriers, the timely delivery, technical solutions, in that way I think that we will be able to capture a lot of, if not all of, the five specific areas that Congress said you need to make recommendations on these five topics.

>> JIM FRUCHTERMAN: And guess what? You identified three. There is a fourth. One of our charges is to give detailed recommendations about the model demonstration program. And you go to the model demonstration program, there is a list of about, I don't know, seven things that we're supposed to look at on that one. So I think that we've actually got four.

>> CHAIRWOMAN DIETRICH: So I am wondering if it might make sense to have people who want to work with Skip on putting together the outline meet tonight after the session, and then bring back something tomorrow to the full Commission? I am not really sure that at this point we can go a whole lot further with actually re-working the outline, without actually re-typing it.

>> SKIP STAHL: It may be hard to meet this evening given the public hearing schedule. But that is just an FYI. Although we may have some points of dead air. So we may be able to fit something in. But certainly I am more than open to whatever contributions people are willing to make so we can, you know, figure out a mechanism for doing that. But, yeah, let's see if we can pull something together.

>> LIZANNE DeSTEFANO: It might be useful if somebody could put together a PowerPoint that has the three charges, the five considerations, the four whatever, whatever, so that we could all be looking at them at the same time. Maybe like three columns see this we can see where the connections are.

>> GLINDA HILL: Is the conflict between regulatory, statute, and charter? Is that where are you seeing the three different lists?

>> JIM FRUCHTERMAN: I don't think it's that. But it's that we have four lists of things that we're supposed to be doing.

>> GLINDA HILL: Are the lists coming from regulation, statute --

>> SKIP STAHL: All from statute and charter are the two that we're referencing now. As George mentioned, the task forces are just a vehicle for addressing those. This has been very helpful. Any other comments?

So we'll try to put something together and come up with a Round 2 by tomorrow.

>> CHAIRWOMAN DIETRICH: Because it was sort of conspicuously absent to me, nowhere did I see universal design mentioned. And that was one of the specific areas that we're meant to look at. I just didn't want to get that lost in the shuffle.

>> SKIP STAHL: Thank you. Great. Okay?

I am going to re-up our is their Linc connection.

>> CHAIRWOMAN DIETRICH: Okay. So at this point let's take a 15-minute break to give Skip a chance to resolve those technical details, and then we'll resume with Jim Fruchterman and his task force. 15 minutes. I am not sure what time it is. 9:45, please.

(Break)

>> CHAIRWOMAN DIETRICH: If everybody could take their seats to resume the meeting, please. Could we take our seats, please?

(Pause) don't make me sing!

Okay. Just a little bit of information. We are having a public hearing this afternoon at 4:30. And as per the first time that the Commission met, we are only required to have three Commission members at the meeting. Jim Wendorf and I will both be meeting. So that means that we only need one other Commission member to stay for the public hearing. If someone is interested in doing that, you can either volunteer now or let us know later. But everyone else can go and enjoy the delights of Jacksonville. We were talking about possibly you think 8:30, Dave is a good time? At 8:30 meeting in Currents downstairs for anyone interested in working on the agenda -- not the agenda, but the outline. So Currents is sort of an open bar area downstairs, and they have a really

long big table there that we can setup at, and they also serve food as well as drinks.

So if you want to be part of that please be there at 8:30.

So do I have a volunteer now of someone who would like to be at the public hearing with Jim and me this afternoon?

(No response)

Okay. Don't all step forward.

>> JIM FRUCHTERMAN: I am going to be there for a slice of it. But I have a 7:30 meeting. So I don't know.

>> SKIP STAHL: If you can come up until 7:00, that would be great, because just given the number of signups that we currently have, we may be done by then.

>> GLINDA HILL: I will be there.

>> CHAIRWOMAN DIETRICH: Great. Thank you very much.

Now I would like to invite Jim Fruchterman to take the floor and report on his task force.

>> JIM FRUCHTERMAN: Do we have mics working again?

>> SKIP STAHL: Yes.

>> CHAIRWOMAN DIETRICH: Apparently yes.

>> JIM FRUCHTERMAN: Okay. Great. Well, let's see if I can -- oh, I like the music.

>> ANDREW FRIEDMAN: Was that intended? It's very ominous.

>> JIM FRUCHTERMAN: It's very Lon Chaneyish.

Well, thank you very much. I mean, I think that the technology task force was focusing on sort of several technology issues.

>> ANDREW FRIEDMAN: It's like the Bride of Frankenstein going on now.

>> JIM FRUCHTERMAN: We're getting Muzak. Oh, neat. Technology, it's a sinister force in this field!

So the technology task force was tackling a number of these key considerations around -- that we're charged with in the legislation. And so we were seeing this through, you know, the Lens of eventually having to make recommendations on regulations and legislation, best practices, all of these good things. But we were really focused on two key considerations in the legislation. One is the feasibility and technical parameters of establishing standardized

electronic file formats such as the national instructional materials accessibility standard. That's the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] standard that is the K-12 standard. And I won't read all of the verbiage. And also the feasibility of establishing a national clearinghouse, repository, or file sharing network for electronic files in specialized formats, and all possible entities qualified to administer such a clearinghouse, repository, or network.

So those are the main issues that our task force was charged with dealing with.

And what we did as part of our process is we discussed these issues. We tackled them. We came up with based on the initial conversation a set of recommendations to see if we could accomplish consensus around it and then what we ended up do something, of course, negotiating the language of those recommendations to a point where we felt like we could come forward with the Commission and say, "Hey, here are a set of recommendations that we seem to have pretty good consensus around that we'll inform eventually our recommendations to Congress."

So I want to celebrate the fact that we have some consensus points on some of the key things that we were charged with doing. And some of them turned out to be less controversial than I think that we foresaw. And so I would summarize the overall set of recommendations as moving away from prescribing really specific technical solutions, like there should and file format like the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD]. And our consensus was, no, there shouldn't. Instead of making really specific technical recommendations about exactly what you should do, we came up with recommendations about functionally how should things work? In other words, here are some of the functional things that students with students with disabilities should be able to do these things, that the format should have these characteristics, and what that does is it leaves both the publishing industry and the technology industry with a lot more flexibility on how to implement these recommendations than if we had boxed them in to a very tight technical recommendation.

So I think that's made consensus easier than if we came up with a really detailed list of, you know, check this box. Fill in this -- you know, do exactly this.

>> ANDREW FRIEDMAN: Jim, can you review quick who is on the Commission, the committee?

>> JIM FRUCHTERMAN: Thank you very much. So the number of people who are on the task force, we had Gaeir Dietrich as our Chair. Chester Finn was on the task force. Steven Hamlin-Smith from AHEAD. Kirk who is not here today.

>> SKIP STAHL: No. Will be logging in via conference phone at noon.

>> JIM FRUCHTERMAN: And Bruce from AAP [ASSOCIATION OF AMERICAN PUBLISHERS], and Mark from the National Federation of the Blind. So those were our members. Thank you for reminding me to say that.

>> ANDREW FRIEDMAN: Thank you.

>> JIM FRUCHTERMAN: So what I actually want to do now is if we can, cut to the decision points document, and kind of walk through it, because I think that's really the the sense of where we're going. So I don't know if it's possible to bring that up on the PowerPoint.

>> SKIP STAHL: Let's see where I am with PowerPoint. I'm a little hesitant.

(Laughter)

>> JIM FRUCHTERMAN: Well, I'll keep going if you want me to keep going.

>> PETER GIVLER: We have it, Jim.

>> SKIP STAHL: The reason I am hesitant is we're short bandwidth, and the last time I did a desktop sharing, I lost the iLinc connection. So I would prefer to maintain that connection and you have work off that.

>> JIM FRUCHTERMAN: No problem. I am happy to do that. So what I will do is we start off with a guided principle. And I think that this is these themes that we've heard and a lot of the task forces, and I think is an objective for the entire Commission is what are we trying to accomplish in the technology area? And basically technology developed or deployed to facilitate access to instructional materials must permit user with a print disability the opportunity to acquire the same information, engage in the same transactions, and enjoy the same services as the user without a disability and with a substantially equivalent ease of use.

So this is a technology exposition of what equal opportunity looks like in higher ed. Basically, that students with disabilities should be able to go off and do the same things that non-disabled students do, and get the sort of same value out of the educational materials, and, of

course, engage in the same transactions. Ideally, they should be able to buy the same books. Okay?

So --

>> GEORGE KERSCHER: Timeliness?

>> ANDREW FRIEDMAN: I was just about to say.

>> JIM FRUCHTERMAN: I think that we captured timely somewhere else. But good point. I think that we'll take that as a friendly amendment to our guiding principles. Since that is part of our legal charge.

So in terms of file format issues, the first recommendation that we did I have alluded to the technology task force does not recommend the establishment after NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] standard file format as part of the solution to accessibility issues in higher ed. So there is actually broad consensus around this. You know, as part of our findings, I think that we've talked about sort of the pros and the cons of the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD]/NIMAC K-12 solution, a centralized repository, a standardized format, and I think that the drive towards a market model, which I think is another theme, we have a separate task force on that, so I am not going to -- you know, it's more about give flexibility rather than mandating a specific single format. But if we're not going to recommend a single standard format, we think that formats that are acceptable, or usable, or will accomplish our guiding principle, has certain characteristics.

Our second recommendation is so document characteristics that are criteria for accepting documents as being sort of accessible, include the following. And we have a list of sort of the key provisions.

And these provisions are not dissimilar from what's in the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] standards format to be honest. It has a lot of the same kind of requirements. But, for example, you could conceive of accessible PDF which Bruce brought up as a possible way to meet these needs if it did these things. And those things are text format as opposed to image format. Basically, providing a picture of the page is not accessible because students with print disabilities need to be able to listen to the text, or turn it into Braille or do that sort of thing. Major heading structures. This is around navigation. If you are supposed to read Chapter 2 you should be able to figure out what is Chapter 2 and read it. Page

breaks and page numbers. It's a similar issue. And this has been an issue in the commercial eBook industry.

For example, the Amazon Kindle initially started out without page numbers because it was a new digital thing, and, yet, I believe that Amazon just announced that they're going to restore page numbers. Because it turns out that the linkage between an electronic book and a print book is actually important, especially in education because your professor may assign you to read Pages 173-183, and you need to know what those pages are. So proper structured information presented in table format this is a particular concern of blind people who are trying to access tabular material.

>> GEORGE KERSCHER: Now this is about tables?

>> JIM FRUCHTERMAN: Yes.

>> GEORGE KERSCHER: Because a lot of publishers will make the whole page a table. And the way this is worded, it could be interpreted that the whole page of information could be presented in tabular form. But I think it's just this wording needs to be tweaked a little bit to make sure that we're talking about tables and not all of the information.

>> J. BRUCE HILDEBRAND: There are a couple of things. What I did was after this was finalized, or this document, I sent it out, and we have internally or across our members a group called the critical issues task force. And their mission in life is to make sense of a lot of things. But one of them is to educate me where possible. And so they came back with some recommendations. They weren't completed in time to become an official part of the document here today. I understand that they will become official later, but they are not official yet. So I took the liberty of copying what they wrote, and what was prepared. So if you would pass those down. But there are a couple of questions on here that they think might make this section, or where we are to this point, work a little better.

One is, we have the word "acceptability."

>> CHAIRWOMAN DIETRICH: Excuse me. Excuse me. Let's let Jim get through his initial presentation before we start wordsmithing, please?

>> J. BRUCE HILDEBRAND: Okay. Cool. I am happy with that.

>> CHAIRWOMAN DIETRICH: And we cannot pass out anything that this is a public meeting. And so since we have not been

able to put these things up yet on the public access site, we need to not pass them out to the Commission at this time.

>> JIM FRUCHTERMAN: Okay.

>> J. BRUCE HILDEBRAND: Everybody hide your document on the table.

>> JIM FRUCHTERMAN: Okay. So back to the list. And thank you, George, for clarifying. I think that we are looking forward to changes from George and Bruce on how to make these provisions better, obviously. And the last point was brief descriptive text for images, charts, and graphs, and a logical reading order. And I think this is sort of the -- if you have a multicolumnar document you should be able to figure out not actually start at column 2 and then go, oops, I just missed column 1. That sort of thing.

So the -- and then there were recommended text. The task force recognizes that commercial distribution of accessible materials will greatly reduce the need for parties other than the student with a way to handle the files. This will improve the cost and improve timely delivery of material to students. However, the task force recognizes a need and writes recommendations related to source files in the near term.

And I think that there are two concepts about what you deliver files for. One is, ideally, the student buys an accessible book, or gets the accessible book themselves, and it just works for them. That's nirvana. That's where we're trying to head. But there are often students that will need additional work on the file, for example, you may be needing to provide, say, typographics, or you need to sort of markup to add image descriptions, and that's where a lot of the accessible media production people, books like us, RFB&D, DSS offices, are all sort of working on that we have sort of two needs. Ideally, our needs are the same. We're essentially asking the publishing industry to supply for both kinds of need. Both the end-user need and the accessible media producer need.

Ideally they would be the same.

The last recommendation is that we recommend in this section producers of courseware management systems, web development software, web development among others be encouraged to create accessibility wizards and prompts for accessibility that they've created. And I think that this is a theme that has come up in the technology task force is that this is more than about books. As a matter of fact, I think

that the point that we've heard is that traditional textbooks are actually not the biggest issue in accessibility. It's all of the other materials you need for this, a lot of it is online, some of it is in courseware systems, and we're trying to help create accessible material from its get-go rather than after the fact retrofitting it.

So I think that I will pause there and see if there are any clarifications on that recommendation from members of the task force? Questions? Yes, George?

>> GEORGE KERSCHER: Okay. So a content provider, the source, the originator of the content, I think that's an important concept that we have to keep clear here. Because those -- that content is put out into the retail food chain. So it goes to -- it will go out to CourseSmart, it will go out to Barnes & Noble, all kinds of retail outlets wherever the publisher is marketing material. And that content having these characteristics is essential. Just want to make sure that where that is in the production chain is clear.

>> JIM FRUCHTERMAN: Okay. Well, I will keep going.

The technology task force recommends investment be made in corollary checklists and/or automated tools for verifying compliance for accessibility requirements for source files. And I think this issue got a lot of discussion. You know, automated tools are common. They are, for example, automated tools for checking accessibility of a web page. Or how accessible is this actual book content? And we think that there should be investment in this because it would make, for example, the production of accessible materials easier if you could put it into a automated tool, press a button, and have it come back and say, "Hey, you have no page numbers in this document," and if it's actually page numbers in print it probably needs to have page numbers.

Ideas like that.

We then had a spirited conversation around digital rights management. And I think that, you know, some discussion around, you know, let's not have DRM, or let's -- did not fly in our task force.

(Laughter)

So instead what we came up with, again, was a sort of more functional description of sort of the balancing act that DRM is trying to accomplish. And I often call this the Dueling Moral High Grounds Issue. We have the rights of publishers to make money and protect their intellectual property. If it was available freely they wouldn't make

money selling the books. And you've got the civil rights of people with disabilities. So the question is: How do we keep those in balance? Here was our attempt at that which is the technology task force recognizes that digital rights management is necessary to protect publisher's intellectual property and copyrights. However, the use of DRM protection in both hardware and software must permit a user with a print disability the opportunity to acquire the same information as the user without a disability and with equivalent ease of use.

So I think that are you hearing, again, this sort of our guiding principles showing up again in this, and trying to figure out a way to have both DRM and have accessibility at the same time. That's the objective.

>> ANDREW FRIEDMAN: Can you give an example of that? That might be confusing. I think that what are you say something that you can't turn off speech if you've got the capability to have it because now you are not giving people with disabilities the same access. Is that what you are --

>> JIM FRUCHTERMAN: That would be a good example, the idea that disabling speech in educational material intended for higher ed would not meet this qualification because then students with disabilities wouldn't get it.

And I think at a later point, I think that we could talk about some of those solutions. I think there are a lot of technical people here who have thought about how to make accessible content that has some protection. But I don't want to leap to the -- to sort of how we make this happen, but, again, it's a functional description. Have DRM, but also have accessibility.

The next point around format dealt with science, technology, engineering, and math. And this is commonly abbreviated in the field as STEM materials. And they're frankly the hard toast make accessible. The most expensive to make accessible, because unlike text where you could push a button and it's Braille, or push a button and it's large print, push button and it's text-to-speech audio, and you can have a person describe it. But if you have people describe math, you need someone who knows how to actually describe math. So that's a more expensive or higher-qualified person. And if you ask the publisher to do it, it takes a lot of effort. So STEM accessibility is one of the core issues that we have to actually tackle as a Commission because it's kind of the last frontier as it were.

And so our recommendation was the technology task force recognizes the need to make science, technology, engineering, and math content accessible to students with disabilities. We recommend that when posted to websites, including courseware management systems, or as part of EPUB documents, STEM materials containing equation and/or scientific notations be available to students with disability in accessible form, i.e., images of equations alone will not suffice. And then we used examples of an accessible form such as MathML. Electronic copies of books from publishers should also include textbook equations in format such as MathML which we labeled as preferred, or law tech which is the other major technical thing, format, that is described. Those are the two main math ones today.

Again, the task force stopped short of saying just do MathML because, again, but we say functionally it should have these characteristics the and today here are the leading two that actually might meet that.

>> ANDREW FRIEDMAN: I totally agree. I think that you might want to open it up or say or other like. Because you don't want to go back and say, oh, MathML three years later doesn't even exist.

>> JIM FRUCHTERMAN: Jim?

>> VICE CHAIRMAN WENDORF: Well, I am just wondering, you've presented a lot of very detailed stuff, and are you going to scroll back up and maybe have some discussion about each of these things? So that we can ask questions?

>> JIM FRUCHTERMAN: I think that's good. Actually, if we want to structure the conversation to let's talk about format issues, and then let's talk about repository issues, we are basically at the end of the format issue discussion on the recommendations that the task force was able to come up with around sort of a consensus process. So what I would like now is other task force members that are here to have an opportunity to comment on this first, and then let's make sure that we engage the entire Commission. So I don't know if Chester, if you want to say something specifically about sort of accessible formats at this point? And can we get him another mic?

>> SKIP STAHL: Yes.

>> CHESTER FINN: I think that the point that you made that it was easy to read it when it was Braille, you know, you don't have that much trouble. But the other formats were

harder to do because sometimes you couldn't pick it up, or, you know, sometimes it will stop reading in the middle and you try to figure out where are you at. And you never can go back and find where you are at, because if it's not telling you anything, sometimes you are sitting there like, well, I need a person that can see this thing to tell me, you know, what it is. And it's like sometimes when I am working on something, I am telling John, well, it's not saying anything. And he is looking at me like, well, I see it.

(Laughter)

And the thing about it is that it doesn't matter whether you see it or not. If it's not telling me or instructing me what to do, I'm sitting there as if it's not working. So, you know, it's very important to make sure that you link it up for, you know, you make the voice say what it is because sometimes you can spend a lot of time sitting and waiting for something to happen for your JAWS or whatever are you use something not picking it up. You just sit there and think about it. And it's hard to explain to people. You know, they see something. So you have to make sure that those two are together so that it's easier to get whatever you need to get finished or worked on. You know, and I explain that to people all the time about their website. Trying to tell them that their websites are not accessible.

And they'll say, "Well, it's approved." And I say that I don't care what Bobby says. Bobby is not reading to me what I am supposed to know, you know, how to get whatever materials that I need. Or how to access the website. And a lot of times you go to the website and it will say, "Link here." And then you link, and then you wait, and then there is another process. Either you have to space or you have to tab or both to get what you need. But you never know that. You know, no one ever tells you, you know, in those instructions. So sometimes you have to experiment. Sometimes you don't have time to experiment with things. You need it done then.

>> JIM FRUCHTERMAN: Well, thank you, Chester.

And now, I am going to give the mic Stephan.

>> STEPHAN HAMLIN-SMITH: I am with the association of higher education and disability.

Jim, I need to ask almost for a little tutorial on Point 5, and I am guessing that I am not the only one at the table. Could you give just a 101 explanation of -- I understand that MathML and Law Texts are two examples of something. Could

you say in 101 format what it is that they do? What they are? And what we're talking about in Number 5?

>> JIM FRUCHTERMAN: Okay. And, of course, one of the great things that we have here is we also have George Kerscher who is the world's expert on this stuff. So I am sure George will correct me if I say anything wrong.

>> GEORGE KERSCHER: I will.

(Laughter)

>> JIM FRUCHTERMAN: Okay. Thank you, George.

So imagine I am a first-year college student taking calculus. So I have this math book that is full of equations. You know, Y equals X squared plus 2. Or the integral from X to 0 of X compared to DX , or whatever it might be. In the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD]/NIMAC system, we get those as pictures of those equations. So if I have a high school calculus book, I get all of the text of the calculus book from the NIMAC. And then I get a picture of those equations. Let's say a blind student is trying to use that what they essentially hear is, you know, the text, you know, you'll see the following equation is a quadratic equation, and then they'll hear, "Image, figure 1," so this point 5 is all about how do we turn that picture of math into something that the blind student could actually get, "Oh, oh, that's the equation Y equals X squared plus 2.

Now I can go on to the next step in this process."

So the two standards that we are referring to in this section are the leading ways that authors or people who deliver math tend to do it today. But there are other ways. For example, you can in MicroSoft Word there is an equation reader in there. So there are other ways of providing this. And I would say that Law Text is a common way to write it. Think of it as the word processor for math. Okay? And just like MicroSoft Word puts out MicroSoft Word documents, Law Text puts out Law Tech documents. And the main benefit of Law Tech, than is what Gaeir talked about in our task force is that you can edit it. In other words, you can write math. So, for example, if the student is going in and having to, you know, write out a answer to a problem, they could actually write it in Law Tech.

So it has that word processory sort of kind of thing. And MathML is the format equivalent of HTML or the DAISY format or the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] format. It's a XML format, which means that, you

know, if you look under the hood it has text at it. And it is the leading way that people on web pages will put up math if they're not putting up a picture. And there is a lot of accessibility around MathML today. So, for example, if I go to a web page that has math, and Chester mentioned using JAWS, there is a way that JAWS will know to read Y equals X squared plus 2 if there is a MathML there as opposed to just image. And so MathML is the math part of accessibility PDF which Bruce had part up as an option. MathML is also the way that the DAISY standard uses math. So I think -- so that was really my initial take 101.

George, would you like to explain further?

>> SKIP STAHL: George, let me get you a microphone.

>> JIM FRUCHTERMAN: And I think the answer to that is yes.

>> GEORGE KERSCHER: MathML is being adopted on all fronts in HTML 5. So that's where it's going. And it has been designed to be accessible. It's in XML, and so it can be transformed into spoken language automatically. And that's really terrific. It's in the Re-hear product from GH, around it's been there for a long time. We've had various people on the working group to ensure its accessibility, including Dennis Lees from GM, T.V. Raman from Google who has been working on math for a long time. But the problem right now with MathML is the writing of it. So you essentially need an accessible XML editor in order to create math. And that's a problem. Where Law Tech, it's a text-based thing, and you could write, you know, slash for integral, space 0, space X, and that's the integral from 0 to X, space, of F of X, the X.

And that will come out correctly on print and on the screen. But it's very old at this point and being quickly replaced by MathML. There are still a lot of older professors that are using Law Tech, but it has had a lot of traction in the accessibility industry for a long, long time. But I think what we need to see are not only ways to read math, but ways to write math using MathML. And that's an area of research and development that we might want to consider in our recommendations because it's not just reading. We've got that nailed with MathML. But the writing of it is still -- we need accessible MathML editors.

>> J. BRUCE HILDEBRAND: George, how do you propose that that will get done to go to that next phase? Is somebody working on it? How is that going to happen? I mean, it's just further research by whom?

>> GEORGE KERSCHER: Well, I have been bugging Design Science to make their math editor accessible, but that's essentially what it would be. What do we have to do to make a math editing tool accessible that could be an add-in to Word or your HTML editor, or, you know, whatever you use to create content? Publishers have this right now where they have MathML editors that they license, and they can put MathML into the documents, and it looks pretty in the scales and all of that. But those particular tools are not accessible yet.

>> J. BRUCE HILDEBRAND: Okay. So it's an evolving thing? You think so? You think it's coming?

>> GEORGE KERSCHER: Yeah. And I would love to see it funded, you know, the development of accessible MathML editing tools for people with disabilities.

>> JIM FRUCHTERMAN: One thing I wanted to just briefly mention is in the beginning, George said that MathML will be part of HTML 5. I know what that means, but I'm not sure that everybody else knows what that means. But everyone uses the web everyday. And HTML today is mainly at sort of level 4. And so right now there is an active standards discussion going on for what's the next version of HTML going to be that will become the new standard that is used by all of the web browsers, and that all web page developers can use for delivering it? And so what George is saying is that there are already parts of HTML 5 being deployed by vendors like Apple, but there is actually an active standards effort going on right now, and so MathML is the accessibility solution. This is built into essentially the fabric of the next generation of the web. I know Stephan wants to defer, but I will leave with you the mic.

>> ANDREW FRIEDMAN: That doesn't help anything that's already built, right? It's only stuff going forward?

>> JIM FRUCHTERMAN: You can put MathML now.

>> GEORGE KERSCHER: MathML is in HTML 4 as well.

>> LIZANNE DeSTEFANO: This is an area that I think that we want to flag for model demonstration and faculty development because on the Illinois campus, which I would consider a math-heavy STEM-heavy campus, Law Tech is still by far the most prevalent software that's used. And so I think that in order to get a shift, because this is what the faculty would do their tests with, their handouts, courseware, and things like that. And I think to get a shift it would really be important to demonstrate how you move a

campus from Law Tech into whatever you consider a better format. And it's not only mathematics faculty, but it's really any science that integrates heavy math usage. So it's a considerable range of departments.

>> J. BRUCE HILDEBRAND: Gaeir, could you as somebody who actually uses this material -- where is Gaeir?

>> CHAIRWOMAN DIETRICH: I am freezing and so I am getting something hot to drink.

>> J. BRUCE HILDEBRAND: If you would, explain as somebody who actually produces the materials, because you are the one that would explain to us about the benefits of Law Tech versus MathML, and let's see because if it's going in that direction anyway, I don't know that that's where we want to put our resources. But this is somebody that can tell us that.

>> CHAIRWOMAN DIETRICH: Well, my comment on that would be you need to understand that these are not two formats that are completely divorced from each other. So just like you can work in MicroSoft Word to create a web page, you can work in Law Tech to create MathML. And as was alluded to, there is actually many of the older math professors who code directly in Law Tech. And that's how they do things. But I can with a click of a button go from Law Tech to MathML. So it's a easy transformation. And I can also go from -- well, I am not going to go into it caveats about how it can get hard it can get hard just like an HTML web page in Word can get hard if you get too complex. But if you are talking something fairly simple, it's easy to do. And, in fact, I can take something that a faculty member has created with Equation Editor in MicroSoft Word, and I can change that into MathML.

So these are all -- this is a very moving sort of a standard. As was alluded to, you can think of Law Tech as ASCII. It's the basic. Or hand coding a HTML page, which some of us have actually done, where you went in and put the graphics and all of that. So it's at that level. But the fact is that a lot of things are done in Law Tech, and then transformed. So we can work with either one at this point.

>> JIM FRUCHTERMAN: Glinda?

>> GLINDA HILL: Just a point to, because OSERS not only works with the higher ed piece, but we also work with K-12. And right now we're waiting to put out a notice that we're going to add MathML to the NIMAS [NATIONAL INSTRUCTIONAL

MATERIALS ACCESSIBILITY STANDARD] standard to making that proposal, and it will be out for public review some time.

(Laughter)

Whenever it is out. But we're waiting for the notice to go out. But we are planning to add MathML to the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] code as well.

>> JIM FRUCHTERMAN: Stephan, are you ready to pick back up?

>> STEPHAN HAMLIN-SMITH: Thank you, by the way. That was helpful to me, if no one else.

The only thing that I think I didn't think to bring up, and I am glad George did, I made a note that I think that each time we have the opportunity and it's fitting, we should add that clause about timeliness. I think that if we -- and I'm sorry, we didn't obviously think of everything when we were doing this. But I think we have a lot of opportunities to reinforce that point, and I think that that is -- that can be a strong driver of some of these urgency of these recommendations.

>> JIM FRUCHTERMAN: Okay. So Gaeir and then Bruce.

>> CHAIRWOMAN DIETRICH: Thank you. Well, the first point I would like to make is that I don't want people to think of this as a set-in-stone finished proposal this is not what's going to go into the final report. This is our initial points that we want to bring out. And there will be more wordsmithing, as Bruce pointed out, he has some very nice feedback from AAP [ASSOCIATION OF AMERICAN PUBLISHERS] on this I am sure that other people will take it back to their constituent groups and have other input as well.

There are a number of things that I, myself, want to see more work done in the task force on some of these areas. The one point that I would also like to add in terms of timeliness is the quality. We need to make sure that we include timeliness and quality in there as well as availability and effective use.

And I want to really applaud Stephan whose idea it was to shift from a which format we want to use to what is the functionality of the format, because I think that was brilliant, Mr. I don't have anything to contribute sitting over here.

(Laughter)

And I think that it would be good, in fact, for us to do a similar sort of thing with MathML. Because we found with working with MathML that there are ways of structuring that work less well than other ways. If you take it and make it exactly like the textbook, it actually has some problems where it's not as usable whereas, for instance, if you go in and after the problem number you move the equation down on to its own line because that way you can arrow through line by line, and it's much more clear than having it read, you know, one period, and then immediately start into the equation which may actually have more ls and periods in it so there are some little things like that that we're still going to need to address. I am very pleased at how much was accomplished.

This is the technology task force is a really huge one, and I think that everybody did a really, really great job on it.

>> JIM FRUCHTERMAN: Thank you.

Bruce? Go ahead, Jim.

>> VICE CHAIRMAN WENDORF: A question. I guess it takes us back up toward the top here. What can you tell us more about why a NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD]-type standard is not right for postsecondary? It's right for K-12, but it's not right for postsecondary. I mean, I understand the direction that you've gone, and I think that it make as lot of sense, but I also want to understand what is it about that standard that would not work, or work as well?

>> JIM FRUCHTERMAN: So I think that different task force members probably come to that conclusion from different points of view about why a single standard is not a good idea. So I think that it might be interesting to hear from, you know, Bruce, say, and some of the other folks on why they feel that way. I will give you my take, which is we have a rough consensus here that a market model is the right solution. So if you believe that a market model is the right solution, a NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] standard locks in stone over a pretty long period of time a very single implementation of how technology is today or more likely how technology was five years ago, right, because that's probably what you can agree on. And it's often a least common denominator as well. So a lot of the push to go to a more format should have these functional characteristics that make them accessible, as opposed to a prescription of it shall be MathML only, or it should only be DAISY only, is the get-away from sort of

locking the disability market or field in sort of yesterday's technology and finding ourselves back in the same old position which is the latest and greatest technology is not accessible, and we're asking the publishing industry essentially to down-convert to what we're looking for.

So overall, I believe that's the biggest reason for why we are not recommending a NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD]-type standard. At the same time, NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] is wonderful. It makes producing K-12 textbooks very easy for us. We can turn one around in often a week, often in under a day from getting the file from the NIMAC. It really has changed K-12 textbooks. But K-12 textbooks are also a much smaller field with a much smaller number of major publishers that play in that who are generally much more technically competent and able to produce this. Whereas, you know, postsecondary is this incredibly diverse, you know, publisher, you know, 250,000 books instead of 5,000 books is the kind of numbers that remember hearing from the AAP [ASSOCIATION OF AMERICAN PUBLISHERS].

So maybe we should actually go for what is mass market.

Okay? So I know we're kind of doing both things. But I was trying to get to each of the task force members. But if Bruce, if you are okay, we can actually make sure that everyone gets a say.

>> J. BRUCE HILDEBRAND: I could care less. You know I don't live by structure very well.

(Laughter)

>> JIM FRUCHTERMAN: Tuck, let's open it up.

>> TUCK TINSLEY: Take the bridge, Bruce, just take the bridge. Jim, I would like you to just comment on you said to take a NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] file and make it into an accessible format. In a day to a week, what "type books" are you talking about there? Are you talking about STEM books, and math books?

>> JIM FRUCHTERMAN: We actually will turn out a version of the book for essentially blind students or students who don't want the pictures because that's smallest. And so we find it basically some users are sighted where you are following along in the print book. Or just listening to it. Our blind users are often putting this into Braille displays, and they're getting the text. We also provide the graphics. But we only have the funding to provide, let's say, a fraction of the books. I think that we've done about 100 of

the 2000 NIMAC textbooks with image descriptions. So we're not doing all of the graphical descriptions. Something that's probably worth mentioning is that we, George Kerscher, wearing his DAISY hat and WGBH, the national center for accessible media, have a R&D contract from the Department to develop open-source technology to make developing image descriptions much cheaper.

And so I would say that's sort of the next big frontier is how to make, let's say, image descriptions affordable for all of the 4 or 5,000 books in the NIMAC. And it's another case of it's not just specialized groups like ours doing these image descriptions, because image descriptions for STEM is really expensive. If you produce it in MathML, then you don't need the image description, which we think is the ultimate solution, which is why you heard about math. And then in the other areas, I think that we're trying to figure out how to scale up and to do a lot more. And, of course, if you can attach a detailed image description to an image, that makes that image more valuable for the person who owns that image, for example, in finding it. So hopefully that helps.

>> TUCK TINSLEY: My point is that I think that it's important for the Commission to understand that when you are talking about descriptions and image descriptions and so forth, when we started NIMAC and NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD], the focus was on blind students and Braille. And I don't want the Commission to think that you can take a math book and provide tactile graphics in Braille in a day or a week. I mean I want everyone to understand that. And on our last call, Gaeir pointed out that the cost after calculus book was \$120,000. And for still it takes to produce a geometry book, it takes a year to produce tactile graphics. 9 months to a year. When you say NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] is wonderful, and we can do it in less than a day, let's understand that we're not talking about tactile graphics in Braille.

>> JIM FRUCHTERMAN: But if that calculus book came with all of -- if they came in MathML, they could be done.

>> TUCK TINSLEY: But that's not a tactile graphic. We're still miles away from that agreed?

>> JIM FRUCHTERMAN: Braille yes, typographics, no. Peter?

>> PETER GIVLER: Just have a question about point number 3, Jim. What was the thinking of the task force in the language here? The technology task force recommends investment be made. By whom?

>> JIM FRUCHTERMAN: So I think that this is a larger question. We are here to make recommendations to Congress on what they should do. And some of those things might be law changes. But some of those might be, you know, the pilot project as Lizanne suggested should go in the math direction and have faculty training. So we actually aren't constrained to just make recommendations about this we're actually recommending, for example, that the Department make investments in these things. And so I believe that we're usually thinking of the Department ought to invest in R&D, as opposed to, let's say, the publishing industry should invest in R&D I think that when we come up with sort of "research objectives," we think that the Department should invest in that as a key thing for advancing accessibility, which is part of the Department's responsibilities.

Lizanne?

>> LIZANNE DeSTEFANO: I think that faculty development, if are you thinking about a market model, faculty development is really important, right, because they're one of the factors that drive the market. And I think that if we want to get really specific, like NSF is doing these math institutes where we're supposed to be training the next generation of math professors. So that would be a great place to insert that, right? Because there they are. They're getting paid a stipend. So they've got to do whatever you tell them to do. And it's a good way of infusing that. So that would and great partnership between the Department of Ed and NSF around the very specific thing. So I don't know if we want to get that specific in this Commission, but that's the kind of thing that I think we need to be thinking about.

>> GEORGE KERSCHER: Can I add on to that?

>> JIM FRUCHTERMAN: Yes, George.

>> GEORGE KERSCHER: 100% agree because when we're talking about content producers, many, many times the professor is the content source. Distance learning, online learning, the testing, and all these things. That's a huge source of information that needs to be made available to the

student. So it's not just what we think of as the traditional publisher who needs to be responsible for producing accessible content, and the tools, authoring tools, need to make it easy for those professors and students to create accessible content. The students should be creating accessible content, you know?

>> LIZANNE DeSTEFANO: Exactly.

>> GEORGE KERSCHER: Their papers, their thesis should all be accessible out of the box through the authoring tool and the delivery of a range of, you know, and the functionality. I don't want to go into file formats again, but there are several file formats that do a good job of accessibility these days. At least three or four think that can think of.

>> LIZANNE DeSTEFANO: At Illinois, really, once you get above the sophomore year, the reliance on mainstreamed textbooks is very small in STEM fields. And when you get to graduate school, it's zero, basically. Because in a lot of areas there are no textbooks. So, you know, I think that we have to be thinking about -- the gateway courses and the big courses are really important, but when you think about a student life, things definitely change the higher up that they move in the grade.

>> JIM FRUCHTERMAN: I want to make sure that we hear from everybody else on file format issues before I move into repository issue.

Bruce?

>> J. BRUCE HILDEBRAND: There is some wordsmithing that we are talking about. Terms are important. Like in 2, you look at the word "accessibility." Suitability. Acceptable to whom? We keep going. We make these broad statements. Well, okay, somebody invest. Well, is it the government? Is it a foundation? You know, than is one. Acceptable to whom? So why don't we make it suitable? Which would suggest let's make it work. And things like that.

On page Number 1, I did not realize that particularly for short documents, according to my people, they don't have page numbers in a lot of things that come out. So if you don't have page numbers, and everybody talks about publishers, well I am getting to learn just how many people are putting stuff into the system. It's huge? The higher ed level. So if there are no page numbers, how can we stipulate page numbers if the stuff is already out there? So you can't go back and retro it, I'm told, too very well on the tens of thousands of

different things that are out there. So the suggestion was if the page numbers are there, in a textbook I think that we would be willing -- you know, somebody going to go out there and try to fix it.

But just to say blanket, the tech people told me that would be different.

George you hit a home run on this table format. The way that's worded, and we can play with the wording later, but that is as written would create some havoc the technical folks tell me.

And logical reading order, if you have to go back and get a request for a file, you've got a PDF, we can talk to some people here that deal with that, but to go back and retro that would significantly delay and add to the cost of the file that's going out. So we need look at moving that wording around. Who is going to provide this logical reading order if the file already exists? Are they supposed to go back and totally change that file? That was the question.

There are some other questions in here, and when this paper has been around long enough that it can be accepted into the mainstream, and actually made available to the public or whomever it needs to go to, at that juncture I think, and we'll come to this later because I don't want to bog everybody down here with all of this, then we can go back and go over this. But the main thing is that the people that really care about this stuff and are really well informed have raised some questions and offered some different language, and I think when we can all review this document, whenever that's permissible, we'll do it. I think that it will be helpful to everybody, okay? So I will stop there. But I think that we need to recognize there are some wordsmithing that needs to be done here.

>> ANDREW FRIEDMAN: Bruce, a question. I want to make sure. Were most of the concerns around effective date? So retrofit means going back versus just going forward after recommendations. Is that what people were getting at?

>> J. BRUCE HILDEBRAND: That seems to be a key concern. If you already have a file that's out there or something, you've got to make sure that they're not going backward. And we don't want to -- we can't do that.

>> ANDREW FRIEDMAN: So I think that is an important thing for the Commission to understand is whatever we put out there, what is the effective date? Because you can't go back

to, you know, the beginning of time. Because you ain't never going to get there.

>> J. BRUCE HILDEBRAND: Yep it will bog it, it will just block everything.

>> ANDREW FRIEDMAN: Exactly.

>> GEORGE KERSCHER: One point on the correct reading order, the publishers that are moving into the digital need this as well because when you putting it on a variety of different devices with small screen sizes, when you are reading it on your cell phone, you want the correct reading order, and so that global content is something that the publishers need as well in the new digital media that's being --

>> J. BRUCE HILDEBRAND: I didn't get any objection on that page thing, the element, because this is like a Kindle. When the page pops up, the page pops up, okay? So you need that break. But the problem is that there are documents out there, and it may be research documents, for example, produced at the University of Illinois. They don't have page numbers in them. How do we go over there and make them do that before that can be shared, for example?

>> GEORGE KERSCHER: Well, trying to deal with the printer driver format is really, really, really difficult.

>> TUCK TINSLEY: Jim, just one thing, and I am sure that we're on the same page, but just for the record, when you mention that Braille is the difficulty and not tactile graphics, I think that you were talking about image descriptions of tactile graphics, and I would say that with that issue, the smallest of population, the small-incidence population, Braille is not the difficulty. It's providing tactile graphics for blind students.

>> JIM FRUCHTERMAN: And I would say that while we're very optimistic about a market model, the idea that there will and market model solution where publishers will make money selling tactile graphics is quite unrealistic. And I think that that's something that we need to come back to is even if we manage to shift, say, some of the stuff like the copyright exception model to a market model which we think is generally positive, and I know it's channeling Mark who is not here right now, we have to keep in mind that there are going to be these specialized needs that never going to be really done commercially because of the cost, and that we're going to need to have these specialized media producers here

long term to truly give students who want, say, are tactile graphics equal access.

So I agree with you, Tuck.

Can I say one other thing in response to Bruce on this? When the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD]/NIMAC standard, the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] standard came up, there was this concept that if the book didn't have these structures, that you didn't have to create them from scratch. So I think that your idea is that there are no page numbers, I think that's one where we're familiar with from the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] process, and I think it's really appropriate. You want to replicate the -- what's there, and not create stuff that wasn't there in the first place.

>> GEORGE KERSCHER: The whole tactile graphics is a huge problem, and we might want to be thinking about recommendations of model projects that create tactile graphics that are concept-based. So here is a really well-done tactile graphic that you can shift digitally and print locally that would show the concept. It might not be the exact image that's shown in a particular book, but it's explaining the same concept. Because if we had to produce tactile graphics of every single image that's created, it's, you know, a Herculean task. But we can do the concepts. And I have been told by people at RFB&D who have been recording physics books for years say, "All of these images are repeat of 70 separate concepts that are explained over and over again using different representations, examples, and having a database of those concepts really well prepared tactile graphics would go a long way."

And I already know that Tuck has a few of these in his store right now, like the anatomy books that were done. Those are just terrific. There you go.

>> JIM FRUCHTERMAN: Great. Do we have more feedback about file format issues that people want to get on the table around technology? I think that we're ready to move on to the next piece.

But there are a couple of people that we have not heard from, and I want to make sure that if Betsey, Maria, if you have questions, Ashlee, this is a good moment to bring them up, or save them up later for this afternoon's conversation.

Okay.

>> CHAIRWOMAN DIETRICH: Jim did you feel like you got enough information to be able to explain to your constituency group why we can make the choices and recommendations that we have in terms of file format in the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD]/NIMAC issue?

>> VICE CHAIRMAN WENDORF: Yeah, I do. Thanks, Gaeir.

>> JIM FRUCHTERMAN: Okay. So we have time to tackle repository issues.

So there are, again, a lot of parallels to the conversation that we've just had. We have a model in K-12. We have the national instructional materials accessibility center located at the American Printing House for the blind. And a lot of us around the table have been through this process of setting up sort of the NIMAC, how it's going to work, taking advantage of those files, the policies around that, implementing those things, and this has been a -- you know, this was a law passed in 2004. So we're now seven years in. So there is a lot of experience here. And I think that part of that experience is informing where we actually go with this. And just like I think answering Jim's question of "Why aren't you recommending a standard format?" We're not recommending a repository.

That's actually our first recommendation. The technology task force recommends against the establishment of a centralized file repository along the lines of the NIMAC to meet the accessibility needs of higher ed.

And, again, I think that the NIMAC works. I think that the NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] file format works for K-12. But I think that the disparate nature of the higher ed market, and this push towards a market model solution pushes you away from a centralized repository. So I think that the task force kind of said, "Yeah, we don't think that we should re-create the exact same structure in higher ed because we think it's different, and we also think that we're seven years further along, and one of great things that's happened in the eBook industry is that the distance between what eBook publishers are doing in accessibility is much less than it was 8-10 years ago when the national file format work started." So I think that's a key thing.

>> CHAIRWOMAN DIETRICH: Jim, could I interject one thing quickly there? I want everybody to understand that even though the technology task force is making this recommendation, that this would not supersede. If Tuck and his group with task force on the low-incidence population

decides that it would be good to have a repository for tactile graphics, for instance, those are not exclusive. We can still recommend both.

>> JIM FRUCHTERMAN: Indeed. Indeed.

The second recommendation that we made is the technology task force recommends the establishment of a Federated search entity that enables individual students and DSS offices to search a single online resource to find all accessible materials from all sources.

So we're actually responding to a direction in the legislation around should we have a clearinghouse? Should we have a repository? And essentially our recommendation is let's not have a place. Let's have something that's more like a clearinghouse. And it could take different forms. But the assumption is, and I would say that this is a big complex field, and there's going to be a lot of different ways to solve it. You are going to have specialized entities doing highly specialized things like tactile graphics. You will have lots of students that go to their iPad and say, "Gosh this works great for me, I am just going to buy it from fill in the blank store."

So what we're trying to say is the challenge that we see is finding out what's out there, and that that's the idea behind a Federated search capability. And people say, "What does that look like?"

Well, it might look like Google book search. Or Amazon book search. We have models that are working out there. Now, there are reasons why Amazon or Google have issues that go along with them. Not the least of which are the fact that they and the publishers have been suing each other for a while. But they have an idea of how they might fix that. But I think that the idea is that, and I believe that this is kind of our concept of a Federated search capability, is that you could go to a neutral location, like Google, which is -- well, no, going as well sort of in this business. But let's pretend Google wasn't in this business. Go to a neutral location, and type in, you know, "introduction to anthropology," and find all of the books that are introduction to anthropology books.

And then if I go to advanced search capabilities and say, "I want hardcopy Braille introduction to anthropology," suddenly it will start to point me to, oh, gosh, the Library of Congress has it on their shelves. Great. I can go and request it. Or the national Braille

press is selling it. Great. I can just go to the national Braille press and buy it. Whatever the solution might be.

I might set my parameters differently for this depending on what my specific needs are. If I am a dyslexic person who really prefers text to speech, don't show me books that have text to speech turned off because that won't solve my problem. So I think that this is the direction that we kind of went, and some of our other recommendations kind of follow from this.

>> J. BRUCE HILDEBRAND: Just a moment, Jim.

>> JIM FRUCHTERMAN: Yes.

>> J. BRUCE HILDEBRAND: I think that the Google reference is pretty good. We are suing them. I think that's sort of an indication of how seriously we want to protect our copyrights. Just FYI.

>> JIM FRUCHTERMAN: But you are not suing Amazon.

(Laughter)

>> J. BRUCE HILDEBRAND: No. Actually, we had a problem with text to speech. That was brought by the authors. I think that was mentioned earlier. That was brought on us. If you've got your computer, by the way, and not your Kindle, it's not disabled. That was another thing.

But the thing is that we think that this is a wheel that doesn't really have to be re-invented. And in this context is the presentation that was made today from Access Text Network. It's not a very large step to having that service up and running now. You are involved with that, too, right, Tuck?

>> TUCK TINSLEY: (Indicating affirmatively.)

>> J. BRUCE HILDEBRAND: So it's not -- you don't have to go out and start over when you already have probably 90-95% of what you need already. And that was the point that I was made earlier in the earlier discussion.

>> JIM FRUCHTERMAN: And I am sure that we'll talk more about it later.

>> J. BRUCE HILDEBRAND: Yeah.

>> JIM FRUCHTERMAN: Great. So that was recommendation 7.

Recommendation 8. The technology task force recommends solutions that will permit the sharing of accessibly enhanced files directly and among the organizations producing these

accessible materials, including existing and future authorized entities in the solution of postsecondary education so long as such sharing complies with laws and requirements that are in place to protect all of the rights of copyright holders.

And, Stephan, this is language that you helped to develop. I don't know if you want to speak on behalf of what you think this is trying to solve. If you would like.

>> STEPHAN HAMLIN-SMITH: I will wait until you are done.

>> JIM FRUCHTERMAN: Okay. So I think that the issue is that -- and it's in the -- it's actually in the model programs, is how do we reduce the duplication of effort around doing this? And especially when it comes to really expensive stuff. One of the issues that we see still going on in K-12 is that one school district spends \$40,000 on this book, and the next school district spends \$20-30,000 on this book. So reducing duplication of effort especially in the highly disability areas, like tactile graphic and image description is really key. That's came up as well.

The last recommendation in this area is the technology task force recommends the establishment of accessibility metadata standards and requires support for them to make the discovery of accessible materials easier. So this is a corollary to our Federated search recommendation which is if are you going to have Federated search, you have to know what do you say about a book to say this is available in Braille with the text-to-speech on? And Bruce brought up in the conversation that this is very similar to metadata issues that are in the publishing industry. There is a standard like ONyX and other standards. And I believe that George is working with publishing industry groups around a similar issue. So I think that this is the recommendation of the technology task force, is that to enable us to discover accessible materials, it would be great if we knew the information about accessible materials saying, yeah, this has tactile graphics.

No, it doesn't. This has text to speech enabled no it doesn't this is in Braille or in large print. If it's in large print, what kind of large print? Things like that.

>> SKIP STAHL: Can you describe what metadata is?

>> JIM FRUCHTERMAN: Okay. So metadata is information about information. I mean, that's kind of the definition. If you put on your librarian hat, it's the information enables me to find the book. So it might be a ISBN number.

The name of the author is a piece of metadata. The title is a piece of metadata. The publication date is a metadata. What kind of copy or license? In the public domain? Under a creative commons sense, that's helpful to people so that that they know they can share it legally. And metadata goes a long way beyond that. And George is a metadata king, so I will probably defer to him. But realize that this is also -- there is also metadata is crucial in the publishing industry. A bookstore owner wants to know where do I -- what section do I put this book in so that the customer who is coming into my bookstore finds it?

Well, if it's a science fiction book, it goes into science fiction. But fits a science book, it goes in this section. And the publishing industry has a lot of incentive to say, "This is a teen lit book that is historical fiction so that the person who wants to buy that kind of title will find it"

Both electronically, but also in sort of physical space. And so, for example, another piece of metadata about a book is what does it cost? That's often interesting to people. It's interesting to faculty. Am I assigning a book that cost \$400 to my students? I might want to know that before do I that.

>> J. BRUCE HILDEBRAND: The way it's used from a practical standpoint is you put the ISBN number or title of the author of anything now, and you will get responses generally 10th of a second or so. You are getting as many as 1,000 responses from different sellers that will tell you. Now you get the wholesale price, you can get the publisher's retail, the individual store set their own retail. But you can find out what the underlying cost, i.e., the wholesale price is. But, George, did you say that some the stuff that you are looking for already exists in the BISG file format?

>> GEORGE KERSCHER: What file?

>> JIM FRUCHTERMAN: BISG.

>> J. BRUCE HILDEBRAND: The business industry.

>> GEORGE KERSCHER: Some of it is there. So the ONyX metadata, first of all --

>> CHAIRWOMAN DIETRICH: I'm sorry, before you get too far into that, can you explain to people what BISG is?

>> GEORGE KERSCHER: The book industry study group. It's a publisher's trade organization focused on books that helps to establish best practices and standards in the industry.

>> CHAIRWOMAN DIETRICH: Thank you.

>> J. BRUCE HILDEBRAND: They do a lot of research. They are beyond publishers. But, yeah, publishers are very active with them.

>> PETER GIVLER: Further clarification, it's not really a publisher's group. It's everybody involved in the whole publishing value chain, BISG includes retailers, Google is a member of BISG, you know, book manufacturers and so on. So really it's a very interesting organization from that point of view because it's the one organization that really -- where you can really talk about issues kind of from beginning to end of the whole process.

>> CHAIRWOMAN DIETRICH: Thank you.

>> GEORGE KERSCHER: It is book oriented. It's not the journals or magazines. Are you on the board?

>> PETER GIVLER: Uh-huh.

>> GEORGE KERSCHER: Great. So he is better.

(Laughter)

So, first of all, metadata, you think of the title page in the book. That's some of your basic metadata. ONyX is used by publishers to feed their retail chain. So you get a retailer will get a ONyX book and graph data to populate the database so that they can sell the content effectively. And it has, you know, a lot of other stuff, marketing materials and when the book is going to be first available so it comes out before the book's actually published. So it does contain at this point a little bit of metadata about Braille being available, and I think DAISY being available. But no details on DAISY, whether it's audio only or text only or full text full audio. And the ONyX standards group is wanting to get together with the mark records, the library group, to standardize these accessibility fields in both ONyX and mark used by the international federation of library's association, the section for serving people with disabilities.

So this morning I got e-mailed that editor and ONyX will drive this small working group forward just to define these fields so that they're available. And that will help the Federated Search to find content globally.

>> JIM FRUCHTERMAN: Maria?

>> MARIA PALLANTE: Oh this is working. Great. This is a lot of good stuff. Congratulations. I think we could probably spend days just discussing these four points.

But I have a comment and then a question for you. I think if nine really worked well, and I think that nine is pretty exciting, and whether the field is a licensing field or a public domain field or whatever it could be, these are the kinds of developments that are happening across the board with cultural materials from photographers who are, you know, feeling like they can't control their works online, to publishers who are creating the markets, to the people who are the focus of our Commission. But it occurs to me that if nine worked really well, then you don't need 7 because then you have aggregators taking whatever is out there and creating searches and new kinds of aggregated databases that we can't even imagine today.

And I have some experience with this coming from the government perspective because sometimes the goal of the government is to get things out in a form that's good enough so that somebody else can do something really useful. And you never want to define what that "really useful" might ultimately be because it's something that is supposed to continuously evolve. I am not saying that 7 doesn't have value, but I think 9 if it worked the way that you envision it would lead to that anyway, it would lead to all kinds of new possible ways to find the material because of the metadata. So that's just a comment.

My question is with respect to 9 do you see it as a best practice starting with textbooks? Do you see it as a best practice -- this is broadly defined these four points to cover all kinds of materials. Do you see it as regulation? What kind of recommendation are you looking at for 9?

>> JIM FRUCHTERMAN: So part of our objective is to see what common ground we had before we got into some more of these contentious issues about what would that mean. I would -- I will go back to sort of your initial point. I don't think that the existence of a standard in and of itself sees that students and DSS offices on the ground actually get the benefit of it so a standard by itself is not sufficient. So I would say that -- and there are a number of different things that you might see in terms of regulation and/or investment in, let's say, a model market program.

Let me give you an example. In theory, a lot of us are libraries, and the rest of us are bookstores. And if are you going to make it easy, what you have to actually do is expose your catalogue. So the question might be if you are getting federal funding for developing accessible materials, should you at least as a minimum expose a catalogue with this

standard? That might potentially be a regulatory solution or a recommendation that is a condition of federal funding you make it easy to discover this thing that the feds paid for, or are partially subsidizing, and are requiring publishers to deliver, to reduce a duplication of effort which is another part of our charge? So I would imagine it taking a number of different forms. But I think that a standard by itself won't actually see the benefit.

I think that's like work to be done either in this task force or another task force is to make sure that the benefit of that standard actually is realized so that the actual student -- and, remember, our ideal recommendation is the student goes out and says, "I need this book, and this book it meets your accessibility requirements." So how do we get that there? The publishing industries have voluntary reasons to make that easy. And I think that the reason this is written more broadly, and the reason why you will hear Bruce talk about ONyX, or George talk about ONyX, we continue to want to be integrated into this mainstream market otherwise we won't solve the problem.

>> ANDREW FRIEDMAN: I think that's a good point. I would like to hear from Ashlee, and the people who actually don't have easy access now. What are your problems so that when you go to get accessible materials, what do you think the right solution is?

>> ASHLEE KEPHART: Mainly what my school has had to do if they are not able to get like a copy that is able to be read by the universal reader is they will try and type it in for me, which takes an insane amount of time. But there was a website that they directed me to, the name escapes me right now, where a lot of my textbooks have actually been in listening format on that site, and I am able to put it into the universal reader. So that's helped me out a lot.

>> LIZANNE DeSTEFANO: I think that the issues that I have experienced have really not been with textbooks. I think we have a good strategy for dealing with textbooks, and we have a very good DSS office, and they're very helpful. I think that the things I have experienced with have been with other sorts of instructional materials. And let me just give you an example.

A lot of our courses use visualization software in physics, chemistry, and other areas to help students sort of be able to visualize chemical bonding, or something like that, right? So if that supplants a lot of the regular instruction, so they're saying to kids, "Go on the website

now and do visualization exercises," then for kids who that present as problem, what's the -- what do you do then?

And so I don't know if that answers your questions, but as instructional technology's evolving and we're doing new things, then how do you make sure that the needs of special populations in our classes are being met? So that's why in that number 5 up in the technology issues, I want to make sure that we just don't say if we solve the problems of formulas and equations, then, poof, everything is good. Because I think that there are many more issues around technology that -- in STEM -- that if we solve the formulas and equations, that's great but there's a lot of other stuff that's happening. Did I make you sad, George, when I talked about that? I know, I know, it's sad.

>> GEORGE KERSCHER: No, it's cool.

(Laughter)

>> LIZANNE DeSTEFANO: It's very cool.

>> GEORGE KERSCHER: This is wonderful technology, and nobody wants education and learning to slow down. We want to see it at, you know, warp speed. Now, how do we make all of that accessible? There is the question. Now, in the new EPUB, standard EPUB 3, which is available as a public draft now, there is this part that talks about JavaScript, and the way this technologically is probably going to be done is that there will be data in the learning object probably in HTML 5, and then JavaScript will act on that data and do all kinds of cool and nifty things for visualization, student interaction, being able to put things in. And this is an area I think that we want to support that innovation and try to develop the best practices. So, for example, if you've got JavaScript turned off in your browser, that visualization would just be text data that a person could read.

And if that text data could be coherent in itself, then at least you can get at some of the information that's presented through that interaction. So modeling, research, and best practices development are important in this area moving forward.

>> LIZANNE DeSTEFANO: And I saw that kind of related to Point Number 7 there. I think a Federated Search entity is really important because it's incentive for faculty making those things available online, and adapting them in ways that would be useful to different populations. So it's not just, you know, the metadata standards, which, again, I think deals

with a portion of this. But there is another big portion that I think is needing to be dealt with in other ways.

>> JIM FRUCHTERMAN: Okay. Great. Do we have more comments about this issue around repositories? I mean, we're making kind of a controversial recommendation, or at least one where we say let's not have a centralized repository. So if there is, for example, the potential that other people think, as Gaeir suggested, maybe we need a repository for one kind of specialized material is that something that we want to talk about at this point? I want to make sure that we get some of the issues on the table around the technology recommendations. Stephan, do you want to say something?

>> STEPHAN HAMLIN-SMITH: I do. I have to reiterate what Lizanne has brought up. I think that textbooks are the easy part of this. I think three or four people could sit down and enhance textbook solutions that already exist, put some processes around it, and I don't think that's not a crazy issue.

My concern is the truly massive amount of instructional material that does not originate with a publisher and does not have a cover. Or originates can lots of individual, you know, like everyone of us who is with an association, we publish journals. And those journal articles become instructional material. And there are online references. There is originated stuff that comes from faculty and from grad students and unpublished materials. And I think I just need to verbalize that we cannot set our standards so low as to just concern ourselves with textbooks.

>> JIM FRUCHTERMAN: So in the context of the repository question what would you do about these things?

>> STEPHAN HAMLIN-SMITH: But see, that's why I think that all four of those repository points are important. Because, for instance, metadata is an absolutely fabulous answer for things that are categorized in that system that exists there. At the same time, that's why I think that a Federated search is crucial where everyone can feed in, whether metadata or not.

So I actually think that all four of these work together and provide enough flexibility. So I am not sure I would want to see us walk away from them. I like them as a package more than just individually.

>> JIM FRUCHTERMAN: Maria?

>> MARIA PALLANTE: We're good?

>> JIM FRUCHTERMAN: We're good.

>> MARIA PALLANTE: Sorry to be dense on the Federated search. But the more I hear it's a wide open listing of materials, the less persuaded I am that the Federated search works. If we're talking about textbooks, and the problem is that there is not one place to go to find out if it's already been put out in accessible format, but it's still a limited universe. That makes more sense to me. If you are talking about every possible material that's out there and students who need to get sent to the web to do research for an upper-level class, it sounds to me like you are re-creating the Internet. So that's why I am back to if there is metadata standards in all publications, whether it's for audiovisual works or textbook or newspapers, or whatever else is on the web, then a student like Ashlee could type into Google or Bing or whatever search engine she wants to use, I need "X," and the metadata will take her to the copy that's accessible, or the copies.

I know I am not quite getting something here, but I am finding it really hard to understand a Federated search for all materials in the world.

>> CHAIRWOMAN DIETRICH: I can address that.

>> TUCK TINSLEY: Go ahead.

>> CHAIRWOMAN DIETRICH: Go ahead.

>> TUCK TINSLEY: I really like number 9, metadata. And as far as Maria's comment, I think that the definition in how we define "print disability" is going to be major. With the K-12 population, duplication I don't believe for the blind is an issue now. Federal Government funded the LOUIS instructional materials, and so someone in another part of a country is needing that book, they will see that it has been filed. On that database, you have RFB&D material, Library of Congress material, Bookshare material, so you know what's available. The comment about tactile graphics that George made, it doesn't probably even need to be a repository. For the pre-secondary students, K-12 students, we have a tactile graphics image library. And people just supply those images as they are producing them.

So I think that with our small population, the blind and partially-sighted students, we have mailed that pretty well with the K-12. But for us, and I think in our task force, Gaeir came up with the first straw man of defining "print disability." And it's really almost the world as are you looking at it, and that's going to be a real charge for this

committee to come up with a definition of that population, and not have to deal with the whole universe. I think metadata issues, or however we end up, having that metadata and being able to access it is a great recommendation of your committee, Jim.

>> JIM FRUCHTERMAN: Gaeir, and then George you want to go next?

>> CHAIRWOMAN DIETRICH: So the Federated search in particular is something that the alternate media specialists are looking for because right now they will spend 20 minutes checking, there's about 10-12 different places that they look. And right now there are a couple of them that are integrated where you can go to one.

>> MARIA PALLANTE: Look for what?

>> CHAIRWOMAN DIETRICH: For alternate media.

>> MARIA PALLANTE: For example?

>> CHAIRWOMAN DIETRICH: For books specifically, mostly books, but also journal articles, things like that.

>> MARIA PALLANTE: Books are alternate media?

>> ANDREW FRIEDMAN: Alternate format.

>> MARIA PALLANTE: Ah, thank you.

>> CHAIRWOMAN DIETRICH: I guess I didn't understand the comment.

>> TUCK TINSLEY: Alternate media, she wants to know the formats.

>> CHAIRWOMAN DIETRICH: Oh, oh. The basic thing is we're looking to see is it done or can we get eText so that we don't have to scan? That's the bottom line for what people in the we will world are looking for. Like I said, right now, you know, you you've got a couple of places where there are a few of them grouped together, and there are a couple of other places where at least they have convenient links so you can just click the Bookshare, click to RFB&D. But there is currently no one place that you can go and enter the title of the book and search those top dozen places.

>> MARIA PALLANTE: Gaeir, I'm sorry, we're only talking about non-books at this point. The comment was Federated search makes predictable sense for the book world. But what I heard Stephan said is we have to get away from talking about just books. We have to talk about all kinds of materials. Anything that a student could possibly want while

they are in college including audiovisual works, movies, sound recordings, you name it, whatever it is, the whole universe. And for that I am having a lot of trouble from a technical perspective trying to figure out what a Federated search looks like if it's not just searching the web. We're recreating a proprietary search entity.

>> CHAIRWOMAN DIETRICH: We're not talking about search, at least this is the way I am visualizing it, but talking about searching specific entities. In other words, we're not searching like who in the entire universe has "War and Peace," or whatever this widget that's being used, and we use it, too at the university for it, we're looking at what does RFB&D have? What does Bookshare? What does NLS have? What does audio.com have? There are lists that people go through for every material they are looking at to see does anybody have this.

>> MARIA PALLANTE: I understood that that's where I started with my question, I think, was for things that are not the traditional kinds of works that we've been used to regulating, how do we do that? Is it a best practice? Is it regulation that you can't put a work out on the web no matter who you are unless you are somehow connecting it to an entity and to the search engine. I am just trying to get how we're beginning to form some kind of recommendation around this. Because it seems to me that it's wide open. In terms of what we're trying to bring into that. It was really a structural question.

>> JIM FRUCHTERMAN: So I think this is a great moment --
(Laughter)

To capture the fact that we have some outside speakers that are supposed to start in just a couple of minutes. And I think that we need to make sure that we can start them in time. This is not the end of our complete agenda item. But I think that we've covered a lot of terrific territory. I think that we will have pending this question of Federated search for things on books, because I think that we get why books are an easier thing to search for, but I think that people should be think being how else might do you that? Or is it more metadata standards for these non-book-like things that we can actually use.

And anyway, I just wanted to say thanks to all of the members of the task force. I think that we actually made terrific progress on our charge. I think that it's keeping us sort of, you know, ticking along on Gaeir's deadlines, and so I think that's great. And I am looking forward to more

conversation this afternoon about where we go with technology issues, in terms of constructing the recommendations that we have to have. So back to our Chair.

>> CHAIRWOMAN DIETRICH: Thank you very much, Jim, and thank you to the task force for all of the work. As most of you can tell this is not a small area that they've taken on. It's very big, and the fact that there are this many points of consensus at this point in the process I really think is absolutely marvelous. We are going to take just a 10-minute break, and I am really serious about the 10 minutes. Just take 10 minutes because we just want to give our speakers a chance to setup, and then we'll be back, and we will have Skip working with Tom and Christopher to get their presentation setup. Thank you.

(Break)

>> CHAIRWOMAN DIETRICH: We're beginning to start the audio, so you might want to drop your private conversations and return to the table. Until you don't mind being broadcast over the Internet.

I would like to welcome our speakers. We have two presenters representing two different solutions here that are being currently implemented. We ask them to come before the Commission to give their presentation so that you would have a sense of what two of the more forward-thinking groups are doing with trying to solve some of these issues at the postsecondary level. So we have Christopher Lee from the Access Text Network, and also Bob from the Access Text Network, and Tom Hadfield from Course Smart. So Christopher, you are going to start. Oh, Commission members, could you please hold your questions until both of the presentations are through. We have a rather tight timeframe here, so once both of the speakers have presented, then we will take your questions.

>> CHRISTOPHER LEE: Great. Good morning. How are you doing this morning? Good. Thank you for the invitation today. I appreciate it. We have a lot to cover in a very short amount of time. I am the director of AMAC, Alternative Media Access Center. I will tell you a little bit about that, as well as a director of Access Text which some of you may have heard of by out in. We've got a two-prong presentation. I will take over and talk about AIM and Access Text, and then I will turn it over to Tom who will talk about Course Smart on an initiative that we're working on right now, which is a marketplace initiative funded by the Department of Education. We've got a lot of accessibility

components. So we hope to get through all of this together. Do I appreciate the invitation.

I've got just to go over a little bit of who AMAC is, AMAC was actually funded from the board of regents at a grass roots effort from the national federation for the blind, the learning association of Georgia, and the governor's council on developmental disabilities. And back in 2005 there were concerns in Georgia that students with print-related disabilities were not being served. We knew that was going on, and we were frustrated with that in Georgia. So we came about, as well as what was going on at the same time in 2005 we actually had some state legislation going on that would limit academic freedom for faculty. So we had all kinds of stuff going on in 2005. With that, and a little bit of a push from the advocacy organizations, the board of regents funded the access center about huge fund of \$600,000.

And this \$600,000 was supposed to serve the state, 35 institutions, which make up 9,000 students with disabilities. A percentage of them having print related disabilities, and a lot of them not. So we had a year to get it up and going. We had a membership model that we could ask all institutions to participate in. But the goal of AMAC was pretty simple. It was supposed to be a manufacturing production center. We were supposed to produce alternative media for students with print-related disabilities. In addition to that \$600,000, we were supposed to provide assistive technology. In addition to that training. In addition to that, technical support. We had to do the whole package in a year and pull it together. So cause imagine, there were a ton of challenges, which file format would we use?

Which platform would we news you have all of the student as direct service standpoint, all of this came about and we made tough decisions during that process. But we had a lot of successes. As you can see with this slide, and for accessibility reasons I will read some of it currently right now we are looking at about 20,000 media records in our file. Now, Bob from our staff, Access Text staff, we pulled them from California, he said to me, when you reach 5,000 titles in your repository, are you going to end up seeing a reuse rate. And we did we are currently at 40% reuse rate right now which is saving the system a ton of money. We're looking at between \$3-\$4 million right now. So we've got great data that we saw. The challenges with Access Text, really with AMAC, came more in the lining of funding.

More in the lines of publisher relationships. Back in 2005, 2006, and 2007 we were -- we didn't have great publisher relationships. My staff which was very limited at that time went from website to website to website cross-eyed requesting files from publishers. So that was an issue. That was a big issue. It was really costing us a lot of money because our credit card went from 5,000 to 15,000 to \$20,000 a month. See, the mission of AMAC was to serve all students that came through the USG institutions no matter what with all materials. So we're talking about a lot of money being put toward Amazon. Which is great, and the publishers are smiling about that but it was a lot of money for us, as well as the students were purchasing the book, too.

So a lot was going on with that. And I knew as director that I needed to understand where the publishers were coming. At that point, Rick Bowes was doing the feasibility study for the AAP [ASSOCIATION OF AMERICAN PUBLISHERS]. I found out about it, we got involved with that and I tagged along with Rick. I hung out with him to find out what exactly we could do to better our relationships with the publishers, knowing that we had to. If AMAC was to succeed, if not, we would fail. With that in mind, we ended up getting Access Text off the ground. We decided to go with a lot of file formats. We started off with accessible PDFs mainly because our student advisory committee wanted those things. And we were very driven for customer service.

You can get an idea from the slides what we used. As I said, we have not only served the USG institutions, but broader to the technical colleges. We've got a lot of interesting situations. We also served K-12 and doing testing. We also have a large Braille program now that we've got going that I am proud of. So here is AMAC. This is a little bit about us. It gives you the foundation of where we were and where we started. Now, the next slide hopefully -- gives you a little bit of a bird's eye view of evolution of where we would have been, where we're going, and where we plan on going. So to describe it for people who can't see it, you've got the board of regents initiative of AMAC. Now we're about getting subsidized about a million dollars a year to the projects that we have we have about 20,000 students in the State of Georgia that we're supposed to be serving.

Only a percentage of those we are actually serving. Then you have the Access Text project underneath AMAC. To describe that program, to give you a context and I will drill down in a second more, it was a relationship and agreement between the AAP [ASSOCIATION OF AMERICAN PUBLISHERS] and the

University system of Georgia. And AMAC was to develop and run the day-to-day operations of Access Text, which is basically a web-based application that institutions around the country can actually go in and request and get fulfilled a title, a textbook title. That's pretty much the guidelines at the very beginning of Access Text. The idea behind it was that there would be a provisioning system behind it, that based on the publisher's needs and wants, they could actually automatically Approve or deny for whatever reason these files.

We decided to actually load these titles. These aren't actually textbooks in a sense. These aren't files in the sense, but it's actually the titles, with balca data which is 350 titles, 350 titles that we loaded it into. And then it eventually fed into the ONyX system where our publishers participated in that. That gives you an idea. There was a donation on Access Text, that donation that was about \$4 million, a little under a million dollars to develop it, and in July of 2010, our agreement with AAP [ASSOCIATION OF AMERICAN PUBLISHERS] ran out. So now we are Access Text being a membership-driven organization. We're not tied to AAP [ASSOCIATION OF AMERICAN PUBLISHERS] even though as director of Access Text I reach out to AAP [ASSOCIATION OF AMERICAN PUBLISHERS] and the critical issues task force quite a bit to get their advice.

You can see on the next slide. We are a membership model. We do charge a revenue of \$500 a year to be a member of what we're doing, which is part of the problem that we're dealing with. But during the same time, I did want to say that we're doing a lot of publisher work, and we brought in course smart and started working with them and the R&D aspects. So this market model thing that started off the presentation with mentioning we've got going on is the Department of Ed grant. It's the student eText pilot project. It's something that got started in October. The focus of this actual grant is to look at textbook costs for students, all students. It just so happens that we wrote in a very large piece that we would do from a national perspective as well as dealing with the accessibility issues.

And that's why we brought in members of course smart and other partners such as Access Text. I will explain how that works in a second.

So to drill down and talk a little bit about Access Text a little bit more, you've got the scope of what we're dealing with right now. We represent about 92% of the marketplace of

the publishers. That's about 240 imprints of our 400,000 title records, not books, but title records in our application. We right now are serving about -- we have requested about 41,500. I am not super happy with that but it's only been open a year and a half. That represents only about 25% of what actually the publishers receive. So that number is still very small, but it's growing at a 20% rate, which is pretty impressive. Our fulfillment rate from these files that we're getting from the publishers are about 85%. So the way that it works is the institution logs into this web-based application.

They request a title. They see the record, ONyX feeds, hopefully it's correct, and they request it and it's uploaded by the publisher where it comes through our FTP service, being Access Text. That's the flow of the process. A majority of what we're seeing is obviously PDFs. What's exciting Access Text, though is that we're tracking some crazy historic data for you. We're watching as the liaison between the publishers and the DSS office, we're seeing all kinds of trends from a marketplace standpoint. That's been exciting to see. So we've got a lot of stuff going on. We're also highlighting within the original agreement with the AAP [ASSOCIATION OF AMERICAN PUBLISHERS], we setup an advisory committee with a 60/40 split. And that 60% split is tied strictly to DSS offices participation, as well as we have expert people on the committee.

40% being the publishers. And sitting around a conference call on an advisory committee with publishers and DSS office can be interesting as you can imagine. So it's been a great learning curve for me specifically. You can also see that we opened our doors in August 24, 2009, which is just around the corner. So we went through a year beta. We had 1,000 members tied to it. As after total we have 921 that have actually touched the system. A lot of that now is being developed through statewide contracts with like the State of Ohio, that other USG institution in Ohio is actually a member of Access Text. Whether we use it or not is a whole other question. But they are a member. So we're starting to work with different states on this.

So it's a exciting time for us. The platform that we actually use is QuickBased, which is the same as QuickBooks. It's an Intuit product. It's a robust product. We see it expanding down the road and going off of that just because of the number of titles we're getting from the publisher. That gives you a blow of what Access Text is as I mentioned in the beginning, we're consumer focused. We want to hear from our

members and driven by the members we're interested and want to know what's going on with the publishers and make that connection. We were basically getting feedback from members that we our services were not as robust as we would like them to see.

>> TUCK TINSLEY: You said 41,500 request processed and you weren't happy. You can talk about that?

>> CHRISTOPHER LEE: As an institution, puts in a request, basically, that that request adds up to that one. So we've got 45 out of the 921 postsecondary institutions put in requests. And of those 41, 88% has been received back with files. Now, why I am not happy with it, and maybe that's more what your question is, is that for example, this is just a small percentage of what actually the publishers are still getting. So just because we have Access Text Network, it doesn't mean that they close their door and not accept requests from the DSS offices. So we've got work to do on that but that is growing at a 20% rate. Does that answer your question?

>> TUCK TINSLEY: Yes.

>> CHRISTOPHER LEE: Okay. So the expansion services are what I want to highlight next. So as I was saying from our memberships, the actual Access Text's baseline service was good in helping them out, and actually there was survey data that is over on the window over there if you want to look at it from our DSS offices. We knew that we had to do more. I must say this is from our members, from the advisory committee, and from Access Text pushing the publishers to do some additional services. And they wanted to do that, and they took it on. Some of the things that, and this came from Gaeir, right up front was we needed a Federated search component. So we built that into the application this Federated search aspect will not only direct an institution to the publisher if they have a file that is accessible that they can sell, but it will also actually direct them to another organization such as RFB&D, and these are just examples, course smart, so that has been built into the application right now.

One other points brought up a little while ago was do we want to search all of these applications? As some of you can see, there are -- you can actually highlight the ones you want to go to. If I just want to go to RFB&D, to be frank with you, you've got students that just want RFB&D titles. They can actually just go in and search RFB&D, or any other entity that they like. So this is exciting component of it it's got

challenges. If you search all of these entities, which I am sure that the database is aware of it slows down the search. It takes more than 10 seconds. You won't go with it. So there are challenges, and that's why we built this actual feature in keep in mind this course smart feature will come back in just a second when we talk about the actual grant.

>> CHAIRWOMAN DIETRICH: Christopher, I just want to add in here, for those not familiar with the LOUIS database, it's hosted by APH, and it is a -- they have a data listing of Braille and other things that are done by a lot of the authorized entities.

>> CHRISTOPHER LEE: So the Federated search component is now up, and one of the groups that we're working with is the ATPC which is out of California. So we've been working with them on that. We're also AMAC which is the original group is tied to that. Again, these files are all, keep in mind, provisioned through the system. So they still need to be approved by the publisher. So that's really crucial on this. The matrix behind the QuickBased application is very unique to an individual, to the publisher themselves, which makes it kind of exciting because we can actually individualize that

The other actual service that we looked at was a hosting exchange library. Again, this is something that wasn't in the original agreement with the publisher, so we'll take you another step forward of services that are needed by the students. And what we have got going on right now is this library again, provisioned by the publishers, will host about 1,000 files in March, with a variety of file formats, and we're pretty excited about that exchange. We are working on -- with the ATPC in California, and we're watermarking their file so that we know it's the ATPC's files, within the exchange there is an evaluation component, it hasn't been tagged, the navigation is set, isn't a completed title which we only allow completed titles in right now. But we actually have kind of a very high level evaluation at this point built into this exchange library.

We've had very few requests at this point through this because we just got it off the ground. But we believe as we become more robust in that exchange that we will see a change in that. So, again, it's by publisher, by publisher who wants to participate, who doesn't want to participate, and we've got some of the largest publishers participating, and you can see the formats that we're looking at. We'll have DAISY, MP3s, DOCs, and PDFs within it. So, again, there will

be an evaluation component built in. The last thing that we want to do is turn around bad files. That's the expanded service of the Federated search, Access Text, and the library. One thing we have learned is that some of the trends that we're seeing from the publishers and what's happening with just not AMAC but Access Text is that we are seeing as I mentioned a 20% increase in using the Access Text's network.

So it's building. It's building a lot. As we bring on new publishers, that's going to be even more exciting. We are seeing that there are more PDFs, smaller files, and no print marks from publishers coming through FTP. And that's been interesting to see. We're seeing that tag PDFs starting to appeal more specifically with the high volume that AMAC does. We're seeing that happening. Remediated PDF for accessibility, we're seeing that happen more. And creating alternative text images. We're seeing that, and consulting on accessible issues. That's happening more and more. And we're talking to the publishers about making their files better. So that gives you a little bit after overview of some of the publisher historic trends that we're seeing from our side.

Now, to kind of close the loop on the evolution, where do we want to go with Access Text? Well, as I mentioned at the beginning, we have our challenges. And we've had a lot of challenges, but we've had a lot of successes. What we plan to do is we really want to expand the application to provide more of a workflow for the DSS offices. Whether or not the publisher is a member of Access Text, we have heard from the DSS offices that, wow, I've got 20 e-mails going off. I am going to 10 different publisher houses. I can't keep track of it. I can't keep track of it don't you have this publisher as a member right now. So we will be expanding the application by June to allow some workflow tools that we are pretty excited about because that's what our members want.

One of the biggest complaints that we have even though we're at 92% marketplace right now in the sense of the publishers that are participate something that we need more publishers. So we're going to be really aggressively going after more publishers. I have been very tentative on going after publishers too fast because it is a new system. I don't want -- the more that we add, the more files we add we don't want to slow things down. We're being very strategic in how we do this. Policy, our membership agreement is a trusted

environment where they sign off on this membership agreement. Every institution does that. And that membership agreement continues to be tweaked with the AAP [ASSOCIATION OF AMERICAN PUBLISHERS]. They love me. I keep knocking on their doors saying we need to do this a little bit better. And we keep going through legal, through legal, through legal.

>> ANDREW FRIEDMAN: are your memberships just with the schools?

>> CHRISTOPHER LEE: Just for the actual institutions. So it's not student. We would love to go that route. That's what we want to see from a market standpoint. We would like to see that happen and figure out how to do that. But at this point we haven't figured a way of actually doing that. It will happen a little bit with this grant that we're working on, the students will be able to actually go and buy the book. So that possibly could kind of feed into this.

The other issue, and it continues to be an issue is right now to run the operation it costs us about a million dollars to run it that's with the quick base and the staff and keeping the growth rate that we're doing. We could probably get by on a little bit less, but I would be concerned mainly because we're going to be going off of the quick base application and building our own application. So we're looking at that. So right now there is a fee, as I said, of \$500 tied to it we have been exploring having the baseline services which is the requesting and fulfillment process being open free for members, and then charges for expanded services that we may have. The Federated search component will be a free option. So we're pretty excited about that. So that will definitely be something we're looking at.

In that, we do have RFB&D titles, and that's great. I am not sure how many we get right now through RFB&D. From a market model participation, we really want to drive this. That is kind of our mission from our advisory committee as well as from the Access Text staff. We want to see it down the road where students can actually purchase these books and get access to them and high quality and timely. We're moving towards that our commitment shows due to the fact that we are truly going after grants that will push that piece, a lot of the grants that we apply for being that Georgia Tech, are kind of embedded in the academic environment deals with RFB&D, and we'll be able to get grants that look at that. And the first grant to kind of close up before I get Tom up here, but the first grant is this eText pilot project step.

There is more data about this in the handouts over on the window.

And the idea of this grant was nothing to do with disabilities. This is what we're so psyched about this grant it had nothing to do with it the idea of the grant was to lower the cost 50%, or to show lower costs of just renting textbooks. And the majority of the people that actually are the award winners, there were 10 or 11 people that won awards, we were the largest access, AMAC received the largest \$1.1 million grant on it. Actually they were more institution based. It was based out your institution. It was based at your bookstore, brick and mortar aspect. We went a step beyond that when we got the grant. We were ambitious and made it national and bringing in course smart as our distributor in addition, we added in a lot of money for R&D on accessibility which we're real happy got funded for that.

So a good chunk of that \$1.1 million is going to look at how we can make these files better. You will hear from Tom in just a second. The way that it's actually going to work is - - well, let me mention this last point. Another goal is that we're demonstrating the possible market model for renting accessible textbook. That's going to be tough. That's definitely going to be a tough thing. But we're going to take a stab at that, because we know the high cost of producing this material as of now. So that's kind of a little bit of goals of this grant. How it's actually going to work is that the AMAC is not only administering the day-to-day aspect of the grant, but we're also doing some of the leg work on the production as well as with other vendors of these files that we're going to be putting up into course smart and actually are already up into course smart.

Course smart will handle the distribution and customer service component of the grant. They'll be working with the students with disabilities and so on. And then the titles will be included in Access Text's Federated search. Does that make sense? So as you log in, are you going to see that course smart has it, and you will be able to redirect to landing page, which will be given to the student. The student can actually go purchase these titles.

We've got great music which transitions us actually to Tom.

(Laughter)

>> TOM HADFIELD: I didn't expect an overture. I am going to apologize in advance. My voice is in bad shape. But hopefully it will hold up.

Did I press the wrong button? Oh, okay. Well, first of all, before we even talk about this, maybe people don't even know who course smart is course smart was a joint venture funded in -- it started in 2007. It was a joint venture at the time of the six higher ed publishers with a couple of missions in mind. One was to create a place where there was at least a substantial quantity of digital textbooks. There was no place in the market where you could go and find some large number. Certainly to provide a lower cost alternative was another one of the missions, and then a third mission actually was to distribute digital desk copies to instructors, and give them evaluation copies. We started -- we launched in August 2007 with I think 1,600 titles from our member publishers.

And at this point we have about 15,000 titles. It's hard for me to track. It goes up everyday. And we have at least 18 publishers participating. So I think, you know this definitely has been one of our areas is trying to get this to scale. Trying to get a large number of titles, trying to get most of the things students need. And furthermore, we want to make sure that everybody can have access. So part of our mission statement is that we want to make sure not only are we driving down the cost, but that everybody can use the service. So we have a couple of accessibility goals. First of them is we certainly want to meet or exceed all of the industry accessibility standards, and we definitely want to improve usability. And what we really want to do is to get -- you know, 15,000 titles is a lot of titles.

We would like to get as many of those to be as accessible as the get-go as best as possible, and to serve as many disabilities as we can.

Longer term, you know, we really would like to see that this is a very low barrier commercial alternative. That we can even service the needs of the STEM areas, and even go beyond just providing digital textbooks, but providing other digital products and study tools in an accessible manner. When we talk about accessibility, we actually have five areas that we have to worry about. We have our website, which has to be accessible for people to buy the content. We have to have a reader that works in an accessible manner. And then we have to have the content, which also has to be accessible. And furthermore, we've had to get a lot better at doing user

support. How do we support people who have needs who use the accessible features? And then actually much like Christopher's group, we work a lot with the publishers telling them if you give us this, it's going to work better. We're doing a lot of training to the publishers and working cooperatively with them to get better formats.

So in terms of the accessibility of the website, we're striving for WCAG 2.08 A conformance. We're not there yet. We do review the site regularly. We have independent consultants work on it and every month we put out a new release. And every month there are significant improvements to accessibility. And so we think that we'll be able to hit that AA level by April. We do have our VPATs up on our website.

We've had a lot of help. To be honest, we didn't know a lot about accessibility. The NFB has been incredibly helpful helping us to know what the areas were that we needed to do improvement. They've done input of how you can fix it. And tech for all consulting has worked with us to help us to get the WCAG conformance. We've gotten help from the California State University chancellor's office. And then most importantly we have a lot of students with disabilities who are trying things out and giving us feedback. There is no question that we consider our accessible reader a beta product, or a pilot product. Mostly because until we get real people using it and telling us what works for them and what doesn't work for them, we'll still be strongly in the mode of improving things.

A big problem for us was the reader application itself. Our standard format is image based. We have print fidelity that we think is very important in our market because we're doing textbooks that we expect will sit side by side in a classroom with somebody else who has a print book. So the page numbers have to match. The layout has to match. Or are you not going to be able to work in this mixed environment. But as you can imagine, our graphical image of a page is not terribly accessible. So we've done a lot of R&D, and we're working on creating ways to make that text accessible to technology. And we're doing a lot of technology to actually pull the text out of the publisher's PDF, and present it in an HTML format to the screen readers. And so anybody who is using our accessible reader, they get the graphical page, but they also get an HTML rendition of the page.

That's been an area that I think initially people were very dubious that we could do it. Everybody knows that it's better if accessibility's thought of from the beginning. But one of the reasons that we have 15,000 titles is we've made our workflow very easy for the publishers. It's pretty much part of their production process that their print PDF ends up in our system. So if we really want to scale, that's going to be our fastest way to get large number of titles. I will be honest, it's not going to be the best way. You know, there are things that we could do better we had the source files, but we would have a handful of titles instead of thousands.

We do have an offline and device strategy, but right now the offline solution we use has moderate accessibility, and unfortunately our device applications aren't accessible at all because we have real technical limitations. But we do have blind students using voice-over on the iPad and the iPhone, very successfully with our website. And we're working on developing an entirely new reader that's HTML 5 based so that you can have online and offline access. And one of the reasons that we're going this route is we really think that the standards for accessibility in the HTML world are just far ahead of everybody else. We've had some experience with an offline solution that was a custom program. There's a lot to invent when those standards don't already exist. If we can go to a browser-based solution, we all know that the technology people are using for accessibility works with browsers.

So we're working with a very rich set of standards.

>> TUCK TINSLEY: Tom, how does HTML rendition make a graphic accessible? I am naive on that.

>> TOM HADFIELD: Well, I am going to go through that a little bit.

>> TUCK TINSLEY: Okay.

>> TOM HADFIELD: So I will get to that.

So as I said, the publisher supplies files, they may not be really very accessible. They certainly often lack structural tag, and they don't have any image tags. So we've worked with some engineers who actually were some the people who developed Adobe's Acrobat accessibility methods, and we were devising methods to automate pulling that text out, putting the structure tags in, and then identifying the images so that they could be hand tagged. So tagging is a mechanical but also a manual process. The images clearly

have to be tagged by hand. We do as much of the tagging as we can mechanically, which we can usually do tables fairly well. Certainly we can do headings and structures, and even in our -- even if we don't tag the book, we have a very rich table of contents metadata that allows the book to be navigable to a fairly low level in the table of contents.

I do have to caveat it's not artisan tagging. So it's not hand crafted. It is done in a fairly rapid manner. But that's the way that we think that we can get it to scale. When we get feedback that a title needs more hand work, we reprocess it. So to answer your question, the images are just tagged with descriptions, with alt-text.

Now, we do find that students -- to be honest, students can use our books often even if they are not tagged. The book format that we get from the publisher will very often render very well in our accessible reader. It won't have headings. It won't have image tags. And sometime it is will have very terrible reading order problems. But oftentimes they've been fine. So what we've tended to do is if a student asks for a title, we'll give them the title in the accessible reader not tagged, while we send it out to get it tagged. And I've gotten a lot of feedback that I've even had students say "Don't bother tagging this for me. Tag it if you think other students will need it."

So we ourselves funded doing our top seller list and getting it tagged. We worked with AMAC, and that's where we started our relationship. Working with the grant we expect that we can tag a lot more titles. We're hoping to get another 1,000 titles this year. And we look at the trends of what sells? What are the DSS offices asking for? We go to our publishers and asking what titles are you getting requests for to come up with a list of titles that we then give the files to AMAC, and then they process them. And then any student who has come in and said, "Your title is not in the list," we've added them to the tagging queue. Right now it's taking four weeks. We're sure that we can get to down to two. To be very honest, scaling this up is taking us a little time.

But we're -- we've got to figure out the processes. We want this to turn around really quickly.

So as I said, the untagged titles are often accessible, and we are currently not trying to do the STEM titles. Course smart and AMAC are working together, along with some of our publishers to find ways that we could address those titles as well. Clearly they are not going to be as easy to

-- you know, we don't think that there is a high value in us tagging them and turning equations into pictures and tagging an equation. So we said, "If that's our solution, we would rather put our effort into the titles that we can make really work better and come up with a better solution than that."

Ultimately we think that MathML is going to be the better solution. But we know that we can't wait until EPUB 3.0 is everywhere. So one thing that we do have to say, and, of course, DRM is a big problem, and we don't actually make the accessible version of the reader to everybody. A student does have to contact us and say, "I want the accessible version."

And the reason we are doing that is, well, one, at this point, it's a pilot. So I really want feedback from these students. I really want them to talk to me and tell me their experience. But the other reason that we have to do this is that it does expose us to a bit more DRM risk. Now, it is not DRM-free. We still have several DRM techniques that I don't want to reveal.

(Laughter)

That we still can tell if the text is being lifted. But clearly it's still easier than picking up our image-based format, which is a great page fidelity format, but it's also great from a DRM perspective. So we feel that we've come up with a very good way to protect the content. We are not distributing a file. Since it's HTML-based, a student can only look at a page at a time. So that in itself is somewhat difficult to make it easy to duplicate.

We do --

>> ANDREW FRIEDMAN: A quick question for you. Are you only taking new textbooks in? Are you going back? Do you have older textbooks in your library?

>> TOM HADFIELD: We tend not to have older textbooks, period. When the service started up, we started with some back-titles, but we have pretty much stayed with new titles. We get the front list.

>> ANDREW FRIEDMAN: So everything that you have in your library you have licensed rights from the publishers, but you have full audio capability.

>> TOM HADFIELD: Everything that is in our library already has the digital rights cleared. That's actually one of the reasons that it's also very difficult for to us go back to source files. Those source files may not all have

the digital rights cleared, and then there would be an enormous effort but we know that if the file has come us, we have the rights. We have copyrights back to about 2006. Clearly more in the newer -- we started in 2007, so you are going to find a lot more 2009 copyrights.

So, let's see. One of the other things I think that I wanted to make obvious is we're working on our help system. So that people with disabilities don't have to call us to know how do I work this. And, again, we have -- we don't have our own customer support, but at times, at peak times, we have 150-200 agents who are at fall rush. So we've got an issue to scale up. Just how do those people know what they are dealing with? You know, if somebody calls and says I am having a problem with JAWS, one of those, they go, what? So, you know, AMAC's working with us to help us get an awareness and training program that works for those people. And we already have an escalation path that helps anybody who has an accessibility issue.

And as I said, we're working strongly with our publishers to see if we can make this even better. We do have in order to get the content into our system, our publishers have to follow what we call our content submission guidelines. Our content submission guidelines now say, "You have to have reading order remediated. You have to have these things in place to put your book in our service."

Now, are we officially doing that yet? No. But everybody is on notice. And as you mentioned trends, we are starting to see it happen. So when we push back, we do get response, which is really good. And it should make the tagging easier and less and we think that it gives us a lot better future for making this scale.

So as, again, one of the things that's very important is that we do get a lot of feedback. Right now because the automated and manual tagging processes are all new, we're getting a lot of feedback from the students saying, "Here is what's working in these books. Here's what's not working in these books."

Unfortunately, every routine that we develop works like never for all of books. Every publisher has different compositors, the book might be an old title that the book was composited awhile ago. But we're getting the patterns. As the students say here is a problem, we can say we know how to fix that.

We do approach learning disabled people somewhat. To be honest this, we're better off with screen readers. Text-to-

speech we have some solutions for that work. I think that they're clunky. And so we are working to come up with better text-to-speech solutions, better text-to-MP3. As of right now the one thing that we still have an incredible difficulty with, we do not have any notion of highlighting in an accessible version. It very much follows the physical yellow highlighter metaphor. In our re-design of the reader that we're working on this year, we will have two versions of highlighting. One, which is the physical metaphor, and one, which is much more, indicates an area that you want to have tagged from this word to that word.

This is just some of the feedback that we got. It's -- we've been really happy to get it. One student said that it's very accessible on JAWS 11. Very accessible on Voice Over. Another student said that they were incredibly impressed at what they could do with the navigation. And we've had people be very happy -- and this is the one student said, "Yeah, I don't even need it tagged," but we sent that book to be tagged anyway.

And then we've found that people are using it with Braille displays, and we have had success. So we take that as good, but by no means can we stop. We have to keep going and keep making it better. So did I leave time for questions? There is 10 minutes for questions.

>> CHAIRWOMAN DIETRICH: Thank you very much for coming to speak with us. So I would like to open it up now to the Commission members. Do you have questions for Tom or for Christopher?

>> JIM FRUCHTERMAN: I do. We were earlier talking about Federated search, and that's really exciting. So if Bookshare's API collection was free to you guys, would you guys add it to your Federated search?

>> CHRISTOPHER LEE: Definitely.

>> JIM FRUCHTERMAN: Terrific. A second question is that you were saying that the Access Text work is 60/40 DSS offices, but I went to your site and it looks like the majority of your advisory committee was from your publishing committee. Are you recruiting for new members?

>> CHRISTOPHER LEE: It should be 60/40? Are you on the Wiki?

>> JIM FRUCHTERMAN: Yes.

>> CHRISTOPHER LEE: It's a 60/40 setup. We had two drop off.

>> SKIP STAHL: If you could use the microphone.

>> CHRISTOPHER LEE: We have a advisory committee that we had two drop off drop of.

>> GEORGE KERSCHER: Tom, you are on the EPUB 3 working group. What kind of plans do you have in place moving forward with that? Of course, you know, are you waiting for the publishers to call you up with that content. But what's the score there?

>> TOM HADFIELD: Exactly. We are waiting see what our publishers are going to do with it. As soon as our publishers can start to give us EPUB 3, we are going to support it in our reader. And we've already started -- we do have a version of the reader that we use for R&D, and we've taken some of the concepts, and we've pumped in some of our own guesses of how things are going to look, taken some EPUB 2.0 files and then created a few pages that we tried to markup. And so we are working on it we look at it as R&D on our side. But we think that we'll be ready as soon as the publishers are ready.

>> GEORGE KERSCHER: Okay. And with files you are getting right now, what would your life be like if the files were marked up, the PDF was tagged to your level of expectation?

>> TOM HADFIELD: Life would be vastly easier.

(Laughter)

We would have -- we would be able to -- I mean right now as I say student does use our titles without any markup, and they use it with screen readers, and they get an experience that they find more useful than anything else. But to get something that would have the tagging in it from the get-go would be so much faster than sending it out, you know, having AMAC process it, bring it back, you know, there is always a QA step. So, yeah, it would make a big difference. And to be honest, some of the books that we had, as I say, it may be a brand-new edition, but the source file because it's the 10th edition, the source file can be pretty old. So those are more cleanup than the newer ones.

>> GEORGE KERSCHER: You've got competitors out there. I guess are publishers providing the same content to them as to you?

>> TOM HADFIELD: I couldn't answer that question.

>> GEORGE KERSCHER: Okay.

>> ANDREW FRIEDMAN: Question. What percentage of your population is "disability" population versus people just buying your books in an online format?

>> TOM HADFIELD: I'm not sure at this point. We've not done any customer research on that. I would say it's probably not high. Because until we did our accessible version of the reader, which we just launched in December, I can plainly state we were completely inaccessible. So there's certainly not been any, you know, noise in the market that would have built up an idea that corresponds to the place to go to get your accessibility needs met. So I would say that it's probably very low. But with the public PR that happened with the Step Grant, with things happening, it's getting, well, we don't go out and advertise in any way. We're getting more and more people all the time.

>> GEORGE KERSCHER: Chris, is the Federated search available only to people that registered, or can anybody get on there and do a search?

>> CHRISTOPHER LEE: The Federated search will be -- anybody can get on and actually look at the Federated search as of June 1st. So right now it's just within the membership model. But June 1st it will be open.

>> CHAIRWOMAN DIETRICH: Other questions from the Commission members?

>> GLINDA HILL: I have a question on your membership fee.

>> SKIP STAHL: Glinda, microphone, please?

>> GLINDA HILL: I'm sorry. On your membership fee, you mentioned that you had a state that all of their universities --

>> CHRISTOPHER LEE: That's correct, Ohio.

>> GLINDA HILL: Did the state pay the membership fee, or was it just a blanket state fee? How did you work that for the state?

>> CHRISTOPHER LEE: The Board of Regents of Ohio via the Rehabilitation Act and some federal funds tied to state dollars helped to cover that.

>> GLINDA HILL: But it was still a per-institution fee?

>> CHRISTOPHER LEE: That's correct. It was a lower fee because of the amount. There were 360 institutions.

>> GLINDA HILL: The reason think that ask the question is because I've had calls, and people are asking me about what the fee was, and they heard different things. So that's why some people say 360.

>> CHRISTOPHER LEE: We started off at 360 kind of as the beginning.

>> GLINDA HILL: Thank you.

>> CHAIRWOMAN DIETRICH: Okay. If there are no more questions, I would like to thank our speakers very much for taking the time and coming to talk with us.

(Applause)

So we are going to be breaking for lunch now. We only have 45 minutes. So just to make you aware of your options. There are restaurants downstairs in the hotel. There's also the exhibit hall that is on the 2nd floor, Jim? I think it's the 2nd floor that's being run by -- it's the 2nd floor bit conference. We have permission for you to go into the exhibit hall. Normally a tag would be required, a conference tag. But I spoke with Mary Claire, and she said that if anyone questions you, you can just use her name and say Mary Claire said it was okay for the Commission to come into the exhibit hall. In the exhibit hall they do have brown bag take-away lunches. There is not a lot of technology in there, but they do have Intel reader which some of you might want to take a look at.

And RFB&D is in there, and Bookshare, you guys are in there?

>> JIM FRUCHTERMAN: I don't know. Maybe.

(Laughter)

>> CHAIRWOMAN DIETRICH: I know that I saw RFB&D yesterday. So RFB&D and Bookshare are there. So I encourage you to go at least if not at lunch, at some point to take a look at the exhibits so that you get a sense of what is being promote and what is available. And we'll be back in 45 minutes. Please.

(Lunch break)

>> CHAIRWOMAN DIETRICH: Okay. Could I get the Commission members to take their seats, please? We're running way late at this point. And I would like to apologize to Mike for stepping into his time a little bit here with running so far behind.

>> SKIP STAHL: You want to wait a couple of minutes? I am thinking of audience for Mike's presentation.

>> CHAIRWOMAN DIETRICH: Well, the issue is it's already after 1:30.

>> JIM FRUCHTERMAN: And two people are missing aren't from RFB&D.

>> CHAIRWOMAN DIETRICH: We can't afford to wait if we're going to be close to sticking to our agenda, and we don't have wiggle room because of the public hearing.

>> DAVID BERTHIAUME: One more item. I heard from some of the folks who are listening online and got some feedback from people at the Department about that. Members absolutely have to speak into their mics or it's just not possible for folks who are listening to the streaming to pick up what's going on. So we will need Jim Fruchterman and other's able assistance with moving mics around. Thank you.

>> MIKE KURDZIEL: All set?

>> CHAIRWOMAN DIETRICH: We are.

>> MIKE KURDZIEL: Number one, you don't need to apologize for bringing me from the northeast to Florida.

(Laughter)

As Glinda know, we both live just right outside of Washington, D.C. Which I left last night, there was still ice on my deck, and there is still residual snow. So even though I am only here for a day, it's really nice to step outside and get that weather.

Hey, listen, what I wanted to do today, and I am going to talk about our programs. I am going to talk about our services. But I thought that it might be worthwhile just to step back for a second and talk to you about how we view ourselves as an organization. And what we're about. Just recently -- oh, Skip is trying to sabotage me here.

>> SKIP STAHL: Hang on just a second. There we are.

>> MIKE KURDZIEL: Okay. Thanks. And like I said, I just thought I would step back and talk you to about who we are as an organization. We recently got together with a lot of our folks, our Board members, some of our actual members and users. We pulled folks throughout the units. And we have 19 locations throughout the United States. We really wanted to step back and take a look at who we are and what we stand for. So I will do this quickly. But, you know, when we thought about it, and this is very recent, we said, you know, we're really about personal achievement, and that encompasses quite a bit. We're committed to helping

individuals grow and succeed academically by addressing the root of all learning, which is content distribution.

And just recently I was at one of our Board meetings, and Dr. Sally S. who some of you may know, she is on the Yale faculty, her and her husband were there and presented to us. They are specialist in special education learning disabilities. She said something that resonated with me. She said, "Human beings are born with the innate ability to speak. For several hundred thousand years humans have had the ability to speak."

age In historical terms, it's only recently we started writing, and really what writing is a way to convey the spoken word, and it's just another way to absorb content. It's also not something that's innate. Something that needs to be taught. Here is Andrew. Something that needs to be taught. It's something that people have to learn. So when we're talking about, you know, addressing the key problem, we really are talking about how we can address the ways that people acquire learning. And reading is one way to acquire learning. But just as valid, and I know Skip and a lot of folks have been involved with UDL, there are multiple ways that you can acquire knowledge. The trick is the real challenge is how do you get that knowledge? How do you score that knowledge?

And how are you able then to utilize that knowledge day to day and be successful?

So that's what we are about. I am not going to go through the whole thing. But the other thing that we said we wanted to do is we really wanted to work collaboratively with other organizations. But we also want to be able to build social communities, and our organization and his staff have done a lot of work. We are really doing things on Facebook. We're doing a lot of things to try to bring the communities together and develop that social networking so there is a sort after peer-to-peer support. So that's essentially what we are all about. Now I will get into the actual logistics of what we provide.

We serve, you know, by the end of the year we'll serve about 300,000 students throughout the United States. About 10% about 30,000 of those are postsecondary, and candidly that could be a conservative number because when people sign up for our services, if they sign up in junior year of high school or senior year of high school, they might list that. They don't update that information. It's not a required field. So a lot of the students that are seniors in high

school will take us with them as they go on to college. Stow we serve at least 30,000 students in postsecondary education, two-year and four-year colleges.

We're real pleased that over the past three, 3 1/2 years, we've delivered over 1 million copies from our libraries, we've distributed throughout the country, students who are qualified. And I will talk about that. We have about 65,000 titles in our library. And I know that's current because I just checked yesterday. If you go on our website, I think it's 64,000. But it's now up to 65,000. And of those, the vast majority, about 70% of them are textbooks. And, in particular, we specialize in the STEM books, the science, technology, engineering, and math books, because that really lends itself to the descriptive human voice and having folks actually read those descriptions to folks. A good percentage of those are postsecondary titles.

I don't have to tell anybody here that the proliferation of college titles is incredible. You know, the shelf life of college textbooks are relatively short compared to K-12. So we're constantly trying to add new textbooks to our mix. We've recently developed a new process where we're actually going to get pre-sales data, and we're going to get the data from a lot of the schools that are actual bookstores as most of you know about 75% of those are franchised out. So we're going to collect some pre-sales data to maybe get ahead of that curve so we can produce those textbooks that are most in demand.

We also serve 1,320 postsecondary educations. That's about, from what I am told about 25%. I think that the number that is used, I see different numbers. We're also starting an initiative now where we're actually going more proactively with some of the postsecondary. Right now we're serving about 25% of them.

>> TUCK TINSLEY: Say that number again, postsecondary students, there are how many?

>> MIKE KURDZIEL: Postsecondary students there are about 30,000 minimum.

>> TUCK TINSLEY: I mean the universe. You don't know the universe of the print disabled? You didn't say that, right?

>> MIKE KURDZIEL: No.

>> TUCK TINSLEY: Sorry, Mike. Sorry, Mike.

>> MIKE KURDZIEL: No problem. We have 13-20 institutions registered. About our membership. Thanks to a grant that's administered by the Department of Education Office of Special Education, Jo Ann McCann is the project manager. Glinda and I have worked together for quite awhile, we've able to offer to students, to individuals, free of charge our service. So if you are a student, whether you are K-12 all the way through postsecondary, we can offer you our services free of charge. And as you will see, we also provide the software so that you can use it. We do have a membership fee for institutions. Typically, and let me just back up for a second. We have 11 states that are currently under contract. And not counting counties, districts, we also have individual colleges.

The difference is that -- and let me take a typical state. What we do is we go in and we really tailor a solution. I am not just saying that. We go in and find out what it is that they need to make it work. One of the things that I know Andrew and I always say is, you know, it's one thing to have your organization committed to making the materials available. But it really doesn't benefit the student until it's actually down and integrated into the curriculum. So what we do with large state contracts, counties, or large institutions is we actually provide a tailored solution. We give them a project manager. We have folks that will actually sit down with them and say, "Okay, what are the classrooms that you are going to have this program integrated into?"

What books are you going to be using? How do you want us to go the training for the folks?"

Now more and more people are asking to us do web-based training. We have several states that what they do is they make their state educational network available to us because it's much more efficient for both the teachers as well as the school districts to be able to have live Webinars that are tailored using their networks, and then we record them for up to 30 days later folks can go in in case they missed that session. We'll develop an individual training program. We'll provide ongoing support to those schools. Just as importantly, we'll do tracking so that what we can do is we can find out, you know, are they being used? How are they being used in a classroom? What's teachers? What classrooms are using the books? So we do have that capability.

And we give them -- and this is a little ambiguous -- but we give them landing page. And what I mean is that we'll build

a state-specific state so that they can go into it. It will have all their contacts, videos on training, it will tell them where to get certification forms, and it's tailored to the state and updated with that information. So there is a charge associated with that but, again, that's because of the wide variety of services that are in addition to the program itself. How do you go about becoming a member? Let's talk about -- well, I can talk about both. But I will focus primarily on individuals.

We have online registration. So you can go right to our site. We just recently revamped our website, and we're in the process of continuing to update that website. We do have online registration so folks can go right to all of their material, all the information that they need, all of the qualifications, all of the forms that are available. When we're dealing with institutions, we provide to the teachers what we call backpack materials A letter to the parent that says, "Your child can qualify for the free membership."

And I think that's important because a couple of folks alluded to it this morning. It's one thing to have access to the textbook in the classroom. But I know in my daughter even starting in middle school they get voluminous projects. You need to be able to have access to do basic research. So, you know this way not only that but it gives them parity with their peers because my daughter can take her textbook home. But if you are using a school computer, you may not have access to that, or it may be limited, or you might have to go after school. So by having the free membership in conjunction with that, it gives them the same advantages. We also have telephone support. You know, by definition, the folks who qualify for our service struggle with print. They either can't see it, or they have a great deal of difficulty in interpreting them.

So while we have FAQs for the parents. While we have online support, at the end of the day we have 24/7 telephone support. So if the students are like me, when I was in college and 2:00 in the morning on a Friday, you don't want to find out that you can't download a textbook that you need for a test on Monday. So what do you need to qualify? And we have very strict standards that we enforce. You need to have a visual disability. And that's probably the most straightforward and needs to be identifiable. So you either have to be blind or visually impaired, or have a physical disability that would prevent you from holding a textbook or turning a page. Or have a print disability, a qualifying

print disability meaning that you are unable to process the printed word. Are you either not able to decipher it, or as most of you are familiar, and the major category in there is dyslexia, even if some of those students can read it, they spend so much time just decoding that they are unable to retain that information or make sense of it.

So those are the three categories that we serve.

Certification. A teacher can't certify you. A principal can't certify you. We respect the intellectual property of the publisher. So everything that we have has digital rights management embedded into it and folks need qualify for one of these things. So obviously for blindness, visual, impairment, BVI, who can certify you? A physician, ophthalmologist, a teacher of to students. By that I mean someone like we serve the Texas School for the Blind. These are teachers that specialize in blind. They are eligible to certify in terms of learning or perceptual disabilities, read that primarily as dyslexia, but it's not limited to that category. Disability service provider coordinator, neurologist. So you can see these are not just teachers.

These are folks who have to have the properly credentials to be able to certify that the student has difficulty decoding the printed word.

We also work closely, Betsy Boudreaux and Jim and all of us work together, Andrew, a number of us put together. We put together a joint certification. So if you are certified and go through the Bookshare certification process, you can qualify for our service and vice versa. And Betsy and I worked on that a little while ago. We also obviously honor anybody from National Library Service and visually impaired, NLS. So those folks, sometimes certification can be a involved process. So if you go through this process with one of the organization it is carries through to the other. That's what it takes to become certified.

Just real quick. This is what our current website -- unfortunately it's not interactive, but I just wanted to show that you we try to make it as user-friendly as we could. Heavy on the visuals. Fully compliant for folks with visual disabilities. You hit that membership button and it will take you to this representative page, how you go about getting membership, free software, how do you register, how do you get the application form. It's all right there. If there are any difficulties, we will back it up with 24/7 telephone support.

What do we provide? We provide, you know, a fully function DAISY format. We also provide a WMA which is a Windows format for someone who doesn't need all of the featured functionality that would be in the DAISY format. We provide it in a couple of different ways. For the DAISY, for the fully functioning DAISY, we provide it in a CD format. If you need it, we'll ship it you to and it ships courtesy of the U.S. Government free matter. So we'll ship that CD to you. Otherwise, for WMA for the MicroSoft compatible, that's downloadable. We also have a fully downloadable DAISY version. So you can download that. We use an outside external server to do that, one that apply as lot of music tunes, et cetera, because those books are big. They are 300 megabits on average.

So we have that capability and can download quickly. More and more people, particularly individuals, are using that download. It's a very quick and efficient way to get the material.

>> ANDREW FRIEDMAN: you got hook right there. You are done. He didn't like what you were saying.

(Laughter)

>> MIKE KURDZIEL: It can't be your e-mail.

>> SKIP STAHL: It just did it on its own.

>> MIKE KURDZIEL: So about the weather in Washington, let me tell you.

(Laughter)

Not only was it sleeting.

>> CHAIRWOMAN DIETRICH: While we're waiting, does anyone have any questions for Mike so far?

>> SKIP STAHL: microphone. So the people who are disconnected can hear you.

>> MARIA PALLANTE: I had a quick question about your certification process. So we had a discussion, a mini-discussion, in our legal task force about the frustrations of certifications that should be for life. But aren't as a practical matter, as a student might work their way from pre-K up to graduate school. So is your certification, does it expire? Is it once certified it's good? Does it depend?

>> MIKE KURDZIEL: That's a good question. If they are applying through the institution of colleges, you folks know that you will have to recertify. The colleges require that. And we're told we just had a forum with some parents, a lot

of the high schools and grade schools require parents every two or three years to re-certify. That's not our requirement it would depend on the institution. But if they are getting the material through the institution, then we need to comply with their certification process. So if are you going to postsecondary and they say in order to get the material you need to be certified, then you have to go through that certification. I don't know if that answered your question directly.

>> VICE CHAIRMAN WENDORF: Could I ask a follow up over here.

>> MIKE KURDZIEL: Sorry. I was trying to place it.

>> VICE CHAIRMAN WENDORF: About certification. Don't you list medical doctor for students with learning disabilities.

>> MIKE KURDZIEL: No, medical. Maybe I implied that, but, yeah, a medical doctor would do it for blind and visually impaired, and I guess a medical doctor could do it for learning disability.

>> VICE CHAIRMAN WENDORF: But you don't require that.

>> MIKE KURDZIEL: No, we don't. That's why I listed that they have to be someone that's specialized and recognized at a specialist.

All right. We were on the -- are you not allowed to touch this.

(Laughter)

>> SKIP STAHL: I won't even look at it.

>> MIKE KURDZIEL: Like I was starting to say, downloadable. If you don't need it fully functional, you can get it in a Windows format, or we have it in the fully functional DAISY.

It had me worried there for a second.

In terms of format, just to tell you how it's produced, and I think I am doing okay on time here. The only way that we can do this is we have over 6,000 volunteers that are located in 19 production studios around the country, and we're also going to virtual production studios. Any of you know with a good PC and good microphone and a quiet environment today you can record really first-class audio. But these 6,000 volunteers are subject matter experts. We match the people to what they can read. So, you know, I can read, you know, some basic stuff, but we have math teachers

that will read math or someone that's familiar with mathematics to be able to read a math textbook. We have attorneys that do law textbooks, nurses that do nursing textbooks.

These folks, like I said, are subject-matter experts. You know, as you probably already know, but the trick really is breaking the book down because not only do our volunteers record these books, but if you take a typical textbook, it has four major parts. And this goes all the way down to middle school now, and grade school. Unlike when I went and it was all text. Very few illustrations. Now what you have is a sidebar. So that sidebar will give you what I call gee-wiz facts, George Washington was the first President. And then you go to the book itself, the next side over, and there is text. That text is footnoted. So you have a footnote at the bottom of the page that refers to a particular passage in that book for the textbook. And then you have charts, diagrams, formats, right, and in a typical book there's between 500 and 1,000.

I am talking a textbook. You get some STEM books, that can be even higher. So what our volunteers do is they break that book down for the reader. So they say, "Here is when you do the sidebar, when it makes the most sense, relate it over here, when you hit this word, go down to the footnote, and then when you hit the math formula, we have a prescribed methodology on how they describe the math formula"

Unlike how I would describe it because I would reverse functions and you don't wind up with the same answer that way. But they actually know how to read the format in the right sequence.

And now he walked away and really -- oh, there we go. Our format is human voice. Today. And that obviously allows us to do a number of different things particularly when you are talking about descriptions of formulas and stuff in today's technology. But we also are developing and have developed text formats, all right? So that we're going to use text. And that will give us the capability to do synthetic voice, synthetic voice that we can actually alter some of the pronunciation on some of the more sophisticated voice programs, you can do that. It will allow us to combine text with human speech, text with synthetic speech, or augment either one, you know, as necessary. So that will give us a lot of capability. One of the things that we can do with our volunteers is they can actually instead of reading the description of the formula, they can type it in,

so that when they are coming back you can actually hear that formula written.

There seems to be a delay.

>> SKIP STAHL: Yep.

>> MIKE KURDZIEL: How do you play it back? We provide four individuals free software. So obviously if you have a Intel computer, if you are using the WMA, you can use the MicroSoft Media Player and play it back. You don't even need anything. We just recently entered into an agreement and partnership with GH who many of you know produce read hear software. That's a fully function DAISY software. We're providing that free. Right now we're the only one that provide it is free for the MAC OSX system. If you have a MAC computer, you can play it back. If you have an Intel-based computer you can play it back. We have passed the Apple certification. They've checked us out. Now it's a question of getting it launched officially.

We expect that to be done see soon. And what Am allows students to do is to play a fully functioning DAISY book on an iPad, iPad or iPhone. If you are a Apple-based MAC user, you can play it on your computer. And that's important because they are a school district. As am of you know, the entire State of Maine is Macintosh. Schools in Philadelphia are MAC based. We use the standard DAISY player. You can get them through us or commercially. We can give you a download key that will unlock it once you certify so that, you know, the content is still protected. We also work closely with the folks at NLS so that the NLS players are capable of playing our concept. And we recently began support of a MP3 player. So they're like \$50. So you can go out and use one of those if you can use a WMA format.

So we're trying to make -- the aim is to make it agnostic so that no matter what different device that you have, you will have access to this material. Because as technology keeps improving, you know, as you can see with the iPads and stuff, a lot of that technology is embedded in there. So we want to make our product, our content player agnostic. So if a student has something, they can use it the other thing honestly, and I have talked with students. I spend a lot of time talking with students in the field. Students don't like to self-identify. So to the extent that they can use some standard player, it makes it a lot easier for them.

Like I said, there is sleet and snow.

(Laughter)

We also support it -- and I alluded to this earlier. We have web-based training. We have FAQs. Web-based training, we're going with videos now so that people can click on it and use a video and see how to use the equipment. We have fax, e-mail, and we're cognizant of who we are serving. So we have a 24/7 telephone support.

This gives you time to pause.

(Laughter)

>> ANDREW FRIEDMAN: What did you load into this file?

>> MIKE KURDZIEL: I don't think it's my file.

>> SKIP STAHL: You can blame it on me.

(Pause)

>> MIKE KURDZIEL: This is just one of our support pages which is hardly worth the wait, but nonetheless, here it is.

(Laughter)

And it will just show that you we have pictures of the equipment. You can just click on that picture and go right to the equipment. I hesitate to say this because it's taking longer each time I do. You really have to get more than 256K memory.

(Laughter)

(Pause)

Anyway, if you had been able to see the next slide, but really what I wanted to show is that we have a number of organizations that we are partnering with. And we've worked with. We work with Bookshare. I am never going to remember all the ones that are up there. But that's okay you don't need to pull it up. But we've worked with Apple, Intel, with the Intel Reader, we've worked obviously George is heavily involved with the DAISY Consortium. There is another acronym that I forget with the international -- digital production -- and you will remember what it is, George.

>> GEORGE KERSCHER: IDPS.

>> MIKE KURDZIEL: Those are some of the ones off the top that we work with we're interested in working collaboratively. And we do provide and want to give every student the accessibility that they need.

>> CHAIRWOMAN DIETRICH: Thank you, Mike are there any questions?

>> MIKE KURDZIEL: There we go. There are the collaborations.

>> CHAIRWOMAN DIETRICH: Any questions from Commission members?

>> MIKE KURDZIEL: Why does it take so long for the slides to pop up?

>> CHAIRWOMAN DIETRICH: Good question. I believe you also have a demo for us, Mike?

>> MIKE KURDZIEL: Yes, I do.

>> VICE CHAIRMAN WENDORF: I do have a question.

>> CHAIRWOMAN DIETRICH: Sure.

>> VICE CHAIRMAN WENDORF: You know, you've made the case that your organization is all about maximizing the personal success, student success. And I am wondering, given what you just presented, what stands in your way in accelerating that success? In maximizing it either to greater numbers of students, especially in the postsecondary arena? What are the barriers that you see to maximizing student success in postsecondary given the solutions that you bring to them?

>> MIKE KURDZIEL: Part of it is the logistics, the number much books, what are there, 20,000 new books that are published each year, and somewhere in that vicinity, the number of textbooks. I mentioned earlier, that we have 6,000 volunteers. We're working our studios at virtually max capacities in most cases, and we have some that aren't, and we're consolidating them. So, first of all, there is a practical logistical matter of how much and how many volunteers can you have. The solution that we're working for is getting more electronic files. And publishers have been really helpful in that regard. To the extent that we can get the electronic files and make them readily available, it's much easier as you know to convert from an electronic format, and it gives as you greater degree of flexibility.

And the other thing honestly is the cost of the operation. I mean, we are a non-profit. We have substantial fundraising initiatives and efforts. But if there is one limitation, it's just how many resources are available for it I didn't know if you wanted to add anything.

>> ANDREW FRIEDMAN: Yeah.

>> MIKE KURDZIEL: as long as you don't use the slide.

>> ANDREW FRIEDMAN: You can click up four for me?

(Laughter)

I think, Mike, though, certainly for us, it's volunteers. I think that we're moving into a text-based model, which allows it to move a lot faster. The key becomes getting text files from the publishers. And that's not as easy as, "Hey, can we get your text file." So agreements with the publishers to get the text files and get them quickly in the right format. The other piece is to reach for people we are only allowed to reach the people who are certified. That's absolutely an issue for us because we can't reach people outside because we don't have the license rights to go out. And when are you talking about especially the LD population, there are issues in getting certified. People who don't want to get certified, and then especially once you get to college, you know, they don't want to go to the hassles of going through the offices, you know, again, they don't want to be called out as being special, which absolutely is an issue for us reaching everybody who wants what we've got.

>> MIKE KURDZIEL: That's the thing. And Andrew hit on an important point. In a lot of areas, okay, the schools, students just aren't getting certified. They have classified as a slow learner, or they just get moved to the side. And that's a big barrier, too, is just getting the students to be certified and to have the schools recognize that they have a student with a problem. Yeah, Tuck. Caught you with your mouthful.

>> TUCK TINSLEY: I have been eating the whole time. One thing you mentioned about -- you said 20,000 titles and so forth. One thing our task force is going to be dealing with, with the low-incidence, high-cost is wrapping our hands around some numbers. And I think that numbers and requests and so forth in defining that. But the best numbers we've heard recently for K-12 is, like 835 textbooks. And then 2,200 bundled titles, or supplementary books. So we're still talking about 3,000 titles a year. I have been saying, and we have been saying, 250,000 in postsecondary, and we've learned that's wrong. Bruce, can you share?

>> J. BRUCE HILDEBRAND: I think the best example is what [ACCESS TEXT NETWORK] already has, 352,000. And I have been using numbers for years, and it was provided by Balkor. And max came out with this 250,000 number, and people glommed on to it so like in this report that we brought for today was that, you know, the various sources say between 250-350. But we know that there are 352, because he already has them up on a line. And again, how many publishers have you got now?

11. So that only leaves depending on who you ask, 4-8,000 less.

>> TUCK TINSLEY: It will bode us well if we can come together on a number so that when we're talking to our constituent groups, I have been saying 3,000 to Congress pre-college level text. That's about right, 850 plus 2,200. But those numbers also as far as the number of students that you serve, I apologize if I missed it, but what you see is the population, and then the percentage of that population that is visually impaired. Can you give me some numbers on that?

>> MIKE KURDZIEL: Of the total, and I am doing this off the top of my head, but I am within a percent or two, 26% of our students are blind, visually impaired, physically disabled, or a combination of the two, primarily BVI. I think that's close. 70-some percent of them are students with learning disabilities, qualified learning disabilities.

>> TUCK TINSLEY: Thank you.

>> MIKE KURDZIEL: You are welcome. I do agree. We need to -- I alluded to it earlier, but one of the things that we're do something taking a look at getting pre-sale data so that we can begin to anticipate where some of these books are going to be. As I said, some of the grade schools, those textbooks stay around forever.

>> TUCK TINSLEY: Mike, when you said 20,000 title as year, that's basically --

>> MIKE KURDZIEL: I didn't say 20,000.

>> ANDREW FRIEDMAN: If we were doing 20,000 titles a year, it would be in better shape.

>> TUCK TINSLEY: 20,000 titles come out every year new.

>> MIKE KURDZIEL: That's everything.

>> TUCK TINSLEY: Where does that come from? Pre-K? Is it a mix of --

>> ANDREW FRIEDMAN: I am not sure.

>> MIKE KURDZIEL: I think that it takes into account all books being published, and not necessarily everything.

>> TUCK TINSLEY: That's not true if there are 350,000 new postsecondary books a year. And are you saying per year, right, Bruce?

>> MIKE KURDZIEL: 350,000?

>> J. BRUCE HILDEBRAND: Ask the question again, Tuck.

>> TUCK TINSLEY: If this isn't true, 350,000 new titles?

>> J. BRUCE HILDEBRAND: That's the universe on sale in bookstores now nationwide.

>> TUCK TINSLEY: Now how many new per year?

>> J. BRUCE HILDEBRAND: That's in the category of textbooks. Where it really gets off the rails is when you get beyond that and you note supplement, and your digital supplements are expanded exponentially in some areas. So there is an issue. And then you've got, you know, what do you do with things like the sun also rises and all of your trades? And then you've got your anthology extensions as some people call them where you would think of the Norton anthology of literature but now they have other growing segments because where you and I got the Norton anthology and it was that big and that thick (indicating) and literally black and white and no illustrations in it, now so many of it is linked directly. So are you talking about how the theater looked in the day of Shakespeare, well it's got a link on it. Bingo. You are reading along either digitally or in print and you've pulled it up or called it up, and now you have a video and a walk through Shakespeare's theater. I mean, it's just getting exponentially more difficult. I really don't know how we all are going to handle that.

>> TUCK TINSLEY: So we're still saying 3,000 pre-K new titles each year? That's what we're saying. But when you talk about instructional materials, we have to get a number on new per year. I am just talking to the wall. I think that we need to get our hands around some sort of number.

>> J. BRUCE HILDEBRAND: He is trying to get the number for you.

>> TUCK TINSLEY: That would be helpful. I have been telling people it's 100 times the number of books that we have in K-12. And that's not true. So do you agree that we need to know about what we are talking about as far as how big they are? Because if we're going to find low-cost, low-incidence high-cost, we have to have a feel for the number. That was the thing with NIMAC. We had to get a handle on it Jim, remember when we were talking about 300,000 new title as year, and we got AP involved, and they confirmed that in Orlando. It scared me. Because then they said 850, but then they added on the 2,200 additional books. Okay. Thanks.

>> MIKE KURDZIEL: Regardless of the number, what we need is a quick and efficient way to get access to the electronic format so that we can produce as many as possible, and serve

as many students, and that we can couple that with the mandate that helps. Are there any other questions? I will give Psalm will. Unfortunately we don't have a STEM book on here, but this is an example of human voice reading.

>> ANDREW FRIEDMAN: Why don't you actually frame it, because George has asked the question this is the new Apple app.

>> My order were concise with overtones. Report to the OSS. With the inspiring words of the commanding officer in Louisiana, never mind what I told you to do, you do what I tell you to do. Still ringing in my ears, I flew to our nation's capitol, found the problem --

>> ANDREW FRIEDMAN: Why don't you actually -- because I think what's more important here is especially given some of the conversation early on is that you look at what the navigation looks like. So there is full page-level navigation. There is full chapter-level navigation. You can fast-forward to a page. You can back to a page. You can bookmark a page so it will come back and forth which is very different than everything else that we were kind of talking about. So it gives you full navigation through the book because there is the metadata that is attached to the page, and at the chapter level so that you've got that level. The other thing that you've got which is less important for that product is the ability to go large print. So because it's a Apple you can just increase the size or decrease the size.

But you always hold your page. So that everything continues to hold together.

The other thing that you can do is increase speed so that Mike just had that at normal speed. But you can move it out to four times the speed of the voice, which is anybody who actually uses the product they don't listen at the exact speed that somebody talks at because it's a bit on the slow side. So it's now a full Apple product that gives you that level of navigation and literally touch the screen. It's also got voice-over capabilities, and it's been tested by NFB from a blind standpoint so that you turn on your accessibility, and it has voice-over capability and it's fully accessible for the BVI community as well.

>> MIKE KURDZIEL: That's an important point. Featured functionality, and there is a full suite of featured functionality. Which makes it usable for a student who needs that.

>> ANDREW FRIEDMAN: So that's going to generate -- generation one. Generation two is hard to see. That will be two level of having text as well as voice so that you will actually see -- it will highlight as you move along. That's in beta. Right now we've got 1,500 books ready to roll through. Getting volunteers trained to get them through is the problem.

>> Background information on the practice --

>> ANDREW FRIEDMAN: If you want to hold it up, you can actually see it it's highlighting as you go.

(Demonstration)

So it's the exact same navigation, except now you have text and highlighting as you with moving. The other piece that we are working on is developing a software that will actually allow univoice to sync over. So you have human sync-to-text as well.

>> MIKE KURDZIEL: Real quick, and it's non sequitur, that was a practice test. But you think the security is tight on that. When we got an advanced copy of the one series of books, what the heck was it? I am trying to think of the name of that one book that we got an advanced book by Harry Potter. The security on Harry Potter was -- made that look like --

(Laughter)

>> GLINDA HILL: This is a national teacher consortium.

>> MIKE KURDZIEL: We do some of those recordings, too. Well, thank you very much, folks. I appreciate your attention.

>> CHAIRWOMAN DIETRICH: Thank you, Mike.

(Applause)

So, again, I would like to thank Mike for coming. I also wanted to point out to the Commission -- is this one on? Oh, yeah, this one is on. I wanted to point out to the Commission that the choice of who to actually have come testify before the Commission is actually based on Commissioners' recommendations. So if you have the feeling of, "Wow, why these people and why not some other people," tell us who you would like to hear. Now, given that there were other people we wanted to invite to this meeting and decided that the time was too short, and we'll have them come in May, but, still, the point is that if you have individuals or groups who you feel like would -- the

Commission would benefit from hearing, please let us know, specifically let Dave know and Skip know as soon as possible because it does take a long time to schedule and, you know, all of that sort of thing, arrange their travel.

So how are we doing?

>> VICE CHAIRMAN WENDORF: We're run being 15 minutes behind. But Jim will make it up.

>> CHAIRWOMAN DIETRICH: Jim will make it up. Jim, you're on.

>> TUCK TINSLEY: Jim you're off. That was quick!

>> JIM FRUCHTERMAN: Okay this one is working. So what we're doing is we're picking up from where we left off before lunch, and before the presentations. And here is what the game plan is I believe that we had not completely responded to some of Maria's questions, and that was sort of where we left. So I want to make sure that we get a chance for that. And then what I am hoping to do is to go back to the recommendations and get feedback from the Commission on so how close are we on these? Which ones are ones that the task force needs to go back and re-examine? And if we can get some kind of consensus direction from the Commission as a whole that would be terrific. That's my goal for the rest of this section. And I think that the task force has other things to do beyond these nine in terms of the charge.

And that will be part of our task force will also be sort of working with the Chairs and Dave to figure out what else is on our list. But that's really my objective for today.

So, Maria, will you be comfortable sort of re-framing based on the partial answer that you got, what you would like to hear more about, or do you want me to try to state what I heard?

>> MARIA PALLANTE: I will restate it.

>> JIM FRUCHTERMAN: Use the mic, please.

>> MARIA PALLANTE: Sorry. Thank you, Jim. So this morning as I was listening to the conversation, I heard a theme emerge. I heard George say students, faculty, private citizens, book publishers, whoever they are, everybody should be creating accessible works from the start. So I took, you know, that means teenagers should be uploading accessible lyrics when they are writing on their Facebook accounts, and professors should be uploading dissertations that are accessible. Everything. It's not just a textbook publishing industry issue. I heard Stephan saying we need to stop

focusing only on textbooks because instructional material is broader than that and I heard Lizanne say after sophomore year it's really not about books, or particular kinds of textbooks.

So extrapolating from that and listening to the Federated search entity point that you raised, it may just be that I need more -- it's all about the details. So I can see the value in a Federated search entity for textbooks because although it could be a big market it's still a finite market. Where I got lost is how that could possibly work on a free and Democratic Internet that can't really be regulated even if we wanted to in terms of ensuring that nothing can get on to the Internet unless it has a particular kind of accessibility standard that's been met. So I was trying to figure out how we're not recreating the Internet by suggesting that we need a particular kind of entity that's going to basically return to students a list of finite materials which, to me is not the higher ed experience.

So if they're doing real research, and they're putting together a bibliography, it's not that we want them to get sent to a place where there is a finite bibliography of accessible materials waiting for them. We want them to be able to go out and get whatever they want whenever they want it, and it ideally would all be accessible. So what I was trying to get at is if the metadata standards worked, whether it was partially regulatory, or entirely voluntary, best practice that emerged in everything from textbooks to motion pictures so that a student who is a journalism student who is looking at media issues for research paper can go out and find blogs and they are all accessible, and it has nothing to do with the textbook industry, I am trying to figure out if the metadata was setup properly, and I think that it's a combination of education and technical standards, and products that have those standards kind of embedded in them so that even if you are not -- you don't realize what you are doing, there is some kind of standard in place that you really can't upload something without something ensuring that it's accessible, if you are doing all of that, then I guess I really don't understand the Federated search entity beyond the textbook world where it makes some sense to me.

I don't know if that was helpful, but that's where I was.

>> JIM FRUCHTERMAN: So I will try to channel what I think I have heard so far from our task force and some of the things that we've discovered. So I think that we're all clear that Federated search when it comes to books has

benefits, right? And we saw access text at work demonstrating a Federated search capability, there is a lot of demand for that and so now let's go from the narrowest to the most general, right? So at the other end, I think that are you saying everything on the Internet should be accessible, but it isn't. Are we really going to regulate that? And I think that the answer to that is probably no. So the question is, what else is in between those two extremes of trying to make books in higher ed and making sort of generalized content on the Internet fully accessible?

I think that we've talked about this repository question comes up not just for books, but it comes up for other sorts of things in educational materials. We heard about tactile graphics. We've heard about image descriptions to make images that are inaccessible accessible. I know that talking to people in the DSS offices that they are often trying to make essentially video accessible to students, and in all of these cases we have the issue of duplication of effort, the same content maybe required for an educational purpose because this particular video is assigned to all first-year students who are doing, you know, filmography, or whatever the issue might be, so they have to access it. So I think that what we have to do is sort of say, all right, we want to come up with metadata standards to make it easier to find out whether something is or is not accessible.

And we'll probably stick to those things that are clearly attached to higher ed as opposed to CNN.com which we probably don't have much regulatory club on through this Commission's actions. But when we're talking about people delivering courseware, delivering actual content intended for this field, these are things that we might both recommend these metadata standards have some regulatory clubs because of the focus on this particular area. And might have some desire for Federated search. So I would say that's as far as it can go.

>> J. BRUCE HILDEBRAND: I have a question. Can I have a mic, please?

When talking about the search, the example that you used, okay, XYZ college or University, and they've got a filmology course and they have to watch a video that the faculty member or the department came up that is an exemplar of some kind. How would we ever reach a point that the specific materials used in an individual class and or individual college would somehow wind up as part of Federated search? How would we track that down? Gaeir, are you all pursuing or stopping

providing videos of so many of your lectures now because that's become a problem for legal liability?

>> CHAIRWOMAN DIETRICH: It depends on the campus. But what a lot of our campuses --

>> J. BRUCE HILDEBRAND: Here you go, Gaeir. Let's make it easy.

>> CHAIRWOMAN DIETRICH: It was working before.

Some of the campuses what they are doing is actually requiring that only captioned videos be purchased. That's what some the colleges are doing. Other of our colleges are allowing any videos to be purchased, however, the only -- they did not show them until they've been captioned. So in terms of are they using fewer videos, I would say at this point in time they are probably purchasing fewer videos, and that's because of the budget, and because they just don't have as much money to do both videos and the captions.

>> J. BRUCE HILDEBRAND: I didn't pose the question very well because there is a system now on campuses where they are recording -- the campus is paying a service, a company, if you will. There are several vendors out there, and they record hundreds or thousands of lectures on the actual classrooms on the campus.

>> CHAIRWOMAN DIETRICH: You are talking about the podcast sort of model.

>> J. BRUCE HILDEBRAND: I understand there is restraint on that now because it creates OCR problems; is that right?

>> CHAIRWOMAN DIETRICH: You have to understand that California is a little bit different from other states because California has a state law that actually applies Section 508 standards to all California state entities, both -- I shouldn't say all of them. But to the California community colleges and the CSUs. And so we are not legally in compliance if we post anything on to the Internet that is not accessible, and that very much applies to podcasts. And that is why the CSUs worked with Apple so hard to work for accessible with iTunes U. Now, the UCs don't fall under that same law, and they are not paying the attention that the CSUs are and the UCs are. But we are not in compliance, we can be held legally liable if we put up something that's not accessible.

>> J. BRUCE HILDEBRAND: I am trying to figure out how we can have this massive number and kinds of materials that are being developed on campus. 18 went to the University of

Illinois, and I came away somewhat awed. The range and material that they are producing, and how would we ever get something like that on any search?

>> CHAIRWOMAN DIETRICH: Well, yeah, and I think that's one of the reasons why in my mind at least what we were talking about with the Federated search would be specifically the major textbook providers, and not that we were searching for everything on the Internet, but we were searching those providers for those titles because we know that they've got them in a format that we can quickly either make accessible or they are already ready to go. But in terms of a strategy, I don't know how far down this rabbit hole we want to get, but we could look at asking George Ward who worked with the digital marketplace at the CSUs, and they were actually working on a metadata structure where they were planning on having what they called a digital marketplace where anybody across the country could log in and see based on accessibility features what was available in terms of learning objects for courseware management systems, open educational repositories, for all of these things.

That got sidelined when the California budget tanked, but the model is there, and it was actually a couple of years' work was put into that model.

>> J. BRUCE HILDEBRAND: So, if [ACCESS TEXT NETWORK]'s already got 90% there, 75% there, why do we want to reinvent this wheel?

>> CHAIRWOMAN DIETRICH: So let me ask you. How important is the fact that as Lizanne stated earlier that those books mostly are used in the first two years?

>> J. BRUCE HILDEBRAND: I thought we just sort of reached a point that when I taught at Harvard I used a course pack. Okay? It was never going to get -- if I had to make it accessible back then, we would sure have been in big trouble.

>> CHAIRWOMAN DIETRICH: That's why we're in trouble now, Bruce.

(Laughter)

>> J. BRUCE HILDEBRAND: But the point is that I would never wind up in a search because it was changing constantly. It was talking about use of media and political campaigns. And I constantly changed examples every year.

>> CHAIRWOMAN DIETRICH: I think that we're doing apples and oranges here. And George had the floor.

>> JIM FRUCHTERMAN: We're doing back and forth. We need to rotate. George had his hand up, Peter did, there may be other folks. But let's expand this back.

>> CHAIRWOMAN DIETRICH: Pleat make one point before we leave this which is what you are seeing presented today from the technology task force, we're not done. We're going to go back and we're going to be working on other things as well what we're presenting today are those point where's we felt like we had consensus. That doesn't mean that there is not more work to do so I want to be clear on that.

>> JIM FRUCHTERMAN: George?

>> GEORGE KERSCHER: Okay. So I think that books are the backbone of a lot of education. And having a Federated search that identifies accessible versions of the backbone of education, if you buy that, is absolutely essential. The other thing is I think that we're -- one focus is published materials. Whether it came out of the publishing industry and is sitting there in the metadata is one thing, but there are other published materials. And I think that in order to, you know, maybe we can help influence this if we can help elevate the importance of metadata to people that are self-publishing, corporations that are publishing, and professors that are publishing, that would help us to find this stuff on an internet -- in an internet search.

>> JIM FRUCHTERMAN: Great. Peter?

>> PETER GIVLER:

>> JIM FRUCHTERMAN: And then Lizanne.

>> PETER GIVLER: If I can go back to something and make sure think that understand something that Gaeir said -- or not make sure, but try to understand what Gaeir said. When you were talking about the California State system, I did understand you to say that the Universities that are part of the systems aren't bound by then the same regs that state colleges and community colleges are? And if that's true, you could expand on that a little?

>> CHAIRWOMAN DIETRICH: That's specifically in relation to this one law. Well, it's actually two laws, one that applies to the CCCs, and one that applies to the CSUs. And what they do is they say that the 508 standards will apply to us. The UCs are not -- they did not have their own bill written for them saying that it would apply to them. But that being said, they're also trying to voluntarily come into compliance because they don't really want to have legislation written just for them saying that they must comply. And so

we essentially have to follow the 508 standards in their entirety. One of which is that any video that is part of the mission of the college has to be captioned. So -- and captioning was the question.

So, yeah, we did have to do it.

>> LIZANNE DeSTEFANO: Is there somebody before me, Jim?

>> JIM FRUCHTERMAN: No you are next.

>> LIZANNE DeSTEFANO: There is another leverage point here. You probably heard about MIT open courseware where they're putting all of their course material and making them available. And many other universities are going into that, particularly in the STEM area. And I looked at those offerings not from an accessibility viewpoint, but from just a format and quality, and they're kind of all over the place. But, again, if we're talking about a model demonstration, it might be nice to pick one of those, a really high-quality one, in the STEM area and say what would it take to put the metadata on there and to make those materials accessible? I am part of a project right now that's between MIT, Georgia Tech, and Illinois, and it's creating a -- and 12 other universities, Berkeley and, you know, very, very high-quality STEM universities.

And it's called the Graduate Teaching Consortium. And it's putting together graduate course work in very, very leading-edge areas so that students at Universities that might not have that level of STEM research could actually have access to this courseware. So that would be a great place to say, okay, then how can we make these available to students with reading needs? So that might be one place to take a look at how you can capture a lot of data, or a lot of course material in a fairly easy way.

>> CHAIRWOMAN DIETRICH: And just as a little plug since we are supposed to be considering universal design on all of this I think captioning is one of the best examples that I know of of universal design because once you put those captions on there, it is now searchable. Because now you have text associated with that video. You can't search video. But you can search the text. And so there are lots of really big advantages to actually doing that.

>> JIM FRUCHTERMAN: Sounds great. Okay, so Maria, I guess the question is, do you have any other remaining questions that? I thought there was one more that had you that we wanted to touch on, but I didn't remember what it was.

>> MARIA PALLANTE: This is what I think.

>> JIM FRUCHTERMAN: Okay, let's get the mic.

>> MARIA PALLANTE: I started the entire discussion this morning by saying that your recommendation pertains to all materials. So if it pertains to all materials, then I am confused because I don't see how we can regulate the Internet. What I just heard is that what we really need are books. So I think I hear you wanting really badly to say that we have a point of consensus, and this is perhaps my training and we're thinking very differently about this, I see that we agree on a goal. But until we know exactly what's on the table, I guess I honestly don't see the point of consensus, other than we all agree on the goal and we think that have arrived at the point that we really mean books. Which I think is another way of saying that we're really focused at least on the first two years of college to get some kind of better system.

>> JIM FRUCHTERMAN: So I think that we clearly --

>> MARIA PALLANTE: I am not trying to spoil the party.

>> JIM FRUCHTERMAN: I think we clearly have consensus on books. And then we have more questions about should we do more things in graphics, and video, and that's a question that comes back to our task force. So, yeah, our goal here is to see how far we can push these things.

>> CHAIRWOMAN DIETRICH: And I would say that the focus on textbooks is only on the Federated search.

>> GEORGE KERSCHER: And it's not just textbooks, but it's books.

>> CHAIRWOMAN DIETRICH: Sorry, books, yes, books.

>> PETER GIVLER: I'm sorry, I can jump in?

>> JIM FRUCHTERMAN: Yes, please.

>> PETER GIVLER: I am not so sure that we want -- well, we could but I am not so sure that if we're going to talk about postsecondary education and include the universities in that, that we can really limit it to books. We're talking about journal literature, too.

>> GEORGE KERSCHER: Yeah.

>> PETER GIVLER: I just want to make that point. I mean, are we agreed on that, that it is both books and journals?

>> ANDREW FRIEDMAN: I am going to overcomplicate this again. Part of what we're do something to say, hey, don't limit ourselves. The book is defined now, and it will be gone in two years. So what is a book? Is it a chapter? Is it a whole book? Because the whole model is going a chapter at time. Is that still a book? I think that we have to be really careful in not narrowing something down for something that doesn't exist anymore.

>> PETER GIVLER: Printed materials.

>> ANDREW FRIEDMAN: So I think that we all agree that we need something within Federated search. It's a huge need out there. We've got to better define what that needs to look like over the next month or so.

>> VICE CHAIRMAN WENDORF: Jim, do you have enough from this discussion to take this back to the task force for follow up?

>> JIM FRUCHTERMAN: I think what we're do something we're trying to I think finalize our discussion this morning and clarify things. What were we talking about? What are the issues? Get some stuff on the table. I think what we're now going to do is go around and see, all right, you know, where else do we have work to do? So we've ended up sort of starting the second half of the conversation by saying how far does this take? Because this has all accessible materials, or accessible materials, and Maria is saying, well, that's pretty big. So now we have -- I mean, what do we have today -- I'm sorry, I'm not using the microphone.

What do we have today? We have LOUIS. We have the union catalogue at the NLS. We have access text. Bookshare. Support searching other repositories including the NIMAC. We are all doing pieces of this Federated search thing because our users are asking us for it because users hate going to 10 places to try to find the one thing that they're trying to find. And, you know, why is Amazon such a killer, you know, eBook -- book retailer? It's because you find what you are looking for going there. That's why consumers like that. So we have a consumer demand. We know how to deal in books, and a lot of us are implementing different pieces of it. We have a question from Congress saying should we have a repository? And we said no, as long as you can find the 50 places that all of the stuff that are you looking for happen to be.

And when it comes to books, that's achievable technically. We know how to do that. And the other issue, which I don't think is settles, is we have this moving target is our accessibility challenges are bigger than books. It's

multimedia, it's video, it's journal articles, it's federal news. I mean, it's like all of this sort of stuff.

>> CHAIRWOMAN DIETRICH: Libraries.

>> JIM FRUCHTERMAN: Yeah. So I think that -- I hope we're pretty close on books. And then we'll try to figure out and go beyond that.

So, Jim, you ready to go to the next phase? Do you have one more question on this topic?

>> VICE CHAIRMAN WENDORF: No, I will hold go to the next phase.

>> JIM FRUCHTERMAN: Oh, I can't wait for that.

So these were nine points that we had rough consensus on. We brought them back to the Commission. And, of course, the hope is that we're going to go through the same things with the other task forces, legal tomorrow, and the other two task force at our next meeting. And so the thing is that there's a lot more to technology than these nine. So partly what I want to do is to figure out which one of these things are we done, or are we done close enough that these will be, let's say, resources to be drawn upon for drafting of the final report, right? And I think that the answer is that there are points in this list that are done, and there are points in this list that are not done. So what I am trying to do now is identify what they are. Try to come up with a pretty good idea of what it would take to make them done so that we can then go on and tackle the next six or 10 things.

So, Stephan?

>> STEPHAN HAMLIN-SMITH: When I was highlighting as we were going through this morning, one thing where I think that we are not done is in the number 5, which is the last of the ones dealing with file format. And it was recommended that what I heard was, I heard that there is agreement on that conceptually, but there was a desire for us to reframe that in a functional model like we did numbers 2 and 3. And so I had that all highlighted in yellow. So I am assuming that we need to -- it sounded like people agreed with those items, you know, barring a little wordsmithing, except that number 5 that we need to reshape.

>> JIM FRUCHTERMAN: So from a process standpoint, I actually want to give everyone a crack at each of the items. I agree with you. But let's hold that conversation until we get to number 5, and then try to take away exactly what you described. If everyone said, yes, do what he said, then we

would be on our way. So actually I want to just go back through the 9 and try to identify, you know, which ones we're done with, and which ones we have issues around and identify the key issues that people think are still outstanding from that conversation. So I think that the first one is do we recommend the establishment of a NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD]-style standard in postsecondary? And the task force's recommendation was no.

So my question is. Is there anyone here who says, "Hang on a second. We really should have still on the table a recommendation of a specific file format for accessibility and in higher ed?"

Not hearing anyone object. We've got 1 done!

(Cheers and applause)

In item number 2, you know, I would divide this into sort of several different pieces, right? One piece says that we're not recommending for or against specific file formats. We're recommending a functional kind of solution that Stephan had drafted, and I think that a lot of people liked. This morning I heard a couple of different issues. I heard Bruce talk about acceptability versus suitability. I think there is an item of some conversation that's probably good to have right now. And the second question was what if essentially the source document or the print document doesn't have page numbers or doesn't have structure? Do we require that to be in there? And I think that we have consensus, and the answer is, no, and we're following the example of what happened in NIMAS [NATIONAL INSTRUCTIONAL MATERIALS ACCESSIBILITY STANDARD] which is you know, if it exists in the book and the product that the non-disabled student is getting then it should be replicated, but if not then it should not.

There may be other issues on that

Bruce, why don't you take this opportunity to accept about acceptability versus suitability, because for you it's a marker of big issue for the Commission.

>> J. BRUCE HILDEBRAND: It's not huge marker issue. Nobody has been injured here yet.

(Laughter)

>> GEORGE KERSCHER: Yet.

>> J. BRUCE HILDEBRAND: Yeah. Acceptability sets a standard. Is it suitable for this use or is it acceptable?

Frankly it's a word that my wordsmith guy, me, doesn't really think is appropriate. Who says it's acceptable? Let's make sure that it's suitable. Let's make sure that it works. It goes to that thought is that there are people who say, "But you've got to have this format for whatever X."

And you go, "Does it work or does it not work? If it works and the student is able to read, absorb, and use the materials effectively, then it's fine. We don't have to specify as a Commission or any other way if it works."

And part of the discussion today was about the emerging eReaders from course smart and many others. Well, they're not -- the e-reader you would specify today, but how many of these are there going to be out there within the next six months or a year? I don't have any idea.

Nobody here does.

They're growing exponentially. Let's just say "suitable." The other thing that we agreed, to the only thing was page numbers were not available. And then properly structured information presented in a tab table format. Do you have any suggestion on that, George? Because that dog does not hunt.

>> GEORGE KERSCHER: If it's tabular data, then it's tagged properly. Headings were appropriate.

>> JIM FRUCHTERMAN: Sorry.

I was taking notes rather than moving the mic.

>> GEORGE KERSCHER: So this one relates specifically to tables. And it's not the presentation of all of the information on a page in a table. It's when you have tabular data, that it's presented in a table. That's really straightforward. It's just a data format. You know, it's like a paragraph, except this is table. The problem is that many old web pages were all tables. The whole page was presented in a table. Many old publishing forms had the whole page as a table. You know, 70,000 cells of this page. And it was for layout purposes. We're saying put tabular data in the table, and that's it. That's it. That's all.

>> JIM FRUCHTERMAN: Okay.

>> J. BRUCE HILDEBRAND: What we've got here is a suggestion. See this if this works for a language. Reasonable tagging for structure and navigation. Bingo! That was one of the tech people that recommended that. Reasonable tagging for structure and navigation. Would that get it, George?

>> GEORGE KERSCHER: You're trying to capture the semantics. Headings should be tagged with headings, and so on. The structure falls out of what is meant in this spot, the meaning, the actual semantics. And your navigation, your reading -- so DAISY-like navigation is a requirement in the new EPUB spec, EPUB navigation. And you should be able to walk your source file and just pull out all of that navigation by identifying --

>> J. BRUCE HILDEBRAND: Give me some language, George.

>> JIM FRUCHTERMAN: We're not at language. We can take away that we can fix the table issue. That's a acceptable outcome for today.

>> J. BRUCE HILDEBRAND: Okay.

>> JIM FRUCHTERMAN: And I will look to George for something.

>> GEORGE KERSCHER: I will find language for you for the semantics, for proper semantic tagging in the document. I mean, that's what even in PDF tags, that's tagging headings as headings.

>> J. BRUCE HILDEBRAND: This says reasonable tagging for structure and navigation. I don't know if that fits this bill well enough for you, George. Do you want to refine that further? I am going to give you a copy of this document. I am going to e-mail it to you so that you will see what they wrote, and then you will know, okay?

>> GEORGE KERSCHER: Right. But navigation is a separate issue from the tagging itself. Because navigation is laid on top of a document. So you can go through it quickly and easily.

>> JIM FRUCHTERMAN: Stephan, did you have your hand up?

>> STEPHAN HAMLIN-SMITH: Not now.

>> JIM FRUCHTERMAN: You were pointing me that way. Okay. Okay. So if we go to suitability, I think these will become conversations when we write more directive things. I don't think that we're doing that at this point. So I think that we've got a good starting point for this

Are there any other comments on proposal number 2? Maria? Please get a mic there.

>> MARIA PALLANTE: I think this is something to drill down on in the weeks to come. But I think this could be distinguished further in terms of borne digital works priority. Older works, it's a goal with cost considerations.

And everything in between. But I don't think that -- even if we're just talking about books, I don't think that you can treat them all the same.

>> JIM FRUCHTERMAN: What I will do is take that as an additional recommendation on that issue, the sort of borne digital, retrofitting, cost issue, because I think that it's a significant topic that deserves its own. So we'll take that away as a directive to the task force to come up with something on that topic.

>> J. BRUCE HILDEBRAND: One more item is the 6th bullet is brief descriptive text for images, charts, and graphs.

>> JIM FRUCHTERMAN: Those are two separate things.

>> J. BRUCE HILDEBRAND: Okay. But the logical reading order, I spent a lot of time at lunch talking to people who really are smart on this. And they say that it's a post-production problem, and the cost and the speed of which it might get done could actually impact the delivery of -- who decides what logical reading order?

But the problem is with Adobe. And Adobe has not changed their software to enable the publisher to do this. And until Adobe, which is being encouraged to do this, makes that change, then I don't care whether you are the publisher or post-production or anybody else, we've got a problem. And the publishers can't change that at this time. So we're all on the same sticky wicked together. So if you put this in here at this time are going to raise prices, and slow it down a lot. That was the consensus I've got. And I've got people behind here that understand this issue better than I do. But this is not something that we can just write down and it's going to happen.

>> GEORGE KERSCHER: So Adobe is clearly a problem child in their authoring process because they are focused so much on print. And I don't know when creative suite going to be changing any time soon. But I do think that this is an issue that's going to need to be solved quickly by the publishing community for any of the things you want to publish digitally because the reading order is necessary for any of the reading systems that are out there. You know, whether it's the iPhone or the iPad or whatever device, whether it's a Nook, all of these things require direct reading order when you do a -- when you open your Kindle book you've got location. And each one of those locations are numbered sequentially in the title. So you are going to have to figure it out for --

>> J. BRUCE HILDEBRAND: That's nice, George. There is a great deal of debate on this, as I understand, trying to get it done. But it's not happening at this moment, and it's not something that the publishers have under their control. And that's a reality. This is a chain here, and we don't control that link in the chain. So until we can get that link changed, this is going to be a post-production --

>> GEORGE KERSCHER: This is the same requirement that Apple has -- browse Bruce fine, George. You call Adobe tomorrow and get it fixed. Okay?

>> TUCK TINSLEY: I don't care if it's Adobe or who the problem is if we're making recommendations as a Commission, it isn't situation-specific right now. This is what you want. How can you ever say that we're recommending a non-logical reading order or not take that into consideration when we're trying to get materials to kid.

>> ANDREW FRIEDMAN: Bruce, are you holding that it only has to be done by the publishers only it doesn't. That's part of the beauty of the Commission is whether it has to be a change before it gets to the publisher, well, that's fine.

>> J. BRUCE HILDEBRAND: The way they work their way around it and this document, I will try to distribute later, is in addition, if we would recommend the creation of open-source tools or guidelines that would be useful to publishers and other content producers, producers of courseware management systems, yada, yada, yada, to inspect materials. They're saying let's get the whole group in here, and we're doing what you are saying, is let's get everybody on board here. Does that work, Tuck?

>> TUCK TINSLEY: Yes.

>> J. BRUCE HILDEBRAND: I will send that language as a recommendation.

>> JIM FRUCHTERMAN: Okay. So we are getting ready to move on to number 3. Bruce just read it allowed. This is the automated tools, and this is simply an investment recommendation to make it easier to view successful materials. Do we have any questions or issues around this clarification from this morning that people felt that we should have captured in this recommendation?

>> GEORGE KERSCHER: I think it should be for all published materials. So these EPUB check-like DAISY validation tools should be generally available as open source for publishers, not just in the disability community.

>> CHAIRWOMAN DIETRICH: And I am thinking of this beyond publishers in terms of we are looking a lot of courseware management systems out there, and even though you can have a perfectly accessible shell, the instructor is quite capable of uploading a graphic PDF that's not accessible. So having a wizard that came up and prompted you and said, "You know, this doesn't have an alt-tag, you have an image without an alt-tag, you need to either make this into text or create an alt-tag." Something like that Moodle, the courseware management system Moodle has a plug-in that will not allow you to upload anything without an alt-tag. That's the thing I was thinking of when we talked about this in the task force. We do have a lot of very good checklists. Web AIM has a good web accessibility checklist.

I would like to see a wizard that's part of Adobe. You can't do it unless it gives you a logical reading order it will prompt you and say check this, tag this, that kind of thing.

>> JIM FRUCHTERMAN: Great. Thank you.

>> TUCK TINSLEY: Jim, the investment be made in, is that a term you all decided to use to say that this needs to be developed?

>> JIM FRUCHTERMAN: I think -- right now we're having somewhat mom and am pie kinds of things. It doesn't say who will make the investment.

(Laughter)

And I think that that's going to be when the recommendations get more difficult, right? If Gaeir says Adobe should have these wizards in Adobe so that they can't produce inaccessible stuff, that's a different recommendation than, you know, the Department of Ed should -- or the National Science Foundation should invest in something. We're not at that point yet. But I think that we're just identifying it as this is part of the toolkit that we would like to see. And then we'll have to go to the next stage when we write our report.

>> GEORGE KERSCHER: I need that mic back.

So hammering on Adobe, and Adobe is on the Board with me at the IDPS. So the end-design market is --

>> JIM FRUCHTERMAN: Say what that is.

>> GEORGE KERSCHER: That's the authoring and layout tool that is widely used in the publishing industry. But it's widely used in many sectors, government and education are the two biggest purchasers of the creative suite product from

Adobe. So we think that, you know, because publishers use it, that they can go to Adobe and say, "I want you to do this, and I want you to do it now!" Well, guess what? Adobe is not listening to the 9 publishers that make up 92% of higher ed sales. They are listening to government and education purchasers that are using it. And we need to get at those markets to tell Adobe that they really do need to think about correct reading order, and the structure of the documents and semantics from many different sectors.

>> JIM FRUCHTERMAN: Is that a directive to develop a Adobe recommendation?

>> GEORGE KERSCHER: You know, I would say that authoring tool -- authoring tool, this has been a big deal in the W3C and the web accessibility. We've got the web accessibility content guidelines. The authoring tool accessibility guidelines, and I think that we've all known for a long time that if you can get at the authoring tools to make sure it does it right, then you allow authors to do what they should do without breaking their backs, bending over to get it done. The authoring tool people are really important. So, yeah, I think that there should be a recommendation somewhere about authoring tools doing it right.

>> CHAIRWOMAN DIETRICH: Here, here, George!

>> JIM FRUCHTERMAN: Okay. I am ready to move on to number 4.

>> ANDREW FRIEDMAN: Not without a microphone.

>> JIM FRUCHTERMAN: Thank you.

>> CHAIRWOMAN DIETRICH: Watch the water!

>> TUCK TINSLEY: Are you trying to get unanimity on all of this?

>> JIM FRUCHTERMAN: An absence of objection sounds like unanimity to me. And I want to clarify, and I think that Gaeir has made this point. We're not expecting these words to show up verbatim in the final report. But we are expecting them to guide the drafting that we've got consensus here. Now let's take it to the next level for our next meeting.

So number 4 was the DRM statement which was sort of publishers need DRM to protect their stuff. But DRM protection needs to have people with print disabilities to have equal opportunity with the content. We don't specify how. It's, again, more functional description as we ought to come up with ways. And you can imagine quite a number of

different way that make this happen. And we've heard today from groups that help to implement that. So are there any comments on this section? Is this something that we're happy with?

>> J. BRUCE HILDEBRAND: The word "must" you've got -- your DRM is moving, and I think that the number of people who are involved now are saying that it's becoming much more sophisticated and a lot less intrusive and it's evolving rapidly. And now we're sitting here saying that we as a Commission say you must do this. So what do you don't must do it, and you recommend that they'll have to take their products off the market until they straighten out a piece of software? There is not one person that deals with software that doesn't have a glitch somewhere. Be careful with the must. It's like always.

>> JIM FRUCHTERMAN: Is Mark on the phone?

>> SKIP STAHL: No.

>> J. BRUCE HILDEBRAND: We've all had heartaches with software, and DRM is a form, and it's getting much more sophisticated and it's working better. But let's not -- must and always are words that we really don't want to get into.

>> JIM FRUCHTERMAN: So do people agree that this should be something other than must? I see Stephan shaking his head. Go ahead and articulate your feelings about this.

>> STEPHAN HAMLIN-SMITH: I think anything less than must pretty much guts the entire point of number 4. I mean, I don't think that we should say however the use of DRM protection might permit a user, or may permit a user, or could -- I don't know a word less than an absolute that drives home the meaning that Mark has been hammering into us in our task force calls.

>> J. BRUCE HILDEBRAND: But that would put me in a position of saying --

>> JIM FRUCHTERMAN: Betsy, do you have something, Betsy?

>> BETSEY WEIGMAN: In my experience with government policy documents we reserve the word "must" when it's a statutory mandate and use "should" for everything else. I am wondering if "should" would be more appropriate.

>> TUCK TINSLEY: How about gotta?

(Laughter)

>> J. BRUCE HILDEBRAND: If we say that every DSS employee must meet a certain standard of technical skill, or they'll be fired that day, we must do that. Well, we would all go, well, that's terrible. But now we're talking about a piece of software, but it's okay.

>> CHAIRWOMAN DIETRICH: Sorry, Bruce, but that's actually life in our campuses. Or faculty members, trust me. It is.

>> J. BRUCE HILDEBRAND: But it's not true. You certainly wouldn't put it in a Commission report.

>> ANDREW FRIEDMAN: Do you need to be careful and not to downplay, you know, so how much of it is a legal document versus what is the line? Because some things are a must. And we just need to decide whether this is a must or not.

>> JIM FRUCHTERMAN: Okay.

Maria is next.

>> MARIA PALLANTE: I think this is one of the hardest issues on the table. And maybe more complex than all of us realize. The goal is that to the extent there is DRM protection, it should be DRM protection that does not prohibit the access. That's a little different than saying that as you develop your DRM, you're subject to a certain kind of accessibility standard. It's a moving target, and the goal is kind of different than the regulation. We're going to go over this a little bit tomorrow, not very long, and, Jim, I know that you know this, but we do have international treaty obligations that recognize the right of copyright owners to use DRM management, and the way that we crack that nut in federal law to deal with possible exceptions to that, that are really steeped in public policy, is to have an exception through a rulemaking process that my office conducts.

So those of that you follow that know that's everything from a film professor needs to be able to circumvent the DRM in order to use the film in a class. We had a big rulemaking that went the way of Apple this pastime around. And we've had NFB regularly attend the rulemakings there every three years. Now, as policy advisors, copyright lawyers in the government look at that process and say, "That works because it's narrow. It doesn't take anything away from the federal or international mandate that technology can serve a role and enforcement of exclusive rights," but at the same time you may look at exceptions every three years through a rulemaking

and say, "Well, some of these keep showing up, so they probably shouldn't be done through a rulemaking anymore.

They probably should be done easier and broader. but how do you define it? It's all in the details."

So I am not sure how you write this but it might be something more after partnership and less of a hammer on this one because international law is on the side of the copyright owner on this one. So I don't have a suggestion, but I think that we might want to work through exactly how we word this, and I think that -- I don't think that I hear disagreement on the goal. But I am not sure this language -- I am not sure that this language is quite there yet.

>> JIM FRUCHTERMAN: Ashlee is next.

>> ASHLEE KEPHART: I was just slightly worried that if the word is a little too weak it could be passed off as this is just optional, it's not necessary. And it won't get done because it's either not cost-effective or it just take as to long to do. I don't know what word it should be. But if the word is too strong, it might just meet too much resistance. But if it's too weak, it's probably not going to be considered at all.

>> JIM FRUCHTERMAN: Okay. And I'll channel our absent task force member. As we know, the NFB would probably say we have civil rights. We have a global treaty on the rights of people with disabilities, and so we have these two obligations, which are both international obligations and domestic obligations, and how do we actually do this balancing act? And this was an attempt, you get DRM and you get accessibility. And I don't think that Mark would say that accessibility is optional in the face of DRM because it infuriates them that people turn text to speech off in content that they need for education employment. So I am just trying to represent I think what would be a pretty strong position for Mark on this. What I've heard are a couple of things. I heard sort of a Betsey said maybe this should be "should" rather than "must."

We've heard Maria say this will need a lot more attention. And I see Gaeir raising her and had. But, I mean, it may be that our job as a tech task force is to go another couple of levels deeper on this and start talking about some of the different issues that have been identified today. You know, rather than requiring a set of accessibility standards do we basically require or prohibit the inhibition of accessibility. And Maria said that's a different way of saying this than and actually comes away

with a different sense. That might be well worth taking back to the task force.

Gaeir?

>> CHAIRWOMAN DIETRICH: I wonder if we need to give a nod, and correct me on exactly what this is, Jim, the digital millennium copyright act which actually legally gives blind individuals the right to break DRM, if I remember correctly

>> MARIA PALLANTE: That's what I just described. The international treaties that mandate and recognize that copyright owners can use DRM as part of their protection. As part of their arsenal. Because it's not a substantive copyright. It's not part of the exclusive rights package. The question is how do the exceptions work to that? So fair use, and how does that apply? And so what Congress decided was it's generous protection. So it allows exception to the treaty requirements that we've implemented in law. That's the rulemaking that happens every three years.

>> CHAIRWOMAN DIETRICH: But my point is doesn't it actually say that it's not illegal for someone who is blind or visually impaired to actually break the DRM if they need to do that to have access to the copyrighted material? I don't know the wording, but --

>> MARIA PALLANTE: There is nothing that broad. But what I was saying, Gaeir, is every three years there is a legal proceeding where people bring cases to the administrative body. In this case, the copyright office, making the case, I need to be able to circumvent the DRM for this reason, for that reason. And then there is a ruling. So NFB has been a very active participant in those proceedings, and has largely been very success envelope getting the exemptions that they need. Those are very, very fact-specific, very narrow exceptions -- exemptions.

>> TUCK TINSLEY: Example?

>> MARIA PALLANTE: An example is the one I gave but the film professor. That's one that's happened every year since this has been enacted. Another that we just did this pastime around had to do with kind of carjacking Apple to use similar platforms that you might phone. So the point is that if you start seeing a trend, it begins to look like a public policy issue that should maybe be handled legislatively than through rulemaking. We have not had enough experience as a country to have a whole lot of information to draw on. But my only point was that we have to be careful because if we end up writing a report that says, "We think that DRM is great, but

it has to be this way," I don't know how useful that is to a Congress that has already implemented three treaties that had this requirement for DRM.

I am not at all arguing against the goal. I think that we agree on the goal. I am saying let's be really careful how we tee this one up.

>> JIM FRUCHTERMAN: Maria, as a point of information, you could describe what the current rulemaking concluded on the question of DRM interfering with disabled people since it is in there, right?

>> MARIA PALLANTE: It is, yeah.

>> JIM FRUCHTERMAN: What does it say that we can do.

>> MARIA PALLANTE: We're really proud of that, and why don't I pull it up and I will read it.

>> JIM FRUCHTERMAN: It's germane to this and may inform what we're doing.

>> J. BRUCE HILDEBRAND: One of the things, and Maria can address this as well, there is a huge effort on the Senate judiciary committee and other areas on the Hill to stiffen the rules and further protect copyright and IP because of piracy and massive losses that are occurring. And of late it was always the music and movies. It's now gone to publishing and other forms IP, and I talked a little bit today about this earlier. We have to be awfully careful because we've got to get this thing into Congress and hopefully doesn't hit the ground file, okay? That's our goal. That we actually do something for the students. That's of no question to anybody that wants to do that. It's differences in approaches sometimes. But what we've got is if we go too far, it's ground file.

And I don't want to get that far. And the way that the attitude right now up on the Hill is, tough.

>> JIM FRUCHTERMAN: Maria has the information, and then George is next.

>> MARIA PALLANTE: Okay. So this was published on October -- no, December 29, 2008. No. Hold on, sorry.

I can't find the date on my own website.

The decision is good for three years. And on the one that's germane to this group "Literary works distributed in e-book format when all existing e-book editions of the work including digital text editions made available by authorized entities contain access controls that prevent the enabling

either of the books read aloud function or of screen readers that render the text into a specialized format."

So what this basically says is it's okay to circumvent the DRM if this is the fact pattern that you find yourself in.

>> J. BRUCE HILDEBRAND: But it's limited to those instances?

>> MARIA PALLANTE: Yes.

>> JIM FRUCHTERMAN: George.

>> GEORGE KERSCHER: A couple of pieces. We've never used this exception because we've been trying to work with the publishing community to solve the problem without using atomic weapons.

(Laughter)

The biggest problem is that many of the reading apps that present e-books have been completely inaccessible and so as this says, if none of the e-book readers work for a person with a disability, and it's not available from authorized entities, then you can take this extreme measure. Now, one of the issues now with the Department of Justice ruling where, you know, the letter that went out that says, "Boy, you know, if you are considering using digital book technology, your university better be accessible," that seems to make this issue irrelevant because they are going to have to be accessible. The question does come up if a DRM on one reading system prevent as person from using their reading system of choice. That's going to become a big issue over time. Because I could envision having to use six different readers on my computer, and I can't even remember the keys. It's like using six different word processors to create that.

>> J. BRUCE HILDEBRAND: Remember, George, we talked about it. The publishers are going crazy. They've got seven different readers that they're trying to publish for right now, and it's driving them nuts. That's something that's going to cross a lot of rivers.

>> GEORGE KERSCHER: That's going to sort itself out.

>> J. BRUCE HILDEBRAND: So will this other one.

>> GEORGE KERSCHER: Well, I'm not so sure because you have different companies that are carving up the marketplace because they've got DRM. So you are not even if had you an interoperable DRM, you are not going to get Apple to change their market system. You are not going to get Amazon to

change their market. And everybody use one single DRM. I don't see that happening. But we really do need a mechanism in place, and maybe it's, you know, the ability to get it in a variety of different formats with DRM intact, but not forcing --

>> J. BRUCE HILDEBRAND: But, George, you heard Tom this morning talking about the fact that he wasn't going to talk about their proprietary DRM and the techniques that they use to try to protect their stuff on Course Smart. Everybody is doing that because piracy is a huge problem, George. People are stealing our stuff. And we want to protect it. And there may be some wrinkles in here, but there is no silver bullet. There is not going to be because we're going to keep changing the game so that fewer people can steal our stuff easily. And it's happening globally. So that's a reality.

>> JIM FRUCHTERMAN: I believe that we have beaten number 4 about as far as it's going to go. We have a fundamental objection from Bruce to "should," we have concerns from Maria on what this might end up being. And I think that we have a tech task force job to go back and look at this. Let's just put it this way. This is a point of tension. And I think that my goal is to try to wrap this up. I think that we've got how many more minutes? 10-15?

>> VICE CHAIRMAN WENDORF: 15. But, Gaeir, we have flexibility as we move through this. So we're here until the end on this issue. But we need time to wrap up toward the end.

>> JIM FRUCHTERMAN: Okay. Good.

>> CHAIRWOMAN DIETRICH: If you can wrap it up by 3:45, we would be in good shape.

>> JIM FRUCHTERMAN: Let's move on to number 5, which is the STEM issue. And this is the one that Stephan earlier identified. Let's come up with a more functional description about this that says essentially how we need to make math accessible that follows more of the line of number 2.

And so I think that we're already identifying this is one that needs more work. This is also one that didn't get as much attention in the task force. So I think that it's one that we are kind of happy to go back and work on some more. So what I would like to do is frame this as rather than do you agree with this, but do you have other input for the tech task force in dealing with the STEM question that we should keep in mind beyond what Stephan essentially has given us, which is a more functional direction? So does anyone want to

weigh in on that one? I think Gaeir's hand up. Go ahead, Gaeir.

>> CHAIRWOMAN DIETRICH: The one suggestion that I would make is that I think we might want to include some sort of a wording about encouraging producers to use SVG graphics. Not as a sure or a must, but just an encouragement. SVG, scalable vector graphics. You can actually do a lot with those and making tactile graphics.

>> JIM FRUCHTERMAN: That's an additional point because it deals with something in STEM, but it's different than Law Tech or MathML. That's a STEM issue that we need to identify.

>> VICE CHAIRMAN WENDORF: Jim?

>> JIM FRUCHTERMAN: Yes.

>> VICE CHAIRMAN WENDORF: As I look at 4 and 5, and taking these items back to the task force, I just ask perhaps there are other people, other experts that you might want to bring in to the task force to, you know, add additional perspectives? I mean, I don't know who they might be.

>> JIM FRUCHTERMAN: George Kerscher.

(Laughter)

>> VICE CHAIRMAN WENDORF: That goes without saying. But including off the Commission if there are others that you might want to consider to make a presentation so that we can get some other thoughts in.

>> JIM FRUCHTERMAN: Okay. Thank you. Lizanne? Can we get a mic for Lizanne?

>> LIZANNE DeSTEFANO: I'm not sure exactly what you were referring to when you were talking about Stephan's contribution, but the thing that troubles me about that bullet is the way that it leads in, it says, okay, we're going to talk about STEM, and then really what are you talking about is making math formula and equations more accessible. So either taking out that first part that says now we're talking about STEM, and just saying math formula and equations need to be more accessible. Or expanding it to consider other issues than STEM.

>> JIM FRUCHTERMAN: You want to add things like multimedia simulations?

>> LIZANNE DeSTEFANO: Many of the other things that we talked about earlier.

>> CHAIRWOMAN DIETRICH: I would call whatever the software application that the students use like in the math lab and that sort of thing in there as well.

>> JIM FRUCHTERMAN: That's a lot to work on.

>> J. BRUCE HILDEBRAND: By the way, George, here is another one that you can look at on. The authoring tools for MathML. Because my people tell me that, you know, very definitively they won't work on all browsers. It has real problems. It's not possible for them to use it as an authoring tool the way that it's currently constituting. So this is another along the range of the ability problem that is stopping some of the stuff that you would like to see get done because they are not able to change that. Everybody thinking that we can bang it around and get it done. These are cases that it's not working very well as I understand.

>> JIM FRUCHTERMAN: I will add that to our list.

>> J. BRUCE HILDEBRAND: Okay.

>> JIM FRUCHTERMAN: Going on to number 6, we recommended against the establishment of a centralized file repository along the lines of the NIMAC. And do we have anybody on the Commission who thinks that this is still an active recommendation to have a centralized repository for? Not hearing anyone speak up. Got another one done.

(Laughter)

All right. Number 7, this is the Federated search issue that I think we spent a fair amount of time on earlier this afternoon, and we came away I think with some significant directions. We have consensus around books, and then we have to talk about journal articles and multimedia and graphics and video and so I think that's something that is in the court of the task force to explore further. And if people don't need to expand on that, I would like to kind of --

>> CHAIRWOMAN DIETRICH: Just one thing that we might want to look at that totally differently is rather than searching specifically on the materials, searching the providers, the AMPs [accessible media producers], or the, you know, because that's really what we're talking about. We didn't word it that way, but that was really the intention. AMPs, alternate media providers.

>> JIM FRUCHTERMAN: I actually think it's bigger than that. If we keep talking about the market model, just saying just search the people who give away stuff for free is

probably not actually going to meet the objective that we've actually identified.

>> CHAIRWOMAN DIETRICH: I didn't mean that. I was thinking like Amazon and audible.com, but people who have actually end-user files.

>> JIM FRUCHTERMAN: Okay.

>> CHAIRWOMAN DIETRICH: As opposed to source files.

>> JIM FRUCHTERMAN: Okay.

>> VICE CHAIRMAN WENDORF: We're on 7 here.

>> J. BRUCE HILDEBRAND: This was a comment that was sent in to me. We propose the sentence because in 2010 the access tech network successfully integrated a Federated search feature into the network which includes title data from RFB&D. Is that correct?

>> ANDREW FRIEDMAN: I don't think it is. It's pretty old.

>> J. BRUCE HILDEBRAND: Okay. Starting in March 2011, the student information for accessible course smart titles will also be incorporated. This is in addition to all of the other files currently available. I don't know. You guys are all coming from a different angle. So you tell me it seems like a lot of it is popping up already, and more is going on board, and now with what was said here today, we're going to have this stuff pretty much on one side pretty soon, right?

>> ANDREW FRIEDMAN: I am actually don't think you want it all on one site. That goes against the recreate the whole Internet thing. And there is a much broader issue --

>> J. BRUCE HILDEBRAND: Create multiple sites?

>> ANDREW FRIEDMAN: You don't need a database. If everybody's database meets core standards of having -- that's why 7 and 9 have to come together, that is if you have the right metadata and you are on Google, it shouldn't matter whether you are searching by database on Bookshare. You should come up with the right stuff. The thing you want to be careful about is not recreate the Internet. You don't need a database that puts everything back and you're uploading and downloading things constantly. My database should be my database. Jim's database is his database, and you should be able to create a Federated search that bangs against all of them to get the data that you need. So I don't think that you want to recreate everything from scratch. Or recreate the database.

Go ahead, Jim. You've done a lot of thought on this.

>> JIM FRUCHTERMAN: I will briefly take off my tech task force chair hat. And I think that this gets back to the I know that Bruce keeps saying that [ACCESS TEXT NETWORK] has solved 90% of the problem. And I don't believe that. I think that [ACCESS TEXT NETWORK] is great. I think that RFB&D is great. I think that the national library service is great. I think that Amazon is great. But to keep saying --

>> ANDREW FRIEDMAN: What about Bookshare?

>> JIM FRUCHTERMAN: Oh Bookshare is good, too.

(Laughter)

Thank you. I have to fill that in.

I mean, do any of us think that there is going to be a single solution to accessibility, a single entity that's going to solve this entire problem? And if not, then why don't we give every consumer the benefit of the sum of all of the work that's going on here that will reduce the duplication of effort and increase the chances that people find it. Obviously, Bruce doesn't want our responding on that one right now.

>> CHAIRWOMAN DIETRICH: I think that we should get Google to do it.

>> JIM FRUCHTERMAN: Actually, believe me, I've tried. But they have this lawsuit with the publishers, and it gets in the way. So I think that the next issue we talked about was sharing. And I think it is essential that Bruce be part of that conversation because I think Bruce did have issues around sharing. So I am going to skip to number 9, hopefully for a second, and you guys, you have identified multiple times that 7 and 9 go together. So I think that we'll take that as these are a pair. And I've also heard already from Bruce that he thinks that the accessibility metadata standards should be combined with ONyX and commercial data, and I believe that's what the DAISY consortium is also endorsing, so I think that we're probably going to take that in a more sort of tracking ONyX and the like to be part of that

>> CHAIRWOMAN DIETRICH: Jim, I wonder if you might explain what ONyX is, ONyX 101?

>> JIM FRUCHTERMAN: Can I look over to Peter who probably can be more accurate about it?

>> PETER GIVLER: Just very generally, OnyX is a standard for -- that allows publishers to supply information about the books that they are publishing to the rest of the supply chain so that when a publisher publishes a new title, part of that publishing process is sending a ONyX feed about that book with information about that book, it's the kind of metadata that we were talking about, price, ISBN, title, author. It can include sample illustration, sample chapter all sorts of things that the retail accounts, say like Amazon, could use to market -- to help market the book in the store. And the problem is and I don't want to sort of overcomplicate things, but one of the problems is that there are different flavors of ONyX as it is developed, so that Amazon has its flavor of ONyX, and Barnes & Noble has its flavor, and publishers are struggling now with trying to find ways to provide this ONyX data in four or five different formats for, you know, for the different aspects of the retail chain.

But I think that in the sense that it's a relatively new standard, it's been developed within the last six years or so, and it's getting the acceptance of the standard is increasing, and continues to increase, it's pretty broadly accepted now. I think it is a pretty good vehicle if we could have the right kind of standards within the OnyX standards for including information about accessibility, yeah, I think that it would be useful. It would certainly make sure that that data got out into the marketplace.

>> CHAIRWOMAN DIETRICH: Could I ask just a couple of follow-up? First, who -- is this what BISG governs? Do they govern ONyX?

>> PETER GIVLER: It's actually a company that's in the UK, headquarters. They have a standard, or they have the kind of controlling license, if you will, or control licenses for it. And the book industry study group has done a lot of work with Editor on OnyX.

>> CHAIRWOMAN DIETRICH: Is this like where editor is the consortium governing it, but they're the standards organization?

>> PETER GIVLER: George, you probably know more about it.

>> GEORGE KERSCHER: Editeur is the standards organization that runs ONyX 3.0 is the latest version. It's not as broadly adopted as 2, or 2.1. There have been different versions of ONyX. And we want to add metadata to the ONyX

3.0 standard to identify various flavors of accessible content.

>> CHAIRWOMAN DIETRICH: Perfect. That's what I was going for.

>> J. BRUCE HILDEBRAND: For reference it's Editeur, and not Editor.

>> CHAIRWOMAN DIETRICH: Thank you.

>> JIM FRUCHTERMAN: Great.

>> GEORGE KERSCHER: And we want to harmonize the mark record with that ONyX, so we get libraries and the commercial synced up.

>> JIM FRUCHTERMAN: Okay. So CAST people, we've caught that distinction to make sure that we add to this one? Great. Then we're also going to work on the libraries to include the same kind of data. Okay. So that's number 9. We skipped over number 8. So I want to come back to that one. That's the last one on our list. And this is the sharing of accessibility enhanced instructional materials. And, Stephan, this is something that you had the last draft on, and I think it's -- if you could recap why is this here, that would I think be helpful from a DSS office perspective.

>> STEPHAN HAMLIN-SMITH: The original language on this was different, and then Bruce gave some good input in the feedback document. So what I tried to do was capture the essence of what I understood the point to be, and also the need for strengthening the language around protecting rights.

You know, at the very basic just nuts and bolts level, what this is about is if I work in a university and I have spent, you know, 20 or 30 hours converting a full textbook into a fully functioning DAISY book, and maybe I've also output the MP3 files, and maybe I've dumped out a PDF as well from that file, I've put a whole lot of work into that. Someone else will invariably have to do that exact same thing that I have just done, and so if I am at Institution "A," I would like to be able to share the fruit of my work with Institution "B," so there is that piece. But then there is also the piece of if I'm at Institution "B," the one who hasn't done it yet, I would need to know who out there already did it. So there is a piece of identifying where that work lives, there is another piece of being able to not duplicate the effort, and there is an overarching piece of needing to protect the ownership of the property, and not have illegal things happen with content.

So that's kind of the idea here. And that's how far I got. We did not have time to discuss this after I put this forward. So this could need, you know, an entire strike through and rewrite from scratch. I don't know.

>> JIM FRUCHTERMAN: Other comments?

>> J. BRUCE HILDEBRAND: I have more after legal question than anything else. Unless we've got permissions here, I mean, that's broadly covered -- you know, we have to make sure that it's all legal. But I think instead of just saying it's legal, we'll need a little more specificity about some of the hoops that you have to go through here. Because there is so much -- one of the things in this paper that I've brought here another one with me, which by the way is in Braille and we've got memory sticks and all of this sort of stuff. But it's paper that AAP [Association of American Publishers] has produced over the last few weeks or months trying to look at this and that is that there are problems within the community right now that we have -- our research has shown where DSS'ers [Disability Service Staff] need more clarity and how they can do it.

And they have these questions am I violating copyright? Am I going to get in trouble with that? So let's give them clarity. Because that's in this paper identified as a lack of understanding. So instead of going far and wide not to create a controversy, we would do people a service if we were more clear on this one. And I can help work with Stephan on it or however you want to do it, and let someone lawyer it up a little bit with some people who really know this area of copyright. I think that it would be smart. That's all I really have to say I don't think that it's viable the way it is. I agree with the objective. Obviously [ACCESS TEXT NETWORK] is doing it. And they've got this new file sharing thing, or peer-to-peer thing to try to cut out the redundancy. That was one of the things that the publishers pushed for early with them, and they pushed and said, heck, yeah, we're on that train.

So let's just make sure that we do it well. That's all.

>> JIM FRUCHTERMAN: Ashlee, Stephan, and I saw Maria's hand twitch.

(Laughter)

>> ASHLEE KEPHART: Well usually if I need to get an accessible copy of a textbook or something from a publisher, I'll have to send a copy of my receipt to that publisher. Wouldn't it work if copies or additional materials made by

University "A" were then sent to the publisher that they got the original materials from, and then when University "B" wants the materials, they just send proof of the purchase of the original book to the publisher, and then they can have access to anything made in addition to that?

>> JIM FRUCHTERMAN: That could be what [ACCESS TEXT NETWORK] is trying to do.

>> J. BRUCE HILDEBRAND: That's [ACCESS TEXT NETWORK]. It's already done.

>> STEPHAN HAMLIN-SMITH: The other -- the key most keyword in number 8 as I see it is the word "directly." The material files directly among and between organizations producing accessible materials. And I think that there are scads of ways right now that everyday we do it through somebody else. Through a intermediary. I'm not interested in that wasn't my big push for this -- I'm not interested in finding more intermediaries. I'm interested in finding a smoother directory.

>> JIM FRUCHTERMAN: Maria? Could you pass down the mic?

>> MARIA PALLANTE: I definitely think there is a way to get to a consensus point on this. So I think that we're not there yet, but I think that we're not far either.

A couple of things. I think, again, this is something that will be different for borne digital works than it will be for, you know, physical books being converted. And I think that what Stephan is say something that it would be great if the organizations on the ground could step into the space quickly and fill the need quickly by, you know, sending that particular file to whoever needs it, which is a very different -- it's hard in the publishing industry to get your mind wrapped around that because the goal in publishing is to sell the same work over and over and over again to everyone who wants it and what we're sort of asking publishers to do here is to say, you know, we've sold it to one student. You sold it to one student. This other version of it was made. Now let others step in and kind of boom the distributor for that, and are you not in the picture anymore.

So I like what Ashlee said, and I think that [ACCESS TEXT NETWORK] has a role in this. But possibly this is some new form of licensing. If it's not done through Chafee, and it's not fair use, what kind of licensing mechanism other than direct licensing one at a time could help facilitate this so that these office know how to do it and have the authority to do what they are good at? And what's the comfort level for

the publishers? How actively controlled are they? How much are they in the middle of that as long as there is a structure in place that gives them, you know, that allows them to authorize it?

>> JIM FRUCHTERMAN: Glinda?

>> GLINDA HILL: Thank you, Maria. And, again, I am speaking for both -- I am speaking for the higher ed piece of this, but when we were looking at K-12, I think that earlier this morning, Stephan you mentioned it, to please remember the timely aspect of this. And timely is the key to it. I think that this whole thing was convened to look at timely access, and to look at quality as well. And I see heads nodding all around the table of people who are in the bill doing this. It was the reason they were looking at K-12, too. In 2004, that's why it was in the legislation. All guys in the back of the room who work in K-12 know that, too. And we have seen a change. We have seen quality, and we have seen an improvement in timely access. Kids are getting what they need.

Not everybody. But we have seen improvement. And I feel confident that we're going to see this after this Commission, too. We're going to be able to work some of these things out. And Maria, you just very reasonably made some suggestions and recommendations on how this can happen. And it can happen so that everybody -- because it's a matter of coming to the table and talking it through about, yes, it doesn't have to be done over and over and over again. But there must be a mechanism for making it so that everybody's needs are met. Making sure that it's done timely is the key.

>> JIM FRUCHTERMAN: And something else I wanted to mention is just a little bit more of the conversation of when I am in the task force. Because this is already being partially solved quite a number of ways, right? So, for example, that's one of the reasons why I asked Stephan to weigh in on this I think it's the higher ed institutions that have the greatest lack of clarity. I think that Bruce sort of echoed it. Authorized entities? I think that it's pretty clear to us that if RFB&D and we wanted to swap an accessible version that we could make a case why that's legal. And we already have a setup at Bookshare where a University that scans as book for a disabled student can basically meet the need of that individual student. But we allow them to voluntarily contribute that scanned book back to Bookshare as an authorized entity, and then we distribute it under the copyright exception.

And, you know, this has been a practice that's been going on for a while. We have quite a number of universities doing it. But, you know, it's kind of comparable to what [ACCESS TEXT NETWORK] is doing is that, you know, instead of it being done on a copyright exceptions, and lastly we're doing it under permission structures. Quite a number of publishers are saying you can give us back our stuff in accessible formats? So we're now doing file returns to quite a number of publishers, especially the smaller publishers that can't create -- they give us a PDF, and we give it back to XML. And we say you can sell 10 copies, but go right ahead because it's yours. But it's around overall quality and access. And every time that we invest five hours, 10 hours, 20 hours in creating something, how do we make sure that other people benefit from that?

And that includes the publishers themselves as well as higher ed institutions. So I think that this is something that we can dig into deeper.

That is actually the end of our 9 issues. We've come away with significant expansions of significant topics that we have at that tackle. We've identified intersections of things that we have to tackle with other task forces. The legal area, we're not going to chase this down far in the legal area because we have a legal task force that will take a look at those issues it will be our job to articulate that this is the problem that we have can you help with us maybe a solution that permits this. I think that we are going to go back as a tech task force, and re-visit the overall charge of the Commission seen through the technology lens and propose a plan in our next meeting of additional topics that have come up with other task forces that seem to fit in make sure that other task forces aren't doing them, and tackle them.

But I just want to thank again everyone on the task force, everyone on the entire Commission for their great feedback, and for the presentations earlier today which I thought were germane to the topics that we were tackling. I think that we've made some real progress. I will encouraged that we have a prayer of getting our report done on time. Thank you.

(Applause)

>> CHAIRWOMAN DIETRICH: Thank you, Jim, for all of your efforts.

Okay. So we're going to move into closing remarks for the day. Would my co-chair have anything you would like to say?

>> VICE CHAIRMAN WENDORF: Well, I think if anything I would say would be redundant. Jim, you have covered it. I think that we've covered terrific ground. I am absolutely impressed by the amount of work that's been done and the quality of work by the task forces, especially the two that are preparing themselves for this Commission meeting. So I thank you.

>> CHAIRWOMAN DIETRICH: And I very much like Jim's comment about there may be things that come up in one task force that are going to get passed off to another task force. Because we've kind of been little silos at this point, but this is really from here forward is where we're going to start needing to work a bit more together as we give Skip the tapestry rather than the quilt blocks that are separate but connected together.

Logistics, I do need a volunteer. There do have to be three of us here for the public hearing.

>> SKIP STAHL: Can we just double-check that we've got for time? We don't have that many people. So I can tell you what we've got for time blocks.

>> JIM FRUCHTERMAN: I volunteer to stay through 7:30.

>> CHAIRWOMAN DIETRICH: That's a for sure?

>> GLINDA HILL: And Glinda, too.

>> LIZANNE DeSTEFANO: I will stay, through.

>> CHAIRWOMAN DIETRICH: We're covered then. Thank you for volunteering.

>> SKIP STAHL: There are just two. We'll open it up to see if we have walk-ins. I wonder if we have an earlier timeframe for meeting to go over the timeline.

>> SKIP STAHL: The last one currently scheduled 6:00-6.15?

>> MARY O'MALLEY: 6:30-6:45.

>> SKIP STAHL: And that's a blind individual coming in, in person.

>> CHAIRWOMAN DIETRICH: We could say potentially 7:30.

>> SKIP STAHL: Assuming we don't have a line of people to walk in at 4:00, I would say 7:30.

>> CHAIRWOMAN DIETRICH: Everyone interested in participating in the rewrite on the outline that we mentioned earlier this morning, downstairs in Currents which is sort of the open bar area at 7:30, please. And --

>> JIM FRUCHTERMAN: I thought you said 8:30 earlier.

>> CHAIRWOMAN DIETRICH: We had oh, you have an appointment.

>> JIM FRUCHTERMAN: We squeezed something between 7:30 and 8:30. Sorry.

>> CHAIRWOMAN DIETRICH: That's okay. We'll leave it at 8:30, and people --

>> SKIP STAHL: Somebody has to keep me awake.

>> CHAIRWOMAN DIETRICH: Also there is no reason that people who are here can't go down earlier and at least start discussing and maybe have something done when Jim and group come back and that will be great

Okay. Again, tomorrow morning, same timeframe. We will start at 8:00 in the morning with our continental breakfast, and then the meeting will begin at 8:30. We'll be adjourning tomorrow at 3:45. Did you -- Mary, anybody, are you making arrangements for taking people to airports? Maybe they should talk to you? So talk to Mary. If there is anybody who needs to leave quickly after the session, Mary is our wonderful logistics person. And, in fact, Skip, for the last thing here at the end of the day, maybe you would like to introduce your team who has been helping us?

>> SKIP STAHL: Sure.

>> CHAIRWOMAN DIETRICH: So we can formally thank them before everyone is running off in lots of different directions. I for one think that Mary walks on water.

>> SKIP STAHL: Good. What's great is to have a team, and then I get to take all of the credit for it. You are you absolutely right. Mary O'Malley over there. Say hi, Mary. Stand up so that everybody can see you. Mary is coordinator extraordinaire there of flights and hotels and troubleshooting and she calmed me down this morning when I came into this room and there was no AV, no microphone, no Internet.

(Laughter)

And I said, "Oh, here it starts."

And Scott Lapinski who is trying to ignore the fact that I am going to introduce him. Stand up and say hi to the crowd. Scott's our research associate. Skilled writer. So he will be hammering out reports with me and note taking, et cetera. So we try and join all of the task force calls, and turn around. Scott is responsible for turning around

task force call notes pretty rapidly. So it's been terrific. So thank you.

(Applause)

>> CHAIRWOMAN DIETRICH: Very good. Thank you.

>> LIZANNE DeSTEFANO: Gaeir, you could remind us for the dates of our May meeting?

>> CHAIRWOMAN DIETRICH: 2nd, 3rd, and 4th? May 3rd and 4th, and that is at The Ohio State University. You must include "the" unless you want to get beaten about the head and shoulders when you get there. May 3rd and 4th, and also on April 1st, and, yes, it really is April 1st, no fooling, we will have our next teleconference. And that's a Friday I believe? Friday April 1st.

>> SKIP STAHL: And it's not a joke.

>> CHAIRWOMAN DIETRICH: It's not a joke. Seriously. The Ohio State is not a joke either. They're very serious about that there.

Dave?

>> DAVID BERTHIAUME: We just covered what I had.

>> CHAIRWOMAN DIETRICH: That's all Dave had I declare the meeting adjourn. Those of how are staying for the public hearing, you might want to take a break because we will start promptly at 4:30. Thank you.

(End of meeting)

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