Multiple Perspectives, May 4, 2011

DANIEL GOLDSTEIN: Thank you, I think, Scott.

I’m very honored to be asked to give this lecture.

What I want to talk to you about today deals with a particular area of access to technology, and that is nonvisual access to education technology. Long before there was such a thing as learning management software, long before there was such a thing as a clicker, long before there was such a thing as a university website -- I am talking a long time ago, like more than five years ago -- in the beginning, there was the Rehabilitation Act of 1973. And then the ADA, which became effective in 1991. And both of those statutes instructed the nation’s colleges and universities that they could not discriminate against students and faculty with disabilities, and made clear that they must enjoy the full and equal enjoyment of the goods and services, programs and activities of those institutions. And separate programs are forbidden, unless it is necessary, to provide integrated access to those very same goods, services, programs and activities. And in that limited case, the communication must be equally effective.

Now, printed text has to be accessed visually. There is no other way. A person with a print disability needs a separate accessible version, be it braille, audio or text-to-speech, to get at that information. In reality, that separate version did not, as the law required, arrive timely or have all of the same information. It usually didn't have all the metadata that could allow the kind of navigation that was possible in print version. Some of you remember turning pages as you read. And also that metadata helped ease the comprehension of the text, having things like paragraphs and soon.

But unlike print, digital information is zeros and ones. It’s not inherently audible, tactile or visual. And this meant an historic opportunity arose, that schools and colleges could use accessible digital information. And that there could be educational technology to which the blind and other people with print disabilities could have mainstream access. They could use the same goods, services, programs and activities; they could get at the same information, at the same time, and at the same price. No more separate and unequal. After all, not being able to see is a nuisance that can be dealt with, but not having equal access to information is a handicap. And not having equal access to information in an academic setting is a severe and disabling handicap. And the great thing was, not only did the law precede the invasion of educational technology on the campus, but the technology to make digital information mainstream accessible and digital software mainstream accessible to the blind also pre-dated the invasion of educational technology to the campuses. So the law and the technology were there both to require colleges and universities to insist on accessible education technology and to supply it. So I have a short video for you, to show you how this has been working out, with a few random examples. (video).

[video shows Tony Olivero, a blind screen reader user trying to use the Brown University supplement to the Common Application and hearing “Freshman” and “Sophomore” as radio buttons without the answers and spaces to be filled out in a table without the headings being read, and then shows him unsuccessfully trying to use Google Docs.]

DANIEL GOLDSTEIN: So to paraphrase, how’s that accessibility thing working out for you?

Not so good?

Why not?

Why hasn’t the promise of this technology that should be inherently accessible not been accessible?

I don't have all the answers. One is that even academics don’t change their habits of mind when circumstances change. I had a conversation with the person who negotiated the Google apps contract for the University of Maryland.

I said, do you know that Google apps is not accessible?

He said, no, I had no idea.

I said, what would be your plan for the blind student when the professor says, “everybody will divide up into groups of four for the final project and collaborate in developing documents” or assigns the creation of a website using Google Sites? And he brightened up and said, “that’s not a problem.”

He said, “we have this student center where they can go use the computer that has JAWS.”

I said, but what I am saying is it’s inaccessible; I am saying it doesn’t work with JAWS. “Oh,” he said,

“somebody should tell Google about that.”

So part of the this mindset is, this isn’t the problem of the folks who are acquiring the educational technology. This is a problem for Disabled Student Services, as though such an office could create an alternate to learning management software. Part of it is a lack of awareness. Part of it is, I have to say, there is still not an acceptance of equity for disabled students in the minds of many on many campuses. And another reason is that there has been no motivation, until recently when we have taken the 2 x 4 upside the head approach to get attention from the schools.

Let me bring this to a personal level.

I want to tell you about Chris TOTH who should have been in the class of 2012, but whose chance for a college degree is at risk even now. Some of you who know something about accessible technology may have heard of Chris. While a college freshman, he developed QWITTER, the most popular program for blind Twitter users and HOPE, which makes Pandora Radio accessible. Chris was accepted to Florida State’s class of 2008 through a full scholarship as a computer sciences major.

Under Florida law, to get a college degree, you have to pass a math class before the end of your sophomore year. Chris, of course, wanted to take the calculus class, one of two required to be a computer sciences major. He asked for, but did not get, a Braille copy of the textbook. Worse, on the first day of class, the professor explained that all homework, quizzes and tests would be done digitally on something called EGrade. When he got home that evening, Chris discovered that EGrade was inaccessible; it didn’t work with JAWS or other screen access software. He went to his professor, who said, “why don’t you get a human reader to solve calculus problems?”

If I read you a calculus problem, could you solve it? I think everybody here knows why that’s an unequal and perhaps a ridiculous separate solution. You have no control over the reader’s pace. You can’t repeat the words over and over again, quickly jump back and forth as a screen reader user does. If you have ever heard somebody like Tony Olivero use their screen reader at normal speed, it’s far faster than he used it on today’s video. Of course, Chris, like many college students does his homework late at night and sometimes even at the last minute. Then, of course, there is the matter of independence. Florida State held the line and Chris had to drop the course. Chris discovered that all Florida State math classes use EGRADE exclusively. His second semester, Chris thought that maybe if he tried precalculus, he could teach himself from materials he could find online that were accessible, and then he could do without the homework, and just use a human reader for the quizzes. That was his plan, anyway.

Again, the university refused to get him a Braille copy of the textbook. He tried using a human reader, but found that useless and so he dropped the class. By the way, he figured out what would be necessary to make the digital information accessible. He presented it to the math department, and offered to do that work for free. That offer was not accepted. Chris, not surprisingly, got depressed.

His GPA fell, and he lost his academic scholarship. His sophomore year, he decided again. His girlfriend, Jamie, was a freshman and had functional vision. Perhaps, he thought, if they both enrolled in the class, maybe the two of them working together would enable Chris to complete his assignments. On the first day of class, the professor asked him, “why are you trying again? it will just be like last time.” The professor emailed class notes as required by the school’s accommodation plan for Chris, but she sent them as image PDF’s. Even Jamie could not read them without magnification, but the professor refused to send the notes in a text format. Then Chris and Jamie told the university about the accessible clickers on the market, but that, too, was ignored. Chris and Jamie, not surprisingly, both failed the pre-calculus course. Chris is now in his third year -- he is finishing up his third year, but he still has at least two years more before he can graduate because he hasn’t taken a computer science class because you have to take the math prerequisite first, and he can’t take it and pass the math prerequisites.

The math department chair sent an email to Chris advising him because he was offered a reader -- by the way, the university initially refused to pay for the reader saying it was voc rehab’s responsibility-- advising him that since we offered you a reader, we complied with federal law, and it was Chris’ fault that he didn’t pass; he should have tried harder.

I am not exaggerating. That’s what the email said.

They also said he should drop out of Florida State and go to the community college. The registrar blocked his registration when he tried to register because he hadn’t pass a math course and so wasn’t qualified to register for his third year. Jamie filed a complaint with the Department of Education Office of Civil Rights, who eventually said, I have some good news to tell you. EGRADE will be accessible this coming fall. Whether either Chris or Jamie will get any benefit, that is open to doubt. Florida voc rehab doesn't pay for retaking a course you failed.

And Florida State has said they will not pay for Jamie and Chris to get to take the class again. So chances are their college career is at an end unless and until we force Florida State to do so, with a lawsuit for damages. I assure you one is coming down the pike. But that won't be of comfort to Jamie three, four years from now when we resolve that.

Surely, this is as bad as it gets?

Not really.

Here is another true story for you. Although it changes in details, because this particular student has not chosen to come forward and subject herself to have the kind of retaliation I have just described from Florida State. This blind student decides to do early registration because she knows she will need disability student services and that the Nook study e-books used on the campus are inaccessible to make accessible e-books from a print version. Before registering for classes, she decides to go to the poli-sci department to see about the various courses and professors. Most of the images on the website are not labeled, there are no headings, and so the student really can’t get any information.

Now, how likely is this to happen elsewhere?

We know from WebAim’s survey that 95 of 100 college home pages, when tested, had significant accessibility barriers. So I would say pretty likely. But this blind student is resourceful and calls a staff person who assists the dean to ask the questions that she has. The staff person doesn’t understand why the student isn’t just looking on the website and in the event doesn’t know the answer to most of her questions. Besides, she has other demands of her time.

The student gets little of the information she is seeking. Needless to say at 6:00, when the office is closed, the sighted student wanting the same information can just go on the website and get it. Eventually our student enrolls. The course management software that is used at this school is not the latest Blackboard or Desire-to-Learn, each of which received gold certification for nonvisual access, but Angel. Here are the functions this student cannot do: The email, calendar assignments, chat, discussion groups, the grade book.. In short, the blind student will not get the professor’s emails, participate in peer learning, or be able to find out how she did on

the last test. Clueless might be the right word. Still, the student perseveres. She doesn't want to work in some shelter workshop sewing camouflage uniforms under a DOD contract. So she is excited when the professor assigns a research paper on the topic that matters to her greatly. Well, the online library catalog is badly designed and it’s inaccessible. So the student finds a sympathetic librarian and the librarian does the search to locate the relative journal articles.

That’s when the student discovers there is no keyboard equivalent to activate the link to get the actual journal article. Frustrated, the student heads to the dining hall for food. But because the student account information is on a website that’s inaccessible, she doesn’t know that she needed to have put more money into get food at the dining hall. She decides to go get cash and goes to McDonald’s instead. But the ATM on campus doesn’t have voice guidance. So she decides to go hungry. Besides, she doesn’t want to be late for the class where the professor is taking roll, using clickers. And the university in this case had not bothered to buy accessible clickers, even though they are commercially available. The professor marks her absent. When the professor offers a couple of questions for extra credit during the class that the students can answer with their clickers, she knows the answers, but doesn’t get the credit because the clickers aren’t accessible. That’s called being a student at Penn State University. Now, there may be some people here from Penn State.

I would be the first to agree that this could have been a student at almost any other university in this country. In order to try to move things, we filed a complaint with the Department of Education against Penn State university laying out all of this, not because I think Penn State is particularly horrible or terrible.

I don’t.

I think it is typical.

But, unfortunately, the norm right now is that all of the schools in this country, or almost all of them are law breakers right now, not law followers. And we had to start somewhere to get folks’ attention and wake them up. But that’s just two stories.

Surely now I told you the worse of it?

No.

More than 40 percent of the educational institutions in this country are migrating to Google apps for education with its inaccessible G mail, Google calendar, Docs and sites. Can you imagine being cut out of the campus email, of being able to do collaborative documents, of knowing what’s coming up on the school calendar? And Google has been brilliant. They know good marketing, and with that same seductiveness of the guy on the playground with a free joint, they have made Google Apps for Education free to all of the cash strapped colleges and universities and K through 12 institutions in this country. Hard to resist. And so if a couple of blind kids get shut out, well, you know, we can’t deprive everybody else, just because of these blind 12 kids. Except that’s not the right formulation. Because it’s the choice of using Google, which wasn’t being used by everybody last year, and not saying to Google, sorry, you are not playing by our rules. The lot of the blind or otherwise print disabled student today is worse than if you were a blind or print disabled student in 1990. Because the sighted kids didn’t have the benefit of all of this inaccessible technology. And so it at least was a more even playing field. So am I going to be all doom and gloom?

No.

There are actually some good signs. There is Drexel University which is doing a wonderful job of pioneering how to maintain a fully accessible college website and how to get faculty sign-on and keeping it accessible. There is Cal State, doing accessibility self-audits and action plans. There is Peter Siegel who thinks universities shouldn’t buy inaccessible software. There is George Mason University that has language in its request for proposal requiring accessibility. They actually test what the vendors offer for accessibility. That’s a CIO that does know where disability student offices are; they report and look at software and don’t buy the inaccessible technology! And the complaints that we have been filing with the Department of Education and Department of Justice in court are beginning to cause the universities to pay attention. When he introduced me, Scott made reference to my being a pain.

What he was referring to was that Steve WORONA, who is wonderful, started an Educause blog entry entitled “Thanks for the hug, but I think you broke some ribs” -- with,

“Dan Goldstein is a colossal pain in the butt.”

He suggested the cure for butt pain was to make your school’s technology accessible, and he is right! And several universities have called me and said, help us figure out what to do, and we’re helping them. Oh, and as a result of filing complaints against -- again, schools could have been different schools -- against Northwestern, NYU who were using Google Apps for Education, we seem to have Google’s attention. Let’s see if they can figure out what to do.

Maybe if they can hire good engineers, they can carry that out. Better still, let’s see if the next big thing from Google is accessible and accessible the day it comes out, unlike Chrome, Android, Google Apps, Google Earth, et cetera, et cetera, et cetera.

The Kindle complaints served as a wakeup call. On June 29th, for those of you who don’t know, what happened was, when the KINDLE DX came out in April of 2009, it was inaccessible, as had been the KINDLE before, but the KINDLE DX was meant for the academic community. They announced pilot programs with Princeton, Case Western Reserve, REED, Arizona State, and the University of Virginia.. And so we sued Arizona State on behalf of a blind student. And we filed complaints with the Department of Justice, Department of Education against the other five schools. All of the schools ultimately agreed not to use the KINDLE unless and until it was accessible going forward. And all of the schools agreed that the same should be the case for any other technology that was used. If I can find it, I very carefully put it aside. Here we go, as a result of that settlement, the Departments of justice and Education wrote a joint letter to every college and university president in the country. It went out on June 29, 2010.

It’s a letter that’s making a difference.

Let me just tell you a little bit about that letter.

It says, “requiring use of emerging technology in a classroom environment when technology is inaccessible to an entire population of individuals with disabilities, individuals with visual disabilities, is discrimination, prohibited by the ADA and section 504 of the Rehabilitation Act.”

Don’t just take it from me when I said at the beginning this is illegal. We have got the Department of Justice, the Department of Education in charge of the enforcement of those laws saying the same thing. The letter goes on to describe that equal opportunity is required and equal access is required, and that separate access is only permitted when needed to integrate. Meaning, that you don’t get to have technology that could be inherently accessible, but in fact is inaccessible and say, well, we are going to provide a separate solution. And best of all, they made a very good statement, I think, of what accessibility means when they said that under the settlement made with the school, the schools agreed not to purchase, require, or recommend technology unless the student can acquire the same information and engage in the same transaction and enjoy the same services as sighted students with substantially equivalent ease of use. Same information, same transactions, same services. So we are not just talking about content, folks. This isn’t just a question of, can you use the e-book? When the e-book comes from Nook study or VitalSource or packaged with any kind of apps that allow you to group annotate or highlight a term and go to the Wikipedia or the dictionary, then the whole package has to be accessible.

So back to the good news, and this letter has helped spur some of that. There are companies like Pearson that I think are working very hard right now to redo their catalog and make it accessible. And we saw the first signs of spring last summer when the fully accessible iPad came out, together with accessible iBooks. That was a first.

Amazon has upgraded with a KINDLE-3. Still pretty awful, but it’s a step in the right direction from being totally accessible. And the Kindle App for PC is excellent. BLIO’s free software allows you to read and buy e-books with text-to-speech software, but if the publisher has turned off the text to speech, then it still works with screen reader software so you can still hear your book. Coursemark has made huge progress, in making its website, applications and e-book content themselves accessible. They are not all the way there, but I think by next fall, they will be. Adobe keeps promising that Adobe Digital Editions 2.0, due last December will be self-voicing. At this point I think you have to call it an overdue e-book. Barnes and Noble on the other hand is not part of the good news.

They just don’t get it.

They claim their new Nook study is accessible. Since you can’t navigate to the website to download it, and can’t navigate on the website to find the book that you want to buy; and then if you did, you can’t navigate to actually complete the purchase, I don’t think that truly deserves to be called accessible.

There isn’t much we can do about that except, I am sorry to say, go after the colleges that use it until Barnes and Noble decides getting its customers sued is a lousy business practice. Why am I picking on a college and university? Because federal law does not require Barnes and Noble or Google or Apple or anyone else to be accessible. As a policy matter, it imposes entirely on the universities to meet the obligation not to discriminate. I don’t endorse that, but it leaves me with limited options in terms of how to move things along. And when the colleges and universities complain, something actually happens. ITunes was inaccessible. The Massachusetts Attorney General and the National Federation of Blind wrote Apple and said this is a violation of law.

Unlike federal law, Massachusetts has a great law that says that no one may discriminate within the commonwealth in any program or activity on the basis of disability, race, gender, et cetera, et cetera.

So that covers a company that has a program or activity. Apple’s response to the Massachusetts Attorney General was, we’re Apple; you’re just the State Attorney General. But, then we wrote a letter to the 253 colleges and universities that were partners to Apple.

Dear Mr. President, and dear general counsel, you are involved in violating section 504 and the ADA.

A month later, in March 2009, Apple said, “so we have a solution and we think iTunesU will be accessible by the start of the fall semester. Do you think that will be soon enough?”

“Well, all right,” we said.

To Apple’s credit -- this is how the war gets won by the way -- not only did they make iTunes accessible, they came out with the first accessible iPod.

The second iPhone was fully accessible. And then the iPad, the day it came out on the market. And that’s how this is going to happen. The tipping point will come when the technology companies say, “OMG, we can’t sell to this market unless we are accessible.” And I have a suggestion for how the universities can stop being the only target and get the vendors moving. There needs to be somebody who writes the contracts for the university, to draft something that reads something like this:

Vendor represents and warrants that vendor’s product is -- will keep the university in conformance with Title II, Title III of the ADA, and section 504 act. And vendor indemnifies all universities from liability. That will make the change quickly.

By the way, I jumped around a little bit in terms of good news. Pearson said the CSUN conference from the letter from the Departments of Education and Justice is making post-secondary publishers pay attention to accessibility.

And I think that’s true.

Desire-to-Learn and Instructure are now largely accessible learning management systems.

So what does the future hold? How do we get to the rest of the way? Well, right now if I walk into most college CIO’s offices and ask, who is responsible for cyber-security, they would say that’s Joe, third door down on the right.

If I walked in and said, who is responsible for accessibility? I think I would get a puzzled look. When the answer to that question from campus CIO’s offices, Joe, third door on the right, good things will start to happen. Schools will start to make accessibility requirements in requests for proposals and contracts, as George Mason does. And then the representation and warranties and indemnification that I talked about. Second, schools need to do an accessibility self-audit, both of their websites and of their existing technology. And then they need to come up with a remediation plan. I have heard that some schools are afraid that if they say, we’ve got inaccessible technology, the boogie man from the NFB (that’s me) will jump out of the closet and sue them. No, we already know you have inaccessible technology and inaccessible websites. We are looking for you to say that you will fix it. Then if you do say that, we will turn

our attention elsewhere, because you just said you wanted to be one of the good guys. And after that self-audit, that remediation claim needs to be open and accountable with the progress publicly kept. You know, if the school of engineers is saying on its website, we are going to be accessible a year from August, and the dean notices the English department said their website will be accessible this year, the engineering department dean will say, how come English is doing better than we are? And everybody will know if you don’t make it. And it’s, you know -- I only stopped smoking when I told the world I was quitting, right? I mean, you got to put it out there and be held accountable or it doesn’t happen. But that plan, that remediation plan should be physically sound. If we are unrealistic about our expectations, schools aren’t going to do things that aren’t fiscally reasonable for the sake of a small minority. It’s not going to happen. And nobody is going to want to imitate that example.

So these plans are going to take sometime. It’s going to take time to undo the damage already done. Third, schools need to create the kind of and documentation for accessibility that will make it possible for faculty to be convinced to be supportive. And to make maintenance of the website fully accessible as possible. I suspect in most colleges and universities, the number of people that code the site is high. There needs to be -- we learned this from the commercial websites, it’s not enough to say, go look at WCAG 2.0 and follow that.

We wrote manuals for Target, for e-Bay and Travelocity, and TicketMaster. I am smiling because those were four nice wins. And then the people who code on the company websites can easily look, because they don’t it every day. Oh, if I am going to do this, I need to do that. And the universities need to do the same thing. Do some custom instructions. If the assistant of the dean is the one posting new stuff when the new faculty member comes on board, he needs to know what to do. And also, do internal education, so that faculty won’t say academic freedom allows me to post image PDF’s as assignment. If proposed correctly, that kind of nonsense will dissipate like fog on a morning sun.

Today, here in Columbus, The Commission on Accessible Instructional Material in Higher Education was meeting. That commission needs to recommend that there be a committee like the Access Board to set accessibility standards both for content and for the associated technology. And then that committee needs to continue to exist to update it. It would not be reasonable or fair to tell the publishers today, as much as I might like to, oh, accessibility includes tactile graphics. But it will be a reasonable thing to ask the publishers a few years from now, I am certain of it. Because it will be doable. It’s not doable today. So the standards will need to evolve. But right now the schools don’t know and the publishers don’t know exactly what accessibility means other than what I read you, the same information, same transactions, the same services. And so we need a set of evolving standards, and we need that commission also to create a certification entity. How it’s funded is a good question. We need quality control. Because, I hate to tell you all, some companies aren’t honest about their accessibility. In fact, under 508 where companies file VPATs (Voluntary Product Accessibility Templates), I think librarians would have to file a lot of them using the Dewey decimal system numbering for fantasy fiction.

Think about this from the point of view of the school. I was saying this to publishers over dinner last night. We had a very raucous four-hour debate. I said, Ohio State probably assigns thousands of texts every semester. Now, even if they go with the iPad, knowing the technology is accessible, then how do they know if in that introduction to economics textbook, the scatter graphs are all also presented in a tabular fashion for the screen reader? How do you know if the graphics are adequately labeled? That you can’t do by machine.

Ohio State is supposed to look at every e-book and decide if it’s truly accessible? No, it’s not going to happen. And the discovery that a book is inaccessible is going to happen when the blind student shows up to it the first day of class, and then it’s too late. So we need an entity out there that will look -- Pearson will submit its MathLab; it will get looked at and the committee will either certify it or no. So the universities can buy in safety and so that the publishers who are doing the right thing don’t have to compete with the folks who aren’t and are trying to cut corners and make more money by not being accessible. The time has come to hold publishers and technology developers liable and not leave the universities alone holding the bag. There is another reason why that needs to happen.

I told you about Chris TOTH. If the only way to enforce the right to accessibility is for a print disabled student or faculty member to file a complaint against his or her own school, that’s asking too much. You shouldn’t have to sacrifice your college degree. And if you are a faculty member, you shouldn’t have to sacrifice your career. Nobody is going to necessarily get upset with you pursuing Pearson or pursuing Google. But suing your own school? I have talked to graduate students who are in academic fields and 17-year-old rising freshmen going to places like Princeton when they started the Kindle pilot. Sure, I want to advance the cause, but I don’t tell these people they should file complaints. It’s not right.

So we have to extend the liability beyond the universities and the colleges which, frankly, if we don’t, it’s going to be like Prohibition. These laws will be here, as they were when all this technology first came on campus. And it won’t get better because you can’t ask the students to sacrifice themselves in droves.

So I have talked longer than anybody should have to listen to me, and I very much welcome questions.

Thank you.