



**Making E-books Accessible
with
Jens Tröger**

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KENNEALLY: In our information age, access is everything, and because digital technology makes it possible to share content in multiple formats, from text to audio to video and images, what once were obstacles to accessibility are now opportunities.

Welcome to Copyright Clearance Center's podcast series. I'm Christopher Kenneally for Velocity of Content.

As founder of Bookalope, Jens Tröger has applied his background in computer science research and commercial software development to create professional tools for book designers. The trick to making ebooks accessible and even beautiful, says Tröger, is to think of them as software. Jens Tröger joins me now from Brisbane, Australia. Welcome to the program, Jens.

TRÖGER: Thanks, Chris. Thanks for having me.

KENNEALLY: Well, Jens, we are delighted to have an opportunity to learn about ebook design specifically as it applies to accessibility. A BookMachine blog post by your colleague, Oluwatoyin Jegede, recently noted that there are two main reasons why authors and publishers should care about accessibility in their ebooks. It's the right and inclusive thing to do, and it's required by law in many countries. So tell us, what helps to make an ebook accessible?

TRÖGER: I'd like to think of it as navigating a book without being able to actually look at it. For example, if you open an ebook on your phone or on your tablet without looking at it, are you able to navigate the book? Are you able to listen to the book? Are you able to – not read the book, but listen and hear the content, including the image description, including content that is more important than the narrative of the book, content that is set apart from the main content of the book? So accessibility, to me, means is the book accessible to everybody under any circumstances – the content of the book?

KENNEALLY: That must be a challenge, Jens Tröger, because in today's digital environment, it's populated with devices of all kinds. So how difficult, really, is it to publish an accessible ebook that will work for everyone, everywhere?



TRÖGER: It can be a challenge, because as a writer, as an author, or as a publisher as well, we cannot control how people read the book. We have no control over the device or the software that somebody may use when they open the book. It can be a very old Kindle that is the first-generation Kindle whose feature set is very tiny compared to a phone that was updated last week. So building a book these days is kind of a challenge. It's walking on thin ice, because I never quite know how many features and how much beautiful design I can put into the book, because I don't know – will the reader be able to actually look at it and use the features that I built into the book? So from our perspective at Bookalope, we try to find that balance between a book that opens on as many devices as possible and still is pretty to look at.

KENNEALLY: It's a tough balance. I suppose accessibility comes first before the beauty of the book, but it sounds to me like you care about the way these look as well.

TRÖGER: Oh, yes. That actually was the initial motivation for Bookalope in the first place, because I got frustrated with ebooks that didn't work. Back then, I had a Nook – I still do – and I bought ebooks, opened them, and they just didn't work. I couldn't navigate them. They forced me into designs that were unreadable on my particular device. And the more I paid attention to how ebooks look on small phones, large screens, I also started noticing the problems in print book design, and it seemed to me that often even print books are just quickly designed templates that are being shipped into production. That, to me, is an indicator that something in the process of creating and building books went awry.

KENNEALLY: I have said for many years, Jens Tröger, that if you love books, you love everything about them. It sounds to me like that is true as well for you and ebooks. You love everything about them – the content as well as the design.

TRÖGER: Yes, absolutely. What I find amazing these days is how much content we can actually pack into an ebook. Traditionally, a printed book is kind of nailed down to the paper size, the page size, and the font has been determined, and that's it. The book designer creates the printed book. Whereas these days with an ebook, the reader actually has much more freedom to adjust the ebook to their own needs.

For example, if a dyslexic reader would like to change the font that is easier to read to her, then they just change the settings on their ebook reader, and the ebook, I would expect – and that's how we built the ebook – needs to adjust to that, and it needs to still look good. So there are certain constraints that need to flow into ebook design, but it also opens up a whole new dimension of design, because now we can actually add multiple media types. We can embed videos. We can embed sounds. An ebook reader these days is able to synthesize a voice and read back content. You can annotate multiple languages so that the



reader knows what language he or she is currently reading. There are dictionaries built into it, which for me as a speaker of multiple languages helps a lot, because I always come across something – vocabulary that I don't know. And then I can look it up right there in my ebook. So there's a lot of constraints, and there's a lot of freedom that I get as a tradeoff. That's actually, for me, very exciting.

KENNEALLY: As a publisher or a book designer, Jens Tröger, where should anyone begin creating an accessible ebook?

TRÖGER: That's a good question. I think creating an accessible ebook starts by writing structured content. Most authors I've found and I've worked with have a clear view of the content of the book that they want to write. They write the book. And every so often, that content isn't as well structured. What I mean by that is not only the hierarchy of headings, of chapter titles, section titles, subsection titles, but also people often get carried away with self-formatting their book. You know, this needs to be italic, because I like it. I like the font, and I like this, and I like that. My question then always is what are you trying to express here? What is the intention of that formatting? Because if a person can't actually see the text because, for example, their vision is impaired, they won't be able to see this. So we need to communicate in another way the change that happens to the design here. That's why ebooks are really useful, because we can have these hidden annotations in the ebook that tell about these intended changes.

So an author who wants to write an accessible ebook I think needs to have a very clear understanding of not only the content they are writing, but also how they would like that content to be structured. That step from content to structured content with additional information about that structure information – that's the first step to a well accessible ebook.

The next thing, then, would be images, for example. You want image captions, but you also want to describe the image meaningfully in the context. For example, if you're writing a book on paintings, and you have an image of a painting, you're describing what is a useful and a meaningful description if I can't see the painting in the context of the narrative of the book. So thinking about your content in a more inclusive way will get you a very, very big step ahead.

KENNEALLY: Accessibility for ebooks, Jens Tröger, really relies on technology, of course. But a successful ebook publication will also have design elements that are familiar from the print world. Tell us about those.

TRÖGER: I think one of the most important of those design elements would probably be the table of contents, because that is the first thing you open – or the first thing that I open



when I look at a book in a bookstore, just to get a sense for the content of the book. It's very similar in an ebook. The table of contents is what helps me navigate the ebook.

Again, to me, it often helps to imagine what it's like to navigate or to use an ebook if I can't actually look at it. So the first thing I would do is the ebook opens. As an ebook designer, I can specify where the ebook opens, and that usually is the table of contents. So I just have the table of contents read out to me, and that gives me a good sense of what is in that ebook. From there, I can then dive into that ebook.

KENNEALLY: Well, your view as a software developer is that books should be thought of as software. Why is that a helpful way to think of things, particularly about ebooks, for publishers and for authors?

TRÖGER: Yes, I think that's an interesting question, because it certainly shows my personal professional bias as well. I look at ebooks as a blob of data. In the software world, whenever we build software, that software runs in versions, right? That means I build a product. It becomes available. And then I continue to build the product. So the next version ships maybe six months later, then the next version. So software has a very, very old and very well thought through lifetime of versioning and improving software.

I look at ebooks in a very similar way. Books traditionally can have typos. Books have revisions. So I can look at an ebook as a typo is a bug. It's a software bug. I can report the bug. I can fix the bug and ship a new version of the ebook. It's similar with – the author might want to make a change, and in the traditional print publishing, that's not a new thing to do. There's a next iteration of a book that's being published five years later. These cycles can be much tighter. If you look at ebooks in particular as software, then we can ship new versions of a book with bug fixes where typos have been fixed, with additions, with changes, much more frequently.

It would require infrastructure support by the publisher, by distribution platforms, but there's also interesting avenues, for example, where like in open source software, people can file bugs, right? I read a book. I come across an issue. I could just tap on it and give feedback to the publisher and say, oh, here's a typo. So there's a much tighter integration between the ebook and the reader itself and the publisher that opens up to us.

KENNEALLY: That integration between reader, publisher, and author fascinates me, Jens Tröger, because you have pointed out that with an ebook, with an accessible ebook, the reader is in much greater control than ever before. I wonder whether you'd like to see a feedback loop on that. Do you monitor how readers are using ebooks? Do you think that's a good idea? Does that provide helpful data?



TRÖGER: Personally, I'm a little bit paranoid about using software and being monitored too much. I'm a private person, and I kind of take care of the information that I allow to leak out into the world. So I think we need to tread carefully with this issue of the interaction between publishers and users.

On the other hand, I think it would be very useful for publishers, for example, to know what marketing information that they have built into an ebook a user actually makes use of. Marketing campaigns are very common these days, and that same principle can be built into ebooks as well. That's what Bookalope actually does, is it allows publishers to automatically add a publisher's page at the end of the book. That's automatically built into the process. So there are ways where a publisher can interact, but I would like to caution against too much of it, because I value my privacy, and I think a lot of people do. So yeah, finding a balance will be a challenge, and I think that's something that the publishing industry needs to discuss.

KENNEALLY: And for publishing, the ebooks that you are helping design – they're adding to readership. They're opening up new audiences. That sounds like a good deal for publishers, for authors, and for readers, too. So is all this really coming down to smart business decisions?

TRÖGER: I think so. And it also comes down to sort of rethinking what a book means these days. I've been doing this for about 10 years now, and I've talked with a lot of publishers. I noticed a lot of pride in the publishing industry that stems from that very old print tradition, and oftentimes publishers take a lot of pride in what I look at as an outdated production process. It's very labor-intensive. It's manual. And that's what oftentimes publishers are proud of, because it's very centered around print publication.

Then the ebook came along, and it kind of rocks the boat, in the sense that the process needs to change. We need to rethink design. We need to rethink what a book really is. So I think once we accept that I think the ebook is here to stay, the print book is here to stay, it's just a different market with a different clientele, I guess. If we look at those two markets as inclusive and very equal, then I think there's a lot of opportunity that can open up. But looking at an ebook as a kind of addendum and kind of a neglected appendix of a print publication I think is the wrong way to go.

KENNEALLY: Jens Tröger with Bookalope, I really appreciate your sharing with us this thoughtful analysis of the evolution of publishing and what it takes to make ebooks accessible. Thank you for joining me today.

TRÖGER: You're very welcome. Thanks, Chris.



KENNEALLY: That's all for now. Our producer is Jeremy Brieske of Burst Marketing. You can subscribe to our program wherever you go for podcasts, and please do follow us on Twitter and on Facebook. I'm Christopher Kenneally. Thanks for joining me on Velocity of Content from CCC.

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