



## **MIT's PubPub Seeks "New Info Ecosystem"**

**Interview with  
Terry Ehling, MIT Press  
Travis Rich, MIT Media Lab**

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**KENNEALLY:** Two very different laboratories, two very different experiments, separated by two centuries. They share a common DNA. Welcome to Copyright Clearance Center's podcast series. I'm Christopher Kenneally for Beyond the Book.

*Frankenstein; or, the Modern Prometheus*, is a novel whose composition resembles the famous creature itself – a stitched-together assemblage of Gothic horror, Romantic philosophical reflection, and science fiction published in 1818 by 20-year-old prodigy Mary Shelley.

*Frankenbook*, launched online in January 2018 as part of Arizona State University's celebration of the novel's 200<sup>th</sup> anniversary, is a collection of contemporary scientific, technological, political, and ethical responses to the original *Frankenstein* text. The innovative publishing platform that hosts *Frankenbook* is PubPub, among the first experiments to escape the lab at the Knowledge Futures Group, a collaboration of the MIT Press and the MIT Media Lab. The stated KFG mission is to transform research publishing by incubating and deploying open source technologies meant to build a new information ecosystem.

Two KFG principals join me today in Cambridge at the Massachusetts Institute of Technology. Terry Ehling is director of strategic initiatives for MIT Press. Welcome to Beyond the Book, Terry.

**EHLING:** Yes, thank you. I'm glad to be here.

**KENNEALLY:** We're glad you can join us. Travis Rich is project lead of PubPub and a recent graduate at the MIT Media Lab. Welcome to Beyond the Book, Travis.

**RICH:** Thank you very much. Hello.



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KENNEALLY: Hello. Terry Ehling, tell us about the – let me just take that again. Three, two, one.

So, Terry Ehling, tell us more about the ambitions you have for the Knowledge Futures Group. Explain what's behind it and what you're hoping to accomplish.

EHLING: Yeah, I think the idea is to really bring up a new program – and clearly being joint with the Media Lab is important for us. We would like to serve as a test kitchen, an incubator, and a staging platform for the development and launch of open source publishing technologies and aligned open access publications. And we are jointly staffed by the Press and the Media Lab.

The open source approach not only reduces the precarious dependency that most nonprofit academic publishers have on costly outsourced technologies and a limited network of commercial vendors, but it also provides a foundation for greater insourced experimentation and innovation. And I think this is really a way for us to control our future in many ways, which has been increasingly dominated by for-profit multinationals. We are no longer technology-informed, we are technology-driven. Much of that technology resides outside of our control.

KENNEALLY: And when you say our, you're referring to the university and thinking of other universities, as well?

EHLING: Yes. So we are – just here at MIT Press, for instance, we probably have relationship with upwards of 20 commercial-grade service providers and platform vendors of one kind or another. It's costly for us. It also demands that we compromise in many ways that I think are unproductive for us. Using open source technology and, again, a more open research and development environment would allow us to bring much of this publishing activity back in house.

KENNEALLY: Are the compromises business compromises, technology compromises, both, others?

EHLING: Both for sure. Technology is, of course, someone else's technology. It was architected in a particular way for a particular cohort and a customer base which doesn't always appeal to us as a not-for-profit publisher, particularly one that has strong alliances with a university like MIT which has always been clearly very sensitive to open source and open access. Many of the early efforts in both those areas were started here at the institute.

KENNEALLY: Right. And beyond the business and the technology concerns, there's a concern about information, about knowledge itself, as well, and I think you're



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thinking about integrity of knowledge and democratization of availability to information.

EHLING: Yes, and also provenance. I'm going to ask my colleague Travis to say a few words about the Underlay, which is another project that we're incubating.

KENNEALLY: All right. Well, Travis Rich, join us and tell us a bit about what you were thinking about when you and your colleague Thariq Shhipar developed PubPub in 2015. You were hoping to accomplish what? It was an open platform for authors, but for commenting, as well.

RICH: Yeah. I think a lot of it was driven by the different way that research at the Media Lab is typically conducted. We don't have traditional academic grants that have a start date and an end date with a very clear set of goals. It's an undirected research model that is supported by a consortium of corporate members. So the way that we typically operate is by driving some passion and not necessarily just writing that up and sending it off to be published at some point, but by having feedback and conversations with these member companies of the Media Lab. So that iterative, feedback-driven, interactive, data-heavy approach was just – it felt like the right way to do research.

When it came to publishing a lot of our internal work, we just didn't have a tool that let us work the way we wanted to work. So a lot of it was built out of our own sort of necessity and stubbornness to not play the way that different kids were playing.

KENNEALLY: So the laboratory incubated the principles, and then you created the technology to put them into action.

RICH: For sure. And the Media Lab and Joi Ito and my director – Thariq and I's director, Andy Lippman – were enormously supportive of giving us the freedom and giving us the space to build something that otherwise was outside the traditional domain of what we were working on. And I think without that ecosystem and support, you really can't try these sort of silly ideas that turn into something a little more productive.

KENNEALLY: Right. Ambitious ideas, too. You were trying to accomplish a way to enable public discussion around academic publishing, which is something that could only be talked about in the 21<sup>st</sup> century. Up until just very recently, this was a closed world.



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RICH: For sure. And I think one thing we see in that closed world is that there's a lot of historical artifact driving what we're doing, rather than pure utility of action. If we're all a bunch of bakeries, some group has figured out that the best way to sell bread is by putting a really great packaging on it and having your marketing team put all the energy behind it, and 100 years down the line, that corporation is just driving so much bread sales that if you want to join the bread business, that's what you think you got to do. And I think at some point, you got to be in a position to step back and say this bread isn't good. Let's figure out how to make good bread a way.

KENNEALLY: It's gotten stale.

RICH: Right. Yeah, it's stale. They're shipping it from Antarctica, because that's where the yeast grows most cheaply or something. And I think being able to focus on bread, or in this case, focus on the research and the data and the interactivity and the feedback, is something that if you're trying to play the bread business – which a lot of traditional professors, if you're trying to get a tenured position at a university, you can't take that step back. So I think the Media Lab really gave us the space to take that step back and say, let's focus on research. Let's focus on what actually has to happen to do this well.

KENNEALLY: You mentioned publishing as an artifact. You've been working with an artifact of publishing, which is the book *Frankenstein*, now in its 200<sup>th</sup> year. The project *Frankenbook* is a fascinating one, because it obviously refers back to a very different time, the Romantic era, an approach to thinking about science in very different ways, and then puts it into the 21<sup>st</sup> century and enables people to comment on it in ways that would probably – maybe surprise, if not shock and hopefully delight Mary Shelley. So tell us about the *Frankenbook* project.

RICH: The Press and the team at Arizona State deserve a lot of the credit, or almost all of the credit, I should say. They printed a print version of the book that had annotations throughout by the ASU team and by the editors at the Press. So they took that otherwise print, static version of *Frankenstein* that they put out and they put it on PubPub with the goal of not only being able to add new annotations to that over time and having rich media annotations, but also to opening that up to a broader community of commenters, to enabling classrooms to be able to do that same sort of annotation in a small ecosystem that's private and contained and educational, rather than publishing-focused.

The team at ASU has also – they have a long history of working with the book, and so they had a lot of media and interactive content that they wanted to be able to share, and obviously you can't share that in print. So being able to do things on



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PubPub like include video annotations and include links to online video games that they made and augmented reality video games they made changes it from just being this book that has annotations into this book whose annotations turn into the context that lets you dive into different depths of the content.

KENNEALLY: So *Frankenstein* occupies a spectrum rather than a single spot, if you will.

RICH: Right. Absolutely.

KENNEALLY: Yeah. Terry Ehling, MIT Press originally published this book by – I believe it was Ed Finn – *Frankenstein: Annotated for Scientists, Engineers, and Creators of All Kinds*. That came out in 2017. Were you thinking about *Frankenbook* when you acquired that book and were thinking about publishing it?

EHLING: Yes, I believe we have. I'm not in touch with the acquisitions editor who handled that project, but my understanding is that, yes, this was part of the package, as it were, that we acquired.

KENNEALLY: So what's happened since then that's perhaps surprised you? Some of the annotations that have come through – I wouldn't have expected video games to be a part of this. But either Terry or Travis, do you know of something that came in online that you said, boy, if we hadn't had this project, we would never have thought of that?

RICH: I'm trying to pick one.

KENNEALLY: I'm going to stump you here. (laughter) We can edit this part. Don't worry. We don't even have to go with that question if you can't think of something.

RICH: I think one of the things –

KENNEALLY: Hang on. We'll just go three, two, one.

RICH: One of the most interesting things to me, and I think probably most interesting to other readers, too, is that *Frankenbook* in a lot of ways revealed all the ways that the team at ASU really had been putting energy into this work. They had museum exhibits, and they had these AR video games, and they had these production movies that they created. If I had just bought the print book, I might have gone online and looked for it a little bit more, but I don't think I would have. So the shocking thing to me wasn't necessarily anything about the platform or the code



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that we wrote, but it was about what the authors really did when they had the tools to connect other context to the book.

KENNEALLY: OK. Well, you're trying to connect this project at the Knowledge Futures Group and PubPub to other university presses and just the publishing industry, if you can call it that – the publishing profession at large, Terry Ehling. So tell us about this ongoing environmental scan that the Andrew Mellon Foundation has provided a grant for. You're going to be looking at existing code and open source platforms in scholarly and academic publishing. What are you hoping to find?

EHLING: That's right. There's been a tremendous amount of activity in this space in the last five, six years or so, much of it that has been funded by the Mellon Foundation. We want to try to understand where these projects are, what contribution they make, what are their roadmaps? There are probably gaps, so doing a gap analysis about what might actually be needed and what needs have not yet been met.

So as far as we know right now, there can be upwards of 20 or 25 different open-source publishing systems that are available, and we'd like to – the community would very much like to have a profile of all those systems so that we can better understand where to place our assets.

KENNEALLY: Right. We're here at MIT, a place known for computing and for science research, but what we're talking about with both of you is the juncture of computing and creativity, if I can call it that. It's important to point out to listeners that the Media Lab has been around since 1986 and talking about harnessing technology for creative expression. In 1995, MIT Press published what is called one of the first open access books, *City of Bits* by William Mitchell. He was very prescient in observing the ways that online communication was a powerful and liberating force. So, Terry Ehling, to wrap this up, do you feel that you've taken an important new step by establishing the Knowledge Futures Group in realizing the potential of this new and liberating force?

EHLING: Oh, yes. Absolutely. I'm really thrilled to be part of this. An earlier version of the Knowledge Futures Lab did come up about the same time that we published *City of Bits*, so we've been operating in this space for over 20 years now.

When I was here back in the '90s, *City of Bits* was by all accounts the very first book to be online full-text – not just snippets, not just a chapter here or a chapter there. That was really quite a breakthrough. There was a lot of concern that going an open access route would actually destroy the sales of the print edition, and it did



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not. At the time, it actually amplified them. We sold about three times the number of copies of the print edition. So I consider this very much an extension of that very early work that we did in the mid-'90s, which was a very heady time for us as well as here at the institute.

KENNEALLY: And Travis Rich, a pretty heady time for the MIT Media Lab right now, I would think, because we are pretty much at Knowledge Futures – if not version 2.0, maybe 3.0.

RICH: Yeah. I think the Media Lab has done a great job at articulating over the decades that no matter what technology you build, it's really about the people at the end of the day, and I think society and culture and a lot of different groups are starting to realize that, yeah, it's not really about the platforms. It's not really about the things we invent. It's about what we as humans do with those things and how we make them serve us as a community, rather than just empower us because we can. So I think that approach of focusing on creativity, focusing on the human in that loop, is something the Media Lab has loved to do for a long time. I think that society is warming up to that a lot more.

KENNEALLY: They're finally catching up with what's going on here in Cambridge. Travis Rich, project lead for PubPub and a recent graduate of MIT Media Lab, thanks for joining us on Beyond the Book.

RICH: Thank you so much, Chris.

KENNEALLY: And Terry Ehling, director of strategic initiatives for MIT Press, thank you, as well, for joining us.

EHLING: Thank you. Thrilled.

KENNEALLY: Beyond the Book is produced by Copyright Clearance Center, a global leader in content management, discovery, and document delivery solutions. Through its relationships with those who use and create content, CCC and its subsidiaries RightsDirect and Ixxus drive market-based solutions that accelerate knowledge, power publishing, and advance copyright.

Beyond the Book co-producer and recording engineer is Jeremy Brieske of Burst Marketing. I'm Christopher Kenneally. Join us again soon on Beyond the Book.

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