



Make Your Story
Purdue Libraries and School of Information Studies

Season 3, Episode 1: A Penny Press for Your Thoughts?

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AB: Hello and welcome to another episode of Purdue University's MakeYourStory podcast, celebrating student stories of making and creating new and exciting projects and innovations all over campus. My name is Dr. Annette Bochenek. I work as an assistant professor and business information specialist at Purdue and I am your host for today's podcast episode. As a librarian, I frequently see Purdue's Library and Information resources aiding in the research process that prefaces so many of these projects of making and creating.

Today, our story of making comes from a Purdue engineering alumnus, Matt Fitzgerald, who paid tribute to the university with his co-creators in the form of a penny press. This episode tells the tale of his work in taking one of Purdue University's most iconic landmarks—the bell tower—and scaling it down to miniature form. I am delighted to share this conversation with you.

So, tell me a little bit more about yourself. What did you study at Purdue and what years were you at Purdue?

MF: Sure, sure. Great. So I'm Matt Fitzgerald. I am a 2020 alumnus. Graduated from Purdue right in the middle of the pandemic. They canceled classes right before we were supposed to graduate, which was a bummer, but I was there. Graduated from St. Viator High School in Arlington Heights, Illinois, went to Purdue and originally went into first year engineering. I started out in the engineering program, got into computer engineering, didn't really find it to be my type, and then switched over to computer information technology and wound up getting degrees in computer information technology, systems analysis and design, and a certificate in entrepreneurship and innovation from the School of Business.

AB: That is awesome. So you're definitely busy, pandemic or not.

MF: Yes, definitely great experiences.

AB: Wonderful. Well, one thing too that caught my eye, which is definitely why I asked you on this podcast, is the penny press. And then to our listeners, there are actually several instances where I was wandering through the Armstrong building and I so enjoyed seeing this Penny press, sort of a miniature version of the bell tower we have here on campus at Purdue, West Lafayette. And of all people, it turns out that you were one who was behind the penny press project. So I wanted to talk quite a bit about that since it's such a unique item to have here at the university. I'd love to hear more about what inspired you to build this penny press.

MF: Yeah, definitely. Before I get started with all that stuff, I just want to say it was a very big team effort. I was one of the project managers on it. There was another project manager, Sedona, she's awesome. And we both kind of tag teamed it and worked together and made this entire project a reality. And the inspiration for this really came from the College of Engineering. We were celebrating the 150th anniversary of Purdue, and every school wanted to do something big to commemorate that special occasion and see how to showcase the skills that the school can provide. So we got a request from at that time, Dean Mung to build something to commemorate the College of Engineering delivered to the 150th anniversary and we got together. They just were like we should build something, we should do something with this. Our group got together and somebody said, what about a bell tower? And through a bunch of design iterations and different meetings with folks like Dean Mung, we were able to make this thing a reality which was awesome. And it was a huge undertaking and we had great industry partners that helped us with it as well.

AB: That's awesome. I definitely want to give your teammates a shout out as well. You mentioned Sedona. If you want to mention Sedona's last name.

MF: Sedona Carey. Yes. There's a lot of folks on the team. I'm not remembering everybody's name right off the bat. I know Matt Gryzlo was on the team. There were a couple of other folks that really, really worked hard on that. And everybody throughout the couple of years that this project was active, as people were coming in and out of the project, everybody left their mark, which was really cool. And all of those different people were able to make something so awesome and so representative of not only the University that commemorates what's going on, But something that gives you a little bit of a souvenir too, probably. The cheapest Purdue souvenir you'll get ever. So Yeah.

AB: So true. Yeah. I think we're all at least vaguely familiar with the old penny press where if you happen to have \$0.01 on hand, and sometimes it's a little more than \$0.01 too. But to get that souvenir where it essentially squishes the penny and gives you a little souvenir.

MF: It's a whopping \$0.51 cents. But on the bright side, the money goes to tuition assistance for the university as well. So the money that came from that did go to tuition assistance, which was cool.

AB: That's so great. And then I guess my next question is about the bell tower in particular. Out of all the different places and points of interest on campus, we do have the bell tower, which is one of the big, I think, visual symbols for Purdue. There's a lot of history behind the tower. There's a lot of lore behind the bell tower as well. I'm wondering why was the bell tower the design your choice for this particular project?

MF: So that's a great question. And you mentioned there's a lot of different things, like we are one of the few universities that have an airport. We have the engineering fountain. We have Armstrong Hall—which is a beautiful building—the union, so many things that are so salient to Purdue. It was a tough decision to figure out what to make, but we obviously chose the bell tower. After a bunch of thought, the reasoning for that came down was we wanted something to be interactive. If we would have done something with the engineering fountain, we probably would have had to actually include water, things like that. And people could get hurt. Other problems could arise from that. The bell tower was chosen because I don't want to say it's an easy shape, but something that we could work with. We could put something inside of the bell tower, transport it easier. And if we made anything bigger, we already have to take it in two pieces to get it through doors. But if we made anything bigger, it'd be problem to transport.

AB: Got it. Definitely. You mentioned several other points of interest. Were any of those contenders or did you have other contenders as far as the design?

MF: We had contenders. The engineering fountain obviously was our second choice from what we've seen. But we were struggling to find the interactive element of that, how we could make that interactive without either using water or lights or something like that. So I still got my lights in the bell tower, but we were able to make the bell tower in a way such that it held the interactive things inside. It was all self-contained and we wouldn't have been able to do that with other landmarks per se.

AB: Gotcha. You mentioned you had a lot of opportunities for collaboration within Purdue to help make this happen. Who were some of those collaborators for you that helped you realize this project?

MF: Definitely the biggest shout out here goes to Libraries because they helped out with a lot of the research for this project. They made sure that we had all the information we needed on the actual bell towers. And I believe facilities also collaborated to actually get us the original schematics for the bell tower, the original architectural drawings. And I don't think it was original per se, but at least a scan to send it to us so we could base our designs off of that.

AB: That's so great. You could get a nice view of all of it, right?

MF: It was awesome. I still have the PDF just in my digital scrapbook from Purdue. But I was able to get a little print out of them and I actually have it hanging in my basement right now because it's so cool-looking and you're able to see all the measurements and the way they were laying the brick and all of that stuff. It was fascinating to see.

AB: Wow, yeah, that is so interesting. You got all those minute details through the original plans for it.

MF: And that's one of the things that I really applaud about Purdue Libraries and the people at Purdue. If you have a question, you just have to go and ask them. People will be happy to help you find things and do the research. I mean, I'm an engineer, I'm not a researcher very well. I'll do my research or my researching, but I'm not going to go through and spend hours and hours. I don't know where to look, and even if it's just pointing us in the right direction, they helped out with that. And it's great. It was really, really beneficial to the process.

AB: That's good to hear. And again, just another strong argument for why it's so important to just preserve our history for one, and certainly as a university you never know when it all, might come in handy for projects like this.

MF: Definitely. Exactly. And that's a big thing too. Preserving history, that's really what we wanted to do. One of the other things I did while I was at the University was preserve some of the train rails that were buried underneath campus since the 1880s from the old Lafayette Railway that went through campus at a point. But it's another one of those things where all of the history, all of the beauty of Purdue, we really wanted to put into this bell tower and all of the people and the research we did to do that in a very logical and correct way. I feel that the penny press was not only celebrating the 150th anniversary, but it's relatively timeless because the die could be changed for other things and you could put it all over campus.

AB: Absolutely. Well, I'm sure you also had a lot of challenges along the way too, in creating the penny press. What were some of those big challenges that you encountered along the way?

MF: That's a great question. The biggest challenge was figuring out how to get it through doors. Because when we were originally trying to scope out what this would have looked like, how tall it would have been, how we were actually going to build this thing. We scaled the bell tower down. I forget the exact height, but it was going to be something like 20 feet tall. We scaled it. We had the cavity that we wanted to put all the mechanicals in. It would have been absurdly tall, it couldn't fit anywhere. We did a little bit of designing and kind of shrunk it down a little bit, so we made it a little stubbier than it actually is, but still able to get the essence of what was going on. Our other big challenge was actually some of the folks that helped us design the die for the actual crushed penny. Unfortunately, there's like one company in the US that makes those and they were backlogged at the time. And I think the one guy who did it like got sick or something. And all I remember is it was down to the wire to get that stuff set up because we wanted it ready for homecoming. And we were down to the wire. It was ready only a couple of days before.

AB: Wow. Who would have thought? My goodness. And out of sheer curiosity, where is this one company? Who's the one company who

MF: I forget the exact name of it, I know they're out East. I think they're in New York or Pennsylvania.

AB: Okay.

MF: Yeah, and it's a very generic name too, I'm so sorry. It might be like Crushed Penny Inc. or something like that. So yeah.

AB: Wow. Well, that in and of itself is also quite fascinating, right? But for all those challenges, you did have some successes. So did you have a big breakthrough moment or particular success along the way in creating the penny press that you remember, or maybe you are just quite proud of?

MF: This is going to sound so horrible. While we were working on this project, we kind of had to keep it secret because it was not necessarily the public knowledge what we were doing with this. We wanted to make sure that folks knew, hey, there's something cool that's going to be happening. And then they unveiled it at a big Dean's dinner. But as I was mentioning, coming up to that, we worked on it in secret. Actually, one of the people I forgot to mention earlier, Kevin Hunckler, helped design one of the circuit boards for the lights and sound for the penny press. And in order for when you put in a coin, it makes a lot of lights and sounds and plays the Purdue fight song, stuff like that. And he designed the circuit board for that and I was integrating it into the actual penny press. And I remember I'm in the storage room in Armstrong Hall on my back with a soldering iron about 6 " from my nose, with my head inside the penny press laying on my back with the top part on the ground. There was a little door opening and I had my head in there and I was soldering inside above my head. I'm sure the safety people would have had not a lot of nice things to say about to me with that, but looking back on that, it was really fun with that. That was the final touch. Something had broken. I went and fixed it. And then I tested it out and it just worked and you feel the stress just come off of you. You're just like, it works, it's done. At that point, we were ready to deliver it to Dean Mung and debut it at the homecoming dinner, which was awesome.

AB: Oh, wow. How was that? What was debuting it like, and how was it received?

MF: It was that you're proud of it and it was so incredibly scary. I remember that because I was onstage, Sedona was reading, kind of like introducing the project and all of that stuff. She was at the microphone talking. And I was here standing next to, on the other side of Dean Mung with this big obelisk covered in a tarp to kind of hide it. And I had it all powered on, I had everything ready to go, and I was so nervous because I was still facing some of those issues. Like I got it working. It was relatively reliable, but it wasn't what could have been. I could have done more testing. Just due to the lack of time there wasn't as much verification that I

could have done to ensure it was working 100% correct. I was able to do that after the dinner, luckily. But I was so nervous standing up there because I'm like, this thing is going to break, it's going to fail. It's going to embarrass me in front of 300 people that were in the audience, all the donors for the College of Engineering. I'm just going to be disgraced. Like this is the end of my college career, no pressure. So yeah. And then we pulled the tarp off of it. The Dean was the first one to use it and made a penny, and it worked. So, it was incredible. It was just sheer jubilation at that point that it actually worked. Everything. This project that was almost three years in the making had been completed. And it was incredible to see,

AB: Oh, my goodness, what a story. Well, I'm like stressed and happy for you at the same time. A job well done on that front. I guess with the penny press itself, I think that's such a fun thing to create, such a fun legacy to have here at Purdue, which also begs the question, what are you up to these days? What have some of your projects been since then?

MF: Sure, sure. Yeah. So I'll kind of go into a little bit of what I do for work and then I'll touch on the projects. But right now I work for a company called Entara, based out of the Loop in Chicago, and I run all of their automation. I'm a Lead DevSecOps Engineer. So what that is, is development and security operations. Basically if you do any form of business process automation, that's me and I go through and I'm working with a lot of AI right now. I'm developing in-house AIs. I'm working on kind of streamlining business processes, reducing the cost to deliver services, and basically helping people do their jobs more effectively. Entara is mainly a breach remediation contractor. If a company gets hacked, we work on that and also deliver help desk services so like companies can contract with us to be their IT desk. What I do that fits into that is basically make sure that people aren't working harder than they need to in order to fix these issues. If we have to push out something to 5,000 computers, I can automate that using a script rather than people doing that by hand. It's really, really interesting, and I enjoy that as of recently due to the security nature of what we've done. I'm actually a co-founder of a startup called Forecheck. What we do is we actually work with cybersecurity with company cybersecurity to ensure that they aren't getting hacked. Again, in a lot of cases, we've noticed that people will get hacked and they don't actually fix the problem. They're so caught up in actually dealing with the hack, getting back in business, that they're not actually going to go close the door to prevent people from getting in again. They might close the door, they might not lock it, or they might not put on a new lock. So what our software does is we give what's called cyber resilience and allow companies to realize what happened and how can we prevent this from happening again. That's what I do for work personally. I really enjoy making websites, designing things. I mentioned lights and Sound a little earlier, I'm working on a very large Christmas show right now. One of those blinking lights, Christmas shows. I love gardening. I have a bumper crop of tomatoes this year. But yeah, that's what I'm up to outside of work.

AB: That's excellent. A lot of creativity along the way. So here, definitely within Purdue libraries throughout the university too, we always try to encourage creativity and creation and try to inspire other people who are looking to create things, whether it's a podcast or virtual content or these more tangible projects like the penny press. Do you have any general advice or words of wisdom that you'd like to offer other people making and creating around campus?

MF: Wow, that is a loaded question because I could spend an hour just giving advice on how to do that. But it's, I guess what I would say to people who want to go and make something is just go and do it. I worked at the Bechtel Innovation Design Center on campus, too, which specializes in doing exactly that. Just going and making stuff. If you have an idea, head over there, head over to whoever you know and go and make it. There's people who are willing to help you do this. Willing to help you with every step of the process, whether that's Libraries, the folks at Bechtel, even people from EPICS, Purdue engineering projects and community service or industry partners. One of the great projects that I was able to work on while I was at Purdue is me and my roommate and my neighbor actually from the dorm I was at, were able to design and build a complete 3D printer from scratch using all of the resources on Purdue's campus. We only had to go out and buy a couple parts and we obviously sourced those. But we were able to utilize a lot of the engineering staff to basically proofread our designs. We were able to use Libraries to go and do research on different materials and all of the engineering specifications to make that we were able to basically involve the community. One of the greatest things about Purdue is it's a very innovative school and like going along with that, if you meet somebody, chances are they have a very similar mindset. I know that's how I made a lot of my friends. My freshman year was just being like, hey, I built this and people are like, oh, that's so cool. And you can strike up a conversation about that. And usually by the end of it, you have another person to help work on your project. That would be kind of some of my words of wisdom, just get out and do it. There's plenty of resources available on Purdue's campus and there's so much that Purdue can do to help you get that reality. Get that idea into a reality.

AB: Wonderful. Well, I think this is a great time to wrap up and have anyone listening go ahead and get to whatever they need to go create and make. Well, thank you Matthew so much for spending time and sharing information about the penny press and your time at Purdue. I really appreciate it and wish you the best of luck with all the projects that you have going forward.

MF: Well, thank you very much. I really appreciate being on here. And just my last words, go and make it.

AB: And with that being said, the bell tower lives on campus on the ground floor of the Neil Armstrong building in the form of a penny press. For fifty-one cents, you too, can enjoy the fun of the penny press and take home a memorable memento. Thank you for listening to this episode of the MakeYourStory podcast. Until next time!