

Slice of MIT Podcast | What Makes Rock Band Rock

[SLICE OF MIT THEME MUSIC]

ANNOUNCER: You're listening to the Slice of MIT Podcast, a production of the MIT Alumni Association.

HOST: Rock Band is a popular video game that makes you feel like a rock star. You strum a plastic guitar, bang on drums, or belt out classic rock songs holding a toy mic. Your band gets points when you hit the right notes at the right time. And like many interactive games, people really get into it.

[MUSIC PLAYING]

ERAN EGOZY: I think when we saw the guy who was playing his guitar and jumped up in the air, to hit the last downbeat, and landed on his coffee table, which was made of glass, and then smashed right through it, but then kept on playing until the song was over. I think that's when we knew we made it.

HOST: This is Eran Egozy. He and Alex Rigopoulos met at MIT and started Harmonix back in the mid '90s. Not a lot of companies use a smashed coffee table as a measure of success, but in Eran's case, success is all about passion. Their mission: help people experience making music. The company is behind Rock Band, Guitar Hero, and many other award-winning video games. But it wasn't always that easy.

[MUSIC PLAYING]

HOST: In this episode of the Slice of MIT Podcast, Eran shares how an Apple II Computer and some Beethoven got him thinking about music and tech early on. And we get some sage career advice. Oh, yeah, and we listen in on a jam session-- on clarinet. Stay with us.

[MUSIC PLAYING]

[CAR DOOR SLAMMING]

BRIELLE: Harmonix.

HOST: Pretty cool.

HOST: That's my colleague, Brielle, and me, Kate, as we drag our gear into the Harmonix office to

meet Eran.

EGOZY: Hello.

HOST: You mentioned good places to set up. Where would recommend?

EGOZY: Well, I could show you around.

HOST: Harmonix's office is hip. It's got a studio vibe with leather couches and a blue wall where the company's many awards are displayed.

EGOZY: Right. So, here it's offices around the sides. And then these kind of function--

HOST: Before we jump into the story of Eran and Harmonix, let me back up and give you a little history. Eran is pretty passionate about music, teaching, and learning. And that really hasn't changed since he was a kid. When Eran was 15, his parents bought him an Apple II computer. He and a friend got together and decided to find a way to make the computer play back Beethoven's Ninth Symphony.

EGOZY: Today, if you want to enter music into a computer, there's programs that do that. And they're visual and you can either play them on a keyboard or you can draw them with a mouse, or whatever, right? So, I didn't have anything like that.

HOST: Now, this wasn't just one instrument of the symphony. The pair found the whole symphony score, complete with all of the different parts for the string instruments, the brass, and the woodwinds. And every day after school, they would translate the music into computer code. Every 10 seconds of the score took three to four hours to code.

EGOZY: And I had to enter it note by note using hexadecimal code. I was just looking at that note and then just typing-- and I had my whole coding scheme memorized-- but, yeah. I was just typing binary data in order to do this. I did this every day after school. It was kind of nuts.

HOST: As they slowly coded the music, the computer would play back Beethoven.

[MUSIC - BEETHOVEN, "NINTH SYMPHONY"]

EGOZY: While that sounds completely trivial today, back in the mid '80s, I think it was kind of a cool thing to do. Sounded kind of cool, though, when it was done.

HOST: Not every 15-year-old kid is into Beethoven, but Eran had already caught the classical music

bug.

[CLARINET MUSIC PLAYING]

HOST: He started playing the clarinet when he was 12.

EGOZY: I played all throughout high school and MIT. MIT has a fabulous music program. That kept me playing. And then after graduating from MIT, I joined this group Radius Ensemble, right when it was also getting started. And that's been fabulous. It's sort of kept me playing and kept me growing, playing clarinet.

HOST: How often do you play the clarinet?

EGOZY: Oh, I play-- I mean, I play every day. So, I practice every day in the mornings.

HOST: When you play music in a group, there is a moment when you completely connect with your fellow musicians. Eran explains.

EGOZY: You are constantly looking around each other, you're listening, you're watching body motions, you're giving cues, you're receiving cues. And if a piece of chamber music is going to succeed, you have to have all that very dynamic communication happening onstage. And you can tell when it's happening. It's a really, really wonderful feeling of like, oh, we are so locked in right now.

HOST: That feeling of being completely in sync with your fellow musicians is also felt when you start a business. After graduating from MIT, Eran and Alex started Harmonix in 1995. In the early years of the company, Harmonix came out with a game called The Axe. Users could make onscreen instruments play music by moving around a joystick. They also developed a game where you could move your body to make an animated character travel through an obstacle course. Both games didn't really take off. Then in 2005, a hardware company named Red Octane approached Harmonix. They had an idea for a partnership around a new game that would become Guitar Hero. Red Octane would make the plastic guitars if Harmonix would build the software.

EGOZY: It was a crazy idea. But we said, of course. We have to do this. And it was a great partnership. They were totally behind it, we were totally behind it. They funded the game and actually ended up owning the brand Guitar Hero and made the hardware. We made the game itself, soup to nuts.

HOST: But Eran never really thought the game would take off.

EGOZY: So, in fact, we were used to not much commercial success at all. That was sort of the norm. So, when we made Guitar Hero and put that out there, we figured the same thing would happen. Oh, OK, well, we just made this game and they'll sell a few units. But got to go back to the drawing board.

HOST: But this time it was different.

EGOZY: And so, of course, we saw the numbers coming in, which were crazy. Every month, we were selling twice as many units as the previous month, and it just kept on climbing up and up.

HOST: They had stumbled upon a way for people to play music. And it became what Harmonix called "a multibillion dollar rhythm action franchise". Guitar Hero, and then a sequel, were hugely popular. After a year, Harmonix was bought by MTV and Red Octane was bought by Activision. The two companies essentially switched from being partners to competitors. Then in 2007, Harmonix came out with its own iteration on playing music: Rock Band. Their tagline: "Start a band, rock the world." And they noticed a surprising social effect.

EGOZY: I talked to people who have played these games, and they said that it actually changed how they think about themselves. It allowed them to experience this act of performing music. And of course they're not really performing music, they're playing a game. It had this great social experience in the living room where you had-- where we have cases where the entire family plays together, three generations. Right? So, you have the parents and their kids and their parents, the grandparents, all playing in a rock band together. People tell me that their children learned about all this great music that they loved when they were kids. There's people, or kids today, whose first exposure to the Beatles was through Beatles Rock Band.

HOST: Harmonix has come out with Rock Bands 1, 2 and 3, and a special Beatles edition. They even visited Abbey Road for the release and toured with Paul McCartney as part of the game's publicity. And their latest edition, Rock Band 4, is coming out in 2015.

EGOZY: And it's great that we've had this commercial success and all that. I'm really glad that we've been able to influence people. But for me, it's really-- I get to do this awesome thing. I get to think about how music should work in using today's technology, and that's pretty awesome.

HOST: And he gets to teach it. Eran is frequently at MIT to share his story and mentor students. He's

actually going to be leaving Harmonix in the spring of 2016 to become a full-time professor in music technology in MIT's music department.

EGOZY: I still feel like I'm the same kid that was back there at MIT. I love hanging out with the students now. Where I'm teaching them, but I don't feel that different from them, in some sense. Yeah, they're younger and less experienced but they have this awesome sparkle in their eye. And I think I had that, too.

HOST: This past spring, Eran lead a course called Interactive Music Systems.

EGOZY: The most recent assignment was, create a virtual harp using the Kinect. So, the Kinect is a spatial sensor where it can tell that there is a person in front of it, and it can also create what's known as a skeleton to match what the person is doing. So, for example, you can tell that my hand is in front of the sensor in three dimensions. So, the assignment was, given that you know where your head position is, make a harp. So you can swing your hand back and forth and make harp sounds.

HOST: One student made a 2D harp that you could play by swinging your arms up and down and side to side. Another made a harp that plucked loud and soft based on how close to hand was to the sensor.

[MUSIC PLAYING]

EGOZY: When I was at MIT as an undergrad, I remember certain moments where people would help me out. And not that they didn't have to, but they did. And there's this wonderful environment where you receive, but then I think what you need to do in order to sustain it is to give back. The wonderful thing about teaching this class now is that I get to talk about really interesting details and specifics about how Harmonix created all of the products that we've created. What were some of the gotchas, what were the design decisions and considerations. So, it's fun to give back in that way as well.

HOST: While Eran was at MIT, one of his professors played that role for him. Eran worked on a research project under Tom Knight in the electrical engineering and computer science department, for several years. And over time he realized the research just wasn't that interesting to him anymore.

EGOZY: But it was fine. I just didn't feel really passionate about it. And just on a lark, I asked my professor what he thought, was there maybe something else I should try? And he said, oh,

you should go to the media lab, because they're doing some cool things over there with computers and music.

HOST: And that tiny little shift put him back on the right path.

EGOZY: And the difference between how I felt about what I was doing was so vast between the first one and the second one. But of course without the second experience I didn't know that I wasn't really satisfied with the first experience.

HOST: So, Eran believes the key to career success is passion.

EGOZY: If someone watching this is doing something or is thinking about a particular career and they're not really psyched, and they might not know why, it's time to explore. You have to go and see what else is out there. Because you might actually find that you like what you're doing, but you might find that there's something else that you're more excited about. I think that we're so much more productive and can have a larger influence on society if the thing that we're working on is the thing that we're really passionate about. It's not always easy to find what that is, but until you've found it I think you have to keep looking.

[MUSIC PLAYING]

HOST: What are you passionate about? Tweet us your thoughts on this episode to @MIT_Alumni. Thanks to Eran for sharing his stories and giving us a concert for this episode. If you want to hear more surprising, insightful, and quirky stories from the MIT community, subscribe to the Slice of MIT Podcast on iTunes. Let us know what you think. Please rate the podcast and leave us a review. We'll be back next month with another episode of the Slice of MIT Podcast. In the meantime, check out our website at slice.mit.edu. Thanks for listening.

[MUSIC PLAYING]

[SLICE OF MIT THEME MUSIC]

HOST: Today's episode of the Slice of MIT Podcast is produced in association with the MIT Alumni Leadership Conference. If you're an MIT alumnus, come back to campus on September 25th and 26th to learn how to get more involved with MIT. ALC is open to experienced and new MIT volunteers. Register at alc.mit.edu.