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SPEAKER 1: So the schedule for today-- once again, another one of those one hour lecture, two hour group work things. We've got a guest lecturer today. We're got Luigi, here, to talk to us about art and artists, especially when it comes to games and, particularly, visual artists. Yeah?

LUIGI GUATIERI: Yes.

SPEAKER 1: Yeah, so visual artists when it comes to game development. After his lecture, and after Q&A, we don't have any scheduled play tests today, but we do have a couple of guests here who have some really good experience making games. So if you'd like to set aside 10 to 15 minutes per team, have a person come and play your game, I'd highly recommend taking advantage of it. I mean, it all depends, I think, on what state your games are in.

I do want to know that. How many teams are now working in what is going to be their final development environment. So if you're working in Phaser, you're building in Phaser now, if you're working in Unity, you're working in Unity now. Looks like one team, two teams, three teams-- is that two different teams over there?

AUDIENCE: [INAUDIBLE]

SPEAKER 1: Here. OK, great. So everybody's pretty much working in a development environment. Great. Cool. So like I said, as it says on Stellar, Wednesday we're going to have a play test at 3 o'clock.

So at 3 o'clock we're going to have a guest class come in to play your games. We'll do a play test, just like we've always been doing play tests. And then before that, I'm going to be giving a talk on fiction and story for your games. And in between there will be time for you to meet your teams and set up for your play tests.

LUIGI GUATIERI: Cool, artists and games. And So this talk's going to be about what artists do in games, how to find artists, how to work with artists, how artists are involved in game development, the different roles that are assigned to them. I'm going to be talking from the independent games

perspective, so smaller teams, because that's sort of my background and my experience with games. But I will talk a little bit about the diversification of artists' roles in bigger studios.

First, who am I? I'm me. I'm this dude in the corner. My name's Luigi Guatieri. I'm a local Boston indie artist, when it comes to games at least-- no so much comics anymore.

Yeah, so I work with a lot of teams in Boston developing games. Since so few of these developers know a lot of artists, I get to work on a lot of different projects, because they don't have a lot of people to turn to. And I'll go into that in a little bit.

Sort of games I've developed in the past-- I worked on *Girls Like Robots* with Ziba Scott-- up there-- which was published by Adult Swim, iOS. And he likes to tout it as the 13th best rated iOS game of 2012. I don't really care about that statistic, but I'll mention it anyways.

I worked on *The Counting Kingdom* which Jenna Hoffstein, which is actually coming out this week on iOS. So if you have kids, please buy it. If you're not a kid, buy it anyways.

I've been working on *Elegy for a Dead World*, also with Ziba, and, as a partnership, with Dejobaan Studios, which had a successful Kickstarter so if anybody backed it in here, that was great. But if none of you did, then sucks to be you.

All right, that's sort of my summary. I'm not going to show my portfolio, or anything. But let's get into it.

So you need an artist. You're a programmer, or a designer, or a sound guy, and you can't draw for crap. You think you can be like, oh no. I'll just wing the art. It'll be fine. I'll release my game.

No, don't, do that. Get an artist. Artists make games look pretty. Artists make games more immersive. Artists take a player who-- maybe you have the most amazing game mechanics in the game, sort of like a dwarf fortress or something, which turns away so many people because of how ugly it is.

No, you need artists. Artists make your game better, more interesting, even objectively better in a lot of ways-- if you get the right artist, of course. It also makes something you're proud of looking at, and proud of showing off at shows. When you have your booth at PAX and you've got all the AAA studios around, all the high-end indies, and then there's you with blocks that hit each other, you're going to be kind of disappointed in yourself.

But cool. What kind of artist do you need? But of course, that depends on what kind of game you're making. Obviously, here I have just doodled out a few different styles. Style's a big part of art for games. But of course, there's different roles and different kinds of artists in the world. I'm sure a lot of this will be redundant to any of those who really like games, but I'm going to go over it anyways.

Obviously, in big studios you have a lot of very specific roles for artists. This is a character artist, environment artist, texture artist, this is the animator. But when it comes to indie studios, I'm the guy who does everything.

I do the concept art, the 2D assets. I do the promotional material. I do the graphic design. I do the logo design. I make trailers. Because usually indie studios don't have the funds. They don't have the ability, or the time, and/or the resources to get more than one artist, so it sort of comes down to the one guy.

But sort of going to go through the different kinds of art that are typically done in games. I'm going to break it down to their specific roles. And I'll talk about-- I'll be showing mostly my work here. I'll sort of break it down to the different kinds of art, and the different kinds of artists that work on these.

So first is a swath of indie games that are 2D now. Used to be that retro games were 2D. And then older games before polygons and all such things were all 2-dimensionals-- 2-dimension. So 2D makes up [? like-- ?] illustrators, graphic designers, concept artists, sprite artists, texture artists, 2D animators, UI designers-- it is a large field. Again, with indie developers, it's easy to go 2D, because you don't have to worry about 3D, which takes a lot more time.

So this is sort of some 2D assets from a prototype that I worked on a while back, but this is sort of [? my old ?] [? end ?] game stuff. Of course, the first part of 2D art, which also pertains to 3D art, and at bigger studios they have specific roles for this. This is concept art.

Concept art is far my favorite part of pre-production, at least, in terms of you get to take what the programmer wants, and actually make it look like what they think in their head it's supposed to look like. They'll come to you with a crappy pencil sketch on some paper, and be like, here I've got a knight, and he's on a mountain, and he's fighting a dragon.

And I'll be like, this doesn't look anything like that, but I know exactly what you're talking about. And he's like, I'm feeling red! I want red! And they just took like a Sharpie or something, and

just scribbled all over the piece of paper.

So I'm like, all right, I got that. Give me like a day, and I'll come back, and then you'll have this painting of a knight fighting a dragon. And the [? programmer's ?] like, yes! That's exactly what I drew on my piece of paper. It isn't, but you let them have that. It makes them feel better.

So concept art is definitely for both 2D and 3D. You need to know what your game is going to look like before you dive straight into it-- into the visuals and even some of the design, before you have a clear idea of what the game's going to look like. If you have no idea what the game is going to look like, and you already have an artist, and you've made this amazing prototype. And you're like look, just swap out my art and put yours in.

That's not always going to work. There's a lot of design decisions you have to make around the art-- how the characters contrast from the environment, how the environments will animate, how the environments will disappear into the mist, or how this sort of UI will work. These are all things that it's really good to have an artist's eye on as early as possible.

It also gives a sort of visual Bible for the game. Concept art helps-- the artist draws it, and then hands it out to the rest of the team, and like, this is what we're aiming for. In a big studio, you would have the concept artist would hand that off to the 3D artists or the other 2D artists, the animator, the modelers, texture artists, and say, look, this is what we're aiming for. This is what I want the final product to look as close as possible to.

But of course, if you're making 2D games, you go into 2D assets. This is a screenshot, or an early screenshot, from *Elegy for a Dead World*. So with this, I sort of made the concept art, cut it up, and stuck it in the game. That's a really basic way of making 2D art. I have one with this sort of painterly style that I decided to go with the concept art. I made a painting. I said this is the style that we're aiming for. So I cut it up and put it in the game. And now you can move around when things happen, and you can explore this piece of art. 2D assets are part of--

Illustration, it's more of a old school term, especially when it comes to games now. People don't think of it illustration so much, but illustration is used for promotional art, for advertising the game, for inspiring your team, for websites, for trying to solidify your game into like a poster, or an image, or a banner. So many games are sold on Steam now with just a tiny little banner that you click on, then you get a little slightly bigger banner, and then maybe a game-play video.

So much of that first click, like making that person go, oh that tiny little banner looks kind of interesting. Let me click on it-- is such a crucial point, especially if you haven't done your job marketing, that you need to have illustrations and promotional art, and posters, and graphic design. And that goes under the Illustrator sort of dome.

In a big studio, they'd usually have the concept art also be the illustrations a lot of the time, but usually the concept artists are very proficient, because they have to be fast. And they also make the illustrations for a game. Obviously as an indie, you're making the illustrations too.

UI design-- this is like in between three different facets. You got design, illustration, and graphic design. Graphic design, I mean, by like sort of logos, and making things more readable to users, but that sort of goes into game design in terms of how the UI is going to work. And then you also need a graphic designer to actually make it look good. This is a big part of 2D design-- obviously, it's in 2D games, but usually UI's flat, because you're dealing with buttons and menus and HUD overlays. So that's sort of a weird intersection between all three of these facets, where it'd sort of have to be usable, has to make sense in the game design world, and it has to look good.

Let's jump into 3D. 3D is the more complicated side of the art. Painting a picture doesn't take me a very long time, but making a 3D model takes much longer time, especially if it's highly detailed or needs a lot of texturing, or I need to make it work in a very specific type of game.

There's a reason a lot of indies avoid 3D. It's because-- I mean, especially-- it's getting easier all the time, especially with tools like Unity and Blender but a lot in Indies do stick to 2D, because 3D just gives you a lot of hassles that you don't have to deal with in 2D. And usually you need more artists to work with 3D, because, to make a game in 3D, it takes a long time. You have to model environments. You have to model characters. You have to model objects.

Whereas in a 2D game, I'd be like all right, a box is just four lines and just color it in. Box in 3D? All right, I made the cube. That's easy, whatever. Now I got to texture it, and I got to inclusion map it, normal map it-- It takes a lot more time. And it usually ends up looking really nice, but usually you'd need more artists.

The roles in 3D is modeling-- this is one of my earlier attempts at modeling. So the modelers, they sculpt 3D characters in environments. They sculpt what's going to be put into the world. Modeling and texturing makes up the bulk of 3D work. It takes a long time to get right, and then sort of having to make it work within your game is another big facet of that.

ZBrush is a really fancy tool that a lot of 3D artists use. And they will sculpt the crap out of it, and be like, oh man, you can see every-- I sculpted every skin pore on this guy's face, and every vein is actually underneath his skin, and the fat, and the muscle, and the bone-- yeah, good luck getting that to run in any game right now. Obviously, things getting more powerful. Again, as an indie guy, if you tried to sculpt every pore into a guy's skin, you're going to end up spending a month working on that where you should have been spending a month just pumping out art.

So those get broken down further into character art, which is-- at bigger studios, you do have a specific character artist. They only work on the characters, because the characters are a very important part of the game, obviously, and usually have to be more detailed than a lot of the other parts of the game, especially if it's the player character. You're always staring at them if they're a third person game, or if they're NPCs you deal with regularly in the world, they're always there. They're always looking at them. They have to be visually nice to look at. And the modelers have to spend a lot of time making that work right and look right.

And they also have to deal with a lot of uncanny valley stuff, which-- what the uncanny valley is, if you try to make it realistic, and it doesn't quite look realistic-- like this guy-- people look weird, and people are weirded out by that. And it's a big problem character artists have to deal with.

Environment artists-- they're the ones who make the world. They make the buildings. They make the trees. They make the mountains. They're the ones who fill up the world.

Sometimes concept artists are actually broken up between character artists and environment artists too, depending on how big the studio is. Again, as an indie, you're always making the environment art, the character art, the concept art, UI, and everything. But usually when you hand in a portfolio to a big studio, as an artist, they always ask first, are you a character artist or are you an environment artist? Unless you're going for like UI design. But as an artist, if you go up and say, I don't-- I'm kind of both-- which is what I do, kind of both-- they just turn away. They don't have time for you unless you're just unbelievably amazing at both.

So the big facet I skipped out on both of those things is animation, which pertains to 2D and 3D. Animation is very, very difficult to get right in 2D, and in 3D, but 3D is way easier. There's a reason Disney closed down all their 2D animation studios, because it's a waste of time now.

It looks good, but it's very expensive, very time consuming.

A good reference point is-- has anyone played *Skullgirls*? Which was like a 2D indie fighting game. They wanted to add a single character to their game. And they started a Kickstarter and they asked for \$250 grand just to add one character. Because of how exact the animations had to be and the quality of the 2D animations. Hand drawing animations is very time consuming for sprites-- and sort of hand animating 2D guys. So that was sort of solved by tweening.

Tweening is-- as you probably all know-- is I have my arm, and I draw it, and I can do this with it. And that makes animation more fluid, and you can sort of blend in animations with other animations much easier, especially with like, I've been using Spine-- that's it. Spine in Unity to help blend a lot of my tweening animations.

3D usually only works with tweening animations, in sort of, you have the animation rigged. And you move the body parts around, and sort of algorithmically draws in the in between frames. Whereas in hand drawn 2D animation-- old school 2D animation-- characters-- if you want to move the character like this, you have to draw all of those frames usually.

So that's why a lot of indies, they turn to pixel art. Because an arm doing this is like two blocks moving, which it takes way less time. It's way easier. And it's a style that a lot of people like so it's sort of easy to sell it. If there was no such thing as pixel art, and you tried to make a pixel art game now, people would be like, this is kind of lazy. The whole world was Disney quality animation.

All right, great, so you're thinking about what kind of artists you need, what roles you need to fill for your game. But wait! The most important thing is, how much money do you have in your wallet? Because artists cost money, obviously. They have to eat, as much as the starving artist stereotype is perpetuated.

Obviously, if you're a big studio, you can just throw down the fat stacks of cash, and say, I want four concept artists, an army of VFX artists, 3D art modelers. I need 2D texture guys and UI designers, you name it. And they can bring in every one and get the best of the best, because they have millions of dollars to work with.

As an indie, you don't have anything to work with, usually, unless you Kickstarted magically now, and made a ton of money, or you have some sort of outside funding, you sort of have to

coax an artist into your grasp. And either promise them with some money you have or revenue share, but usually you're going to only end up with maybe one, two artists, depending on the size of your team. It's tough.

Amazing artists cost a lot of money. If you're trying to go for the best of the best, the famous guy you saw on the internet one time, they're going to charge for being the famous guy on the internet you saw one time. Middle-of-the-road artists are harder to find, because-- how do I put this-- either they're too old to have kept going with art and they've given up, because they couldn't be an amazing artist, and they're not making enough money as an artist making a living, and they're sort of given up, or you can nab them right out of school at some point or in school. But there are a lot of crappy artists out there. If you want to find any artist, there's a ton of them. I will go into how to find those guys too.

First, back to the next-- one of the early slides here-- artists are important. I know as a designer programmer, you think you can do it all, but don't skimp on artists. If you have an amazing game idea, you want to make that product the best you can. And having a really good artist is a big part of that.

You might think, I'm just going to sell my game on mechanics. It's going to be great. The best mechanics you've ever seen. But why stop there? Why not have amazing art to go with your mechanics? If you can hire multiple artists, please do. Because it'll take a load off of them, because-- especially at a big studio, even indie studios-- making art is a huge chunk of time. As graphics get more and more intense and more and more realistic, art is the thing that takes up the most amount of time during development and it's the money sink now.

You know, OK, let's say we're working on the new *Call of Duty*-- just came out. All right, this is a first-person shooter. We can do some level design. There's some added features. But like, all right, we need robots, and destructible buildings, and soldiers, and everything has to look as top quality as possible, or else everyone will decry the game as looking like crap, because of one other game that did go that extra mile.

And as an indie, maybe you do want to try and compete with that, in that-- let's say, all right, you have your illustrator. He can do the concept art, he can do the 2D assets, in a lot of ways. But maybe he's not the best at animation-- I'm not the best at animation-- so we'll get an animator, as well, who doesn't have to come up with the cool designs-- maybe he can help or she can help-- but you have this artist. You can be like, look, these are the monsters I need

animated. Can you do the animation while I move on to the next thing?

And especially if you're working in 3D, having multiple artists is almost a must, because otherwise you're never really going to get anything done, unless you can sort of design around having one artist, which becomes a huge limiting factor.

But again, with everything, especially in game development, you get sort of a law of diminishing returns. The more artists you have-- or the bigger your team is-- you know, going back to *Destiny* with its ridiculously high budget. It was like \$300 million or something, \$500 million? You know, how much more game did they get? How much more entertainment value did they get with their like studios of artists? They didn't just have one studio of artists working on that game. They had multiple.

So if you're an indie studio and you're like, right, we have two programmers and, like, eight artists. Eight artists, that work is diluted between them. You have to try and make sure that each one of them is working in the exact same style. You have to sort of understand that it is difficult to switch your art style. If you've been drawing one way your whole life, and then you're hired to a team, maybe wrongly, to work on this game that looks nothing like anything you've ever done. And you can't work within those limits, within that style, you're going to make work that looks different from the other artists, and it will stand out and it'll look weird.

Yes, really. Artists are important. I got to really stress this point because I like work. Artists not only make the game look good, but they inspire the rest of the team. If you're just sitting, staring at blocks hitting-- you know, pongs-- hitting a block back and forth all day, you're going to get tired of it if you're working on it for a year.

If you have constant art coming in, like concept art, animations, illustrations, and you see it when a website writes about your game, or a You-Tuber does a stream about your game, it's exciting to see like, look how good my game is, and I need to make this better to match to the awesome art that I have in the game. It helps motivate everyone to be excited about the project they're working on. To know that, look, when this comes out, it's going to look great.

And it's going to be compared to the best of them. Because that's awesome! And everyone should be inspired. And art is such a quick way of inspiring people, that it's almost worth the money to pay the artist just to keep your wheels turning. Because if you just, again, if you're just watching blocks bounce back and forth-- yeah, great, OK. If you get excited about that, that's great. But if you've got five other people on your team, and they're all just working on

blocks bouncing back and forth, they're going to go and work on something else that's more interesting.

So where do you find these so-called artists? Usually in sewers, like the Ninja Turtles. But artists, in general, are usually introverted people. Sort of like a upbringing of-- I'm just going to sit in the corner and doodle all the time. A lot of programmers have the same thing-- I'm going to sit on my computer and code. A lot of them don't go out of their way to make attention to themselves.

I first learned this when I was sort of going to meet ups around Boston for game development. And how few artists I was meeting. It was kind of disheartening in a lot of ways. And the few artists I was meeting, a lot of them were like, eh, OK, get out of here, you're done. Because artists, sort of, even some of the best artists I know, they sit in their rooms, they make their art, maybe they get a blog post on the internet, and it does really well. But a lot of them are just sort of like, oh I'll just work on this drawing. It's OK. And it's crap. Work on the next one.

So you do have to look for the right artist, which is sometimes more difficult than you think it would be. You would think all artists are always looking for work. They're all starving. They need work. They need work to live. Well, yeah sure, a lot of them. They're not going to be coming looking for you specifically. So here's some ideas of how to track down this elusive species.

Networking. Meet-ups, like I mentioned, a lot of game dev meet-ups. They do exist. They are there. There's some comic book meet-ups in Boston with a lot of artists.

It's all about maybe you'll meet someone who knows someone. That's how most of my work comes in, is someone who knows me from someone or from a project I worked on through networking, they get in contact with me, and I get work. I actually used this in a slide for one of my classes.

This is PAX. PAX is actually another great place, surprisingly to meet other artists. Because a lot of people are walking around booths, looking for work, surprisingly, at PAX. Which is kind of weird. They'll hand you business cards and you're like, oh, I'll check out your portfolio later. Maybe they're pretty good. And then maybe there's something to that.

Obviously, bigger conferences like GDC, IndieCade, like Unite, or something. There's a lot of artists there that hang out, and they're a great place to meet, socialize, see if you find

someone you sort of can relate to and hang out with, and maybe they have some really cool work they can make for you. I just thought it was funny, because I randomly found this picture of PAX East on the internet. Ziba and I at our first booth-- we're actually in it-- and it's circled. Our birth, I was very excited about that.

Internet, that scary place. There are a lot of artists on the internet, obviously. There are some big sites that are great to find artists, and sort of remotely discuss with them. CG hub used to be a big one, but for some reason the guy just shut it down. I don't know why. But deviant art, you have to shift through a pile of shit to find good art in deviant art, but it exists.

Tumblr is actually really good. A lot of artists I know, especially good artists, post their art on Tumblr. And usually with tags like game art or concept art or indie art. And again, you have the shift through a lot of crap to find the good stuff. But I know a lot of people who find work through Tumblr.

Conceptart.org has some of the bigger, well-known artists, but there's also a lot of smaller artists. There's like a jobs board you can post on there. This was conceptart.org. A lot of the big studios post there, looking for jobs. This is more for 2D painters, and concept artists, and 2D guys more-- Polycount, for 3D artists, which is another great website and resource.

But if you want to scrape the bottom of the barrel, schools. Schools are a great way to get free artists. I like the claw grabber, because that's basically what you're getting. I mean, I'm not saying there aren't amazing artists at school. Of course there are.

But most of them are, obviously, inexperienced. Most of them will work for cheap to nothing, because they're just excited about the fact to work on a game. So if you just desperately need an artist. And you're just like, I got this prototype. I want to pitch it somewhere else, but I just need some art in it. Schools are a great places. There's lots of schools in the Boston area. A lot of art schools around here with lots of people looking for work, obviously. But again, scraping the bottom of the barrel.

There's a lot of shows that aren't about games where are great to pick up artists. In Boston, we have the Massachusetts Independents Comics Expo, where a bunch of artists sit around tables and they sell their comics. This is a great place to meet artists who, maybe, aren't into games, but maybe you find someone who's like wow, your style's really unique. Your style's really cool. Come work for me. Come be a part of my team and we can make something really interesting together. There's a lot of artists' tables. There's a lot of-- I used to do these a lot. I

don't really do them so much anymore, but-- just selling your prints on tables. There's lots of festivals all the time.

I know this isn't really a stereotypical where to find a game artist, but they are great places to find artists who maybe never thought about making games. And maybe they have a really cool style that'll fit games perfectly, but they've just never even thought about it. Because, again, in this very competitive environment that we are in, game development, you want to make your games stand out and be unique. You don't want it to look like, again, *Call of Duty* number five.

Why are you bothering at that point? Why don't you find someone who has like-- no one can draw like this person. It might not be the most realistic, and it might not be the theme of the time-- like low poly is a big thing now-- but like, this guy will stand out. This guy will make my game look so unique and so interesting to people who may not have even been interested in my mechanics in the first place. And it jives with my theme. I want this person to work for me to make my game the best it can be, because that's really what it's about. It's all about finding that special someone.

You're going to have a working relation together. You're going to have some rough times, you're going to have some good times together. So you really want to find someone, especially as an artist, who you guys can work together very well. You understand a common goal. You're going to be both-- or if you have multiple artists-- you're going to be all your harshest critics, including themselves. You're going to-- because if no one in your group is telling you what you're doing is bad, then everyone else will and. They will do it much harsher and much meaner than anybody in your group.

Because if you're like, hey man, you know, this is a good drawing, but why don't you try doing this to make it better, is much better than a comment on, like, [? Kotaki ?] was saying, this fucking sucks. Don't buy this fucking piece of shit. Because that's-- yeah. You want to, again, you want to find someone who's good as an artist. You want to find someone who's competent, who turns things in on time-- which is a big thing.

I've recommended too many artists to developer friends who did not turn things in on time, and that made me look bad in a lot of ways, because I recomm-- I thought these-- I'm like these guys are great. They work hard. But they weren't hitting their deadlines, they weren't getting stuff in, so they obviously lost those contracts. So you guys are really going to be like partners in crime, especially if you're in a small, two-man group.

So these are some my working relationships I'll talk about. *Girls Like Robots*, I developed with Ziba. He's up there. You can all look at him if you want. He took a chance on me. I was out of college. And I'd done my three month period of mourning looking for a job. And he found me and said, OK, you're OK enough. I'll let you work on my game. And so we really hit it off. And we worked really well together. This game went places we didn't think it was going to go, which was great. It's still doing things that I didn't think it could do as a game. And so we've continued to work together from this.

This was *The Counting Kingdom* with Little Worlds Interactive, Jenna Hoffstein. This was a more standard contractual artist hiring, game development cycle. Jenna came to me and was like, I need these five things. Done. I need these 10 things. Done. I need these five things. Done. All done with [? sculpture ?] works and work for hire contracts.

She is the most efficient game designer I've ever met in my life. It was just boom, boom, boom, boom. We're aiming for this release. Done. Released. It was kind of amazing. I don't think any other game I've ever seen in my life developed that smoothly. And she didn't do any coding, which was also the crazy thing, as the lead designer and coder. She only used PlayMaker, which was kind of fascinating.

Elegy for a Dead World was a weird in that I worked with Ziba again from Popcannibal, but this was a game jam game that turned into a full game when it started getting some attention. It started out as a rev share agreement between a few different studios in the office. And it's been, less of, these are my boss's working on the game, but I've sort of been like a partner in crime. I'm on the same level as all the designers, which is kind of interesting for once. All right, enough of that.

Great, you found an artist. Now what do you do with them? You have them, all right? You just going to poke 'em a little bit? Hey, make some art.

Well, first you have to hire them. And there's one way I like to think that artists should be hired is with an art test. Before you sign them up for a huge massive contract, you should say look, you know what? Your portfolio looks great. I really like you as a person. I think we're going to work really well together. But how about you like take this design that I did, and I want to see the final product.

And I want to see how long it takes you. I want to understand your workflow and your process.

Because they might have the most amazing portfolio in the world, but if it takes them three months to draw a single picture, then it's not worth your time.

And maybe they just lied. That's always a thing. They might have just been like, I just found this picture. I found a photo and I drew over it, which a lot concept artists do to get things done quickly. They maybe can't do what you think they can do, and this is a good way to figure out exactly what they can do.

So you do pay them for this. You pay them for their time, whether you hire them or not. How many art tests I've gotten, which were like, oh no, no, I'm not going to pay you for the art tests, because it's just an art test. I want to see if I want to hire you.

No, no, no. They took time out of their schedule, doesn't matter if they're busy or not, to make this art test to show they are capable of doing the work. You pay them for the time they spent on it, whether they continue to work for you or not. If they don't, you say, thank you for your time. I don't think you're exactly what we're looking for. Get lost. But you do pay them for their time.

Contracting, most indies are going to be on work-for-hire basis for independent artists. What I mean by work-for-hire, those of you who don't know, any work they make, they don't own anymore. When I draw a picture on my own, it is my copyright.

I can do whatever I want with it. I can hire a 70 foot billboard and put it up, and there's nothing anybody can do about it. But if I'm under a work-for-hire contract, and I'm working for a game designer or game company, and I make art for that game, I longer can put it up on a 70 foot billboard without any permissions. The company, or the designer, or the person I'm working for now owns that art. And that is what most artists and other people work as for game companies.

In art school, I was always told work-for-hire contracts aren't fair, because then I can't sell my art again. And that is a-- I mean, that's good as an artist, meaning like, good, I can sell my same painting again and again and again and again for lots of money, and make more money off of this one painting. But that's not the norm in game industry.

It's the norm in other illus-- in other illustration fields you can do that-- some magazine publishing. Since they're all dying, they're much more lenient on that thing, on that. But game companies is, you no longer own the art. So you're going to have to make a work-for-hire

contract, usually with a scope of work attached to it of what exactly is needed from the artist.

Another interesting point for independent contractors when hiring for work-for-hire work is software licensing. It's usually up to the artist to have their own software. If they're hired full-time-- if you somehow magically are able to do that, usually you have to supply the software, especially for working at an office.

Great, so you've hired them. You've got them down. They're sitting there. They've got their tablet out. They got their pen. Now what do you do?

You got to art direct them. You have to play art director, even if you can't draw. As the person who hired this artist, you have to critique them, and understand how they work, and to give them feedback constantly, even if it's just encouragement. You have to make them make the art that you want them to make for you. They're not making art for themselves, they're making art for you. They're not fine artists. Fine artists just sort of waft in the air and discover what they want. But as an illustrator, or a 3D artist, you're like a plumber. I need you to fix this pipe. I need you to draw this picture specifically. It's a great variation on do what I say, not what I do, especially with a programmer or designer who can't draw.

But here are some helpful things to yell at artists. Aesthetic, just instead of saying do it better this time, just not as crap. Aesthetic, the general feel of the art. This one is a little hard to critique, aesthetic, but if you have a general sense of what the theme of the game you're going for, definitely be like, all right, this is a zombie shooter. OK, you've put Hello Kitty in here. This isn't really the aesthetic I'm looking for in the game.

And that ties into style. They're very close together, but style is very easier to point to and be like, we're looking for this style of game. And that helps guide the artist. OK, that's what they're thinking. It's a bad idea, but I'll sort of work with it, and see what I can come up with.

Contrast is probably the most important term in art, in general, and specifically for game development art. Contrast is how different things look, like in contrast in real life. Like when two things contrast against each other, that you're telling the difference between them or the similarities. In games, you want the character to stand out from the background. You need items to be obvious. You need certain things to stand out more than others, maybe things to disappear more than others, maybe things to be more similar, to be more hidden.

Like if you're making a *Metal Gear Solid* game is like, oh, I need the character to blend into

the environment. Contrast is a very helpful word when you're having trouble defining what's wrong with this image, why isn't it working in the game? OK, it's because these animations blend in too much with the character animations. I can't tell what's going on. Or, this image, there's not enough depth in it. This image, I need more depth. Contrast is a big word. It's a really great word that helps with that.

Saturation is another handy one, but that just means how colourful something is. The more saturated something is, the more vibrant and colorful it is. The less saturated it is, the more gray into whites and blacks it is. That really helps with saying, all right, this is sort of the objects and the theme I'm going for, but why don't you make it more colorful? Maybe make it more saturated so the world feels more fantastical and interesting. Or, it's like I want this to be dark and grim. Let's lower the saturation quite a bit to really make it feel like oh, it's a gray day and it's dark and dreary.

Composition, just the layout of art, and the layout of levels, or the layout of what the player is seeing, what the player is dealing with. It's just sort of the arrangement of items. It's another handy word to know.

But of course, encouragement, encouragement is always needed in any part of game development. It's always great to hear you're doing a good job. Give yourself a high-five, or me a high-five, whatever. It's really helpful to encourage your artists, so it makes them make the best work they can. If you're just yelling at them all the time, and they're not doing a good job-- or you don't think they're doing a good job. Maybe they aren't, but they're not going to get better if you're just always dissing what they've got, and it's not fun.

Let's go into-- so you've got the artist, you're going to art direct them, now what are the phases? Pre-production! Pre-production is the happiest part of game development. You're coming up with all the ideas. Your scope is increasing through the roof.

You're like, oh, now we're going to have open world this. The world's dynamic, the characters die, their families grow up, it's going to be great. The art is going to be realistic! It's going to go into space! We got to have all these textures! And the concept art is amazing!

But as an artist, you're working on, usually, the concept art for the game. You're helping with ideas sometimes. Maybe your designer, he's so happy to let you help out with ideas for the game.

Pitches, another good thing if you're making concept art. If you're pitching a game to get funding, like Kickstarter or maybe it's one of the bigger studios like Sony, Microsoft, Nintendo, or others. If you're trying to get money upfront, artwork really helps a pitch, because you have nothing to show. On Kickstarter, you're selling hopes and dreams. You're not selling a game. Because people are imagining in their heads what the actual game is going to be, and it's way better than what you're actually going to make, because they have no idea what they're thinking about.

Pitches with art work better than pitches with nothing. If you just have text, and just be like, here's some scribbles of how my game's going to work. They're going to be like, I'm not excited. But if you have like, here's a painting! And then they're like, wow! That's amazing! How's the game going to work? Don't worry about that. Just look at the painting.

Web stuff, so making a website, obviously, it's early pre-production. Maybe you want to make a blog or something about your game. It's a great place to start. And posting about art as it comes in from concept art, and pictures--

Logos are another big thing, especially if you're doing a pitch. Logos really help with identifying your game, not only to your selves, but if you ever want to talk about it really early on, it's a really good way of getting your icon out there.

And early prototype work, so if you've made a prototype, and you're like, look, let's just slap some art in there to see what this game's actually going to visually feel like. This is all part of pre-production.

Production, the bulk of the work. So this is all the asset creation. This is, maybe, you're doing concept art here too. Maybe you've said, all right, that style isn't working. Let's go back a little bit, but we'll keep moving forward with making models and texturing. It's all about iterations too in production.

It's sort of oh, OK, this level doesn't quite look right. Let's change it a little bit. Let's make it look like this. This is the longest part of game design usually, unless your pre-production was, I've thought of this game from five years ago. This is just making the stuff that will actually go in the game and making it fit together.

Near end of production, and this is when you start panicking and realize your open world space game with dynamic NPCs and families that live and die and have children isn't exactly

panning out. You start cutting things just to get things done. The artist is usually hopefully done by now towards the end, but they have to start doing the promotional push. They have to start making the illustrations, and the art, and the graphic designs, and the Steam banners, and making sure everything looks as best as it can so when this game fires out to the world, a lot of people get it.

As indies, I have to make trailers too. Usually you have a trailer dude for that at a big studio, but as indies, usually the artist has to make the trailer. So that takes up more time you would think. On *The Counting Kingdom*, Jenna came to me and said, I need a trailer in two weeks. And that was harrowing because I fully animated it for some reason. But a lot of the art is also like putting together store assets like trailers and banners and promotional stuff.

So sort of in conclusion, indie artists, they fill many roles. They do lots of things. At a big studio, you have these very specific jobs that everyone is assigned. They go in the morning and they know, I'm going to be the guy who animates shattering glass all day. And they do it for three years and the Avengers comes out.

But at a smaller studio, you know, all right, I'm doing the concept art, at the same time, learning how to model it, at the same time, I'm figuring out how the items in the game are going to work, at the same time, making the logo and maybe some early illustration promotional arts. And you have to like balance a lot of these things.

So is this is me in my zen drawing state, I feel like. I don't usually get to that. I usually get really angry and I don't get this calm when it comes to that. But yeah, indie artists, they have so much stuff to do, they have so much stuff to offer.

Hire artists. Don't make your game without an artist. That's boring. If you think you can do it yourself, that's great, but artists, they add a lot. They inspire you. They usually work hard if you find the right one. And you can form long-term meaningful partnerships with them and it's great.

Thank you. There's my email address and my website, if anybody cares.

[APPLAUSE]

Cool. 44 minutes. It was close.

SPEAKER 1: Excellent. Do you got time for questions?

LUIGI GUATIERI: Sure. Nothing? Really? [INAUDIBLE]

AUDIENCE: Actually, quick question.

LUIGI GUATIERI: There you go.

AUDIENCE: Do you ever work on multiple projects [INAUDIBLE].

LUIGI GUATIERI: I usually work on multiple projects at the same time. I guess that was a good point. I need to bring up-- that was a good question. As a indie artist, I'm not getting paid a lot of money. End of story. It doesn't happen. So usually I have to work on more than one project at the same time just to let ends meet.

Usually the work isn't full-time because either the company can't afford to have it full-time, or the amount of work they need isn't full-time. You have to juggle a lot as an artist. I'm working on a couple projects, doing contract work, sort of freelance illustration on the side. I'm also teaching a class. And you have to juggle all these things at once to survive, basically. Because as sad as it sounds, indie games don't make a lot of money usually, unless [? you're at ?] *Goat Simulator*.

Yes, go!

AUDIENCE: I didn't quite catch what you said, 2D animation is harder than 3D animation.

LUIGI GUATIERI: Have you ever seen an old Disney movie? They usually had armies of what they called in-betweeners, in that there would be a key frame artist. He would draw Snow White dancing like this. And then there would be the poor bastards who had to draw every single frame of her going like this, all 30 or 40 frames.

So in a game, if you want hand-drawn animations that look really interesting and nice, you have to get someone who will bother. Like, *Street Fighter III* is a great exam-- or *King of Fighters*-- those games take forever to animate, because they are done in that Disney style, in terms of just frame by frame by frame by frame by frame.

But the other thing they have to worry about is to make sure that the hit points are in the right place, that the collision boxes are in the right place. It takes a lot of time to do that. That's why when I mentioned tweening as a quick way of trying to mimic that, it doesn't look as good

usually. And in a lot of games that use a lot of tweening, like *Limbo*, for example, they hide it with silhouettes. Because you get these weird seams and it doesn't look as good. There are obviously tools that help with this like Flash animation. You can sort of do an in-between of tweening and hand animation. But sort of frame by frame, sprite animation, takes a long time.

And 3D-- I mean, it's easier, because it's all tweening usually. Unless you have some character that transforms all the time. It's the same way in 2D, in that a 3D arm that is rigged like this is always going to look like this because you can just sort of manipulate it in 3D space. Doing this in 3D is really easy. Doing this in 2D takes forever, if you know what I mean.

That answer your question?

AUDIENCE: Kind of.

LUIGI GUATIERI: Is there something you need me to follow up on?

AUDIENCE: I kind of see what you mean, like you have to draw every frame.

LUIGI GUATIERI: Yeah.

AUDIENCE: Unity has a very cool way to go around this. Like, [INAUDIBLE] that's actually 3D that is snapshot into 2D, so they don't have to worry--

LUIGI GUATIERI: Yeah, that's one way to do it. That's one way to solve it, but then you have to make all your models in 3D first, and then animate in 3D, which the modeling process takes time as well. And then you have to think about-- all right, I have 2D artists. Can I do this? No, I need a 3D artist to do this. It's just something to think about. But yeah, that's a way around it that a lot of people use.

Yes, go.

AUDIENCE: Does it make sense for a software engineer to learn the basics of drawing, so that they better understand maybe the artists and give more reasonable tasks?

LUIGI GUATIERI: Sorry, could you repeat the question?

AUDIENCE: So does it make sense for a software engineer to learn the basics of drawing, so that you better understand artists and maybe give more reasonable tasks?

LUIGI GUATIERI: Yes. Programmers, designers, software engineers should totally try to understand the basics

of art and color theory and the process of making art, so when it comes time to either advising the artist on what they need to change or what might not fit, you have some understanding of all right, these colors go together. These colors don't go together. Could you composition this a little better, so you like put these down here and that over there.

But again, a lot of art direction is about contrasting, and composition, and color is a big one. I didn't really talk about color, color theory, too much.

Like for instance, Jenna in Little Worlds Interactive, when I worked with her, she already had a pretty good graphic design sense, which really helped in, when I gave her art, and the sort of feedback she could give me. And also when she utilized my art. So I didn't put anything into that game. I wasn't directly working in Unity on *The Counting Kingdom*. She knew how things look good together, just because she'd already had like a background in web design. So yes.

Yes?

AUDIENCE: You were saying earlier that usually it's good to have-- or it's basically a must to have-- different people specialized in different roles. Like, someone is the game designer, someone's a programmer, and then you have to find artists to do all the game art. Do you ever find outliers to that? Like, exceptions? Like, someone who does everything and still comes up [INAUDIBLE]?

LUIGI GUATIERI: Of course, there's always exceptions. There's always some magic man who can do it all, or magic woman.

AUDIENCE: [INAUDIBLE]?

LUIGI GUATIERI: An example of an artist who can do it all.

AUDIENCE: Like, a game.

LUIGI GUATIERI: A game designer who can do it all-- I don't know. Can you name anyone?

AUDIENCE: Other than [? *Dwarf Fortress*? ?]

LUIGI GUATIERI: [? *Dwarf Fortress*, ?] yes. I mean, a lot of game designers-- especially if they do it as a hobby-- they make their own stuff. They make their own art. It's just a good idea to spread the work out, because as an indie-- and obviously, a lot of my developer friends-- they have to focus so much of their time on marketing, and programming, and designing, that, to also add art to that,

you've just extended your game development cycle by a lot. And maybe you're not as competent in that.

And people are more apt at telling bad art than they are from telling bad game design. Because all you need to be able to see is just a picture of the game or video from the game and go, that doesn't look very good. Even if the viewer doesn't understand why it doesn't look good, they can tell that immediately. I don't like that. So if the designer, programmer is confident enough, yeah, more power to them. But you're going to be putting a lot to work on yourself. And you're not going to get your game done in a timely fashion at all. And it probably won't be the best you can do.

AUDIENCE: Can I ask one more question?

LUIGI GUATIERI: Sure.

AUDIENCE: Do you ever as an artist think about designing a video game? Do you ever think about making [INAUDIBLE] video game? Like, [INAUDIBLE]?

LUIGI GUATIERI: So I work with a few developers now. And I'm always giving my design ideas. I always have ideas for games. I love coming up with ideas for games. I don't think I would call myself apt enough to design the whole game by myself yet, so I'm definitely still focused on the art side of things. But yeah, I love designing games. It's fun.

Yes?

AUDIENCE: What have you had to do for an art test?

LUIGI GUATIERI: So usually for an art test, it depends on the game. So I recently did an art test for some sort of mobile MOBA game, and what they asked-- they said here are your character descriptions, design these characters. And I said, all right, that'll take me this amount of time. They said, great, that's fine. This is my rate. It was a quick contract. Out the door for that.

And I designed the characters. I didn't end up getting the work, but I don't think my style was really what they were looking for. But yeah, it was that. I designed the characters. I did a quick turnaround. So it was like, characters standing this way, this way, this way, this way, from the back, of each character. I fully painted one of them, and said, this is what I got.

I think that's a pretty good art test, especially if you're building a game focused on characters.

If you're building a game focused environments be like, draw this mountain for me that I'm describing in this text. So usually an art test is here's a description, draw this, especially for an illustrator or a concept artist. It's not so much here's a quick doodle I did, make it better. It's usually here is a paragraph of text, make this thing exist. I feel like that's a pretty solid art test.

Yes?

AUDIENCE: You talked about finding someone who has the style that you're looking for?

LUIGI GUATIERI: Yes.

AUDIENCE: Is that generally the case with artists, or are there artists who are more flexible in style?

LUIGI GUATIERI: So I like to think I'm more flexible. I didn't used to work on a lot of cute games, but now I do. That's just what happened. There are definitely artists who more-- so I'm going to go back to art school here a little bit. This is time travel.

And I'm going to remind myself of what my Illustrator professors told me, is to never do anything else other than your style. Get really good at that one thing. And don't bother with anything else, because you need to be the best at what you do. And I was like, eh, that's boring.

Most artists have their style they work in. A lot of video game artists, they go for the hyper-realism concept art-- the art movie, books, that you see from VFX houses. That's why a lot of them can work together in big groups, because they all have a very similar kind of like, we're going for realism, robots, tanks. OK, we can all work together.

The more unique your style is, I think, the more time you have to spend working on that style. And the more reason, if this person's style is very unique, you're hiring them for their style, not their art talents. Again, that's why a lot of big studios, they hire people who can do realism, because that's a little bit more malleable in terms of what they can turn that into. But if you're hiring artists for their very specific, unique style, you're getting them for that one task.

But again, it depends on the contract for me. If I'm-- all right, this is for children's magazine. I'm not going to put the bad guy from *Doom* in there, obviously. That doesn't make sense. As an artist, I say yes to almost every job that comes my way, because I don't know when the next one's going to come. That's just how it works. But that's how I work. A lot of other people are different.

All right, is that it? Thank you very much. It was awesome.

[APPLAUSE]

SPEAKER 1: All right, so take five minutes to get with your teams. If you'd like to have them take a look at your work, just have your computer set aside, close to the edge so they can easily see it. And at 2:10, we'll walk around and see who wants some feedback on their games from Luigi.

LUIGI GUATIERI: Cool.

[CHATTER]