# GAME DESIGN WORKSHOP

## A Playcentric Approach to Creating Innovative Games

**Second Edition**

*Tracy Fullerton*

*with Christopher Swain and Steven S. Hoffman*

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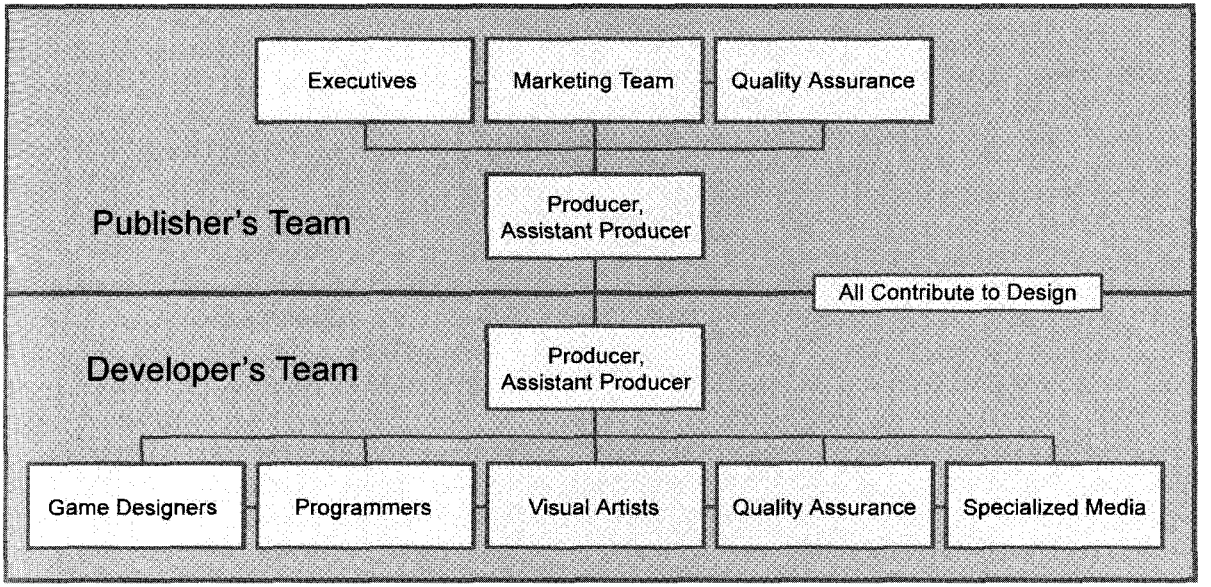



**12.1 Team structure**

| Publisher | Developer |
|---|---|
| - Chooses which titles to produce<br>- Finances titles<br>- Provides QA testing<br>- Markets titles<br>- Distributes titles | - Pitches creative ideas and demos to publishers<br>- Uses money from publishers to produce titles, including game design, programming, art, audio, etc. |

**12.2 Publisher/developer responsibilities**

publisher will do its own internal development. But in most cases, the arrangement will break down according to the chart in Figure 12.2.

Typically the publisher gives the developer an advance against royalties, and the developer uses this money to pay the team members, cover overhead, and subcontract certain portions of the work. The developer's main task is to deliver the product, while the publisher's is to finance and distribute it.

Figure 12.3 shows examples of some typical publishers and developers in the industry today. One confusing aspect of this relationship is that many game publishers also develop games internally. Electronic Arts is one example of a publisher that develops a number of its titles in-house. Additionally, some game developers are owned by publishers. For example, Blizzard Entertainment is wholly owned by Vivendi Games.

Even in these cases, however, there is a basic publisher/developer relationship between the internal development group and the rest of the company. In many respects, in-house development teams, as they are called, are forced to act like small companies that are responsible for their own cash flow, profit and loss, schedules, and staffing. This helps the publisher to gauge the success of each developer and analyze whether it is more cost effective to work with internal or external groups.

We will look at the typical individuals involved in a game production from the publisher's side on page 362, but first, let's focus on the production team from the developer's perspective.

| Publishers | Developers |
|---|---|
| Electronic Arts | Blizzard Entertainment |
| Nintendo | Rockstar Games |
| Activision | Ensemble Studios |
| Sony Computer Entertainment | Naughty Dog Entertainment |
| Take-Two | Bioware |
| Microsoft Game Studios | Firaxis Games |
| THQ | Gas Powered Games |
| Ubisoft | Epic Games |
| Konami | Lionhead Studios |
| Sega Sammy Holdings | Relic Entertainment |
| Namco Bandai | Insomniac Games |
| Vivendi Games | Ready at Dawn |
| Square Enix | Pandemic |
| Capcom | id Software |
| NCSoft | Infinity Ward |
| SCi/Eidos | Valve |
| Lucasarts | Vicarious Visions |
| Buena Vista Games | Bethesda Softworks |
| Atari | Treyarch |
| Midway | Crytek |
| | Harmonix |
| | Bungie |

**12.3 Example publishers and developers**

# Developer's Team

Game development companies often begin life as small groups of people, usually friends, who enjoy working together. Many times, especially in the beginning of a company's existence, the exact job descriptions might not be clear. "Everybody does everything" is a common comment at small start-up game companies. But as the team grows larger, budgets grow bigger, and projects grow more and more complex, even the best of friends have to determine who is responsible for what—and when.

Most established game developers clearly delineate job descriptions for every member of their team. This does not mean that individuals do not work together closely, they just sometimes ignore the exact lines of their formal job descriptions. It does mean that each individual has a specific focus, however, and a set of skills that makes him the best person to be ultimately responsible for certain aspects of the project.

Let's look at each of these types of individuals closely, beginning with the game designer, because our primary goal is to understand how the game designer fits into the structure of the team and interacts with all of these other individuals.

## Game Designer

As we have already discussed, the game designer is responsible for the play experience. From conception through completion, it is the designer's job to ensure that the gameplay works at all levels. Because gameplay is so intricately linked with how that play is programmed, visualized, and supported by music, voice-over, etc., the game designer must collaborate closely with just about every other team member.

Because you have had experience designing your own games by now, you know the designer's primary responsibilities. To review, they are as follows:

- Brainstorm concepts
- Create prototypes
- Playtest and revise prototypes
- Write concept and design documents and update throughout production
- Communicate vision for the game to the team
- Create levels for the game (or works with level designers; see page 361)
- Act as advocate for the player

Not all companies have dedicated game designers. This role is sometimes undertaken by programmers, artists, executives, or producers. Depending on the scope of the project and the skill of the individual taking on multiple roles, this practice can sometimes have a detrimental effect on the design process.

For example, a game designer who is also the programmer of a game might not be objective about the success of a crucial feature of gameplay simply because the feature took them several weeks, or even months, to code. If the roles are divided, the game designer can approach playtests and feedback with a more objective mindset.

This conflict of interest is true of game designers who also play the part of producers, artists, or executives. It is seen most clearly when the role of game designer is combined with that of the producer. Because the producer is ultimately responsible for the schedule and budget of the project, there is a natural conflict with the designer's role. How can a single person advocate expenditures of time and money to ensure the best gameplay possible, while on the other hand making sure the team sticks to a strict bottom line?

As a solution to this problem, at some companies, like Electronic Arts Canada, the producer does act as the game designer, but many of the producer's traditional responsibilities are handled by another individual who is called the development director.

In the end, exact titles are not as important as job descriptions. What matters most is that on every game there is someone who is able to focus specifically on the workings of the gameplay without the distraction of too many other responsibilities. We call this person the game designer.

To take on this responsibility, especially on games as complex as those being made today, is a full-time job, and the industry has begun to move toward a system where dedicated game designers can concentrate on the gameplay and the player experience without being burdened by budgeting, scheduling, resource allocation, and other production duties.

## Producer

The simplest definition of a producer for the developer's team is that she is the project leader. The producer is the person who is responsible for the delivery of the game to the publisher as promised. To make this delivery, the producer must create a plan for that delivery, including a schedule, budget, and resource allocation.

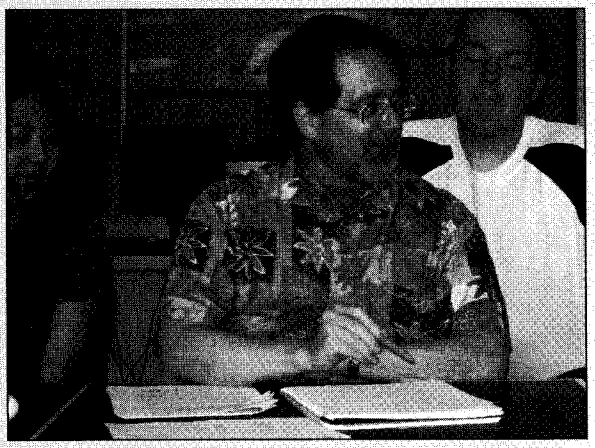
In most productions, there is a producer on the publisher's team as well as one on the developer's team. These two producers, in a good working structure, serve collectively as the single point of contact for important decisions regarding the production that have to pass between the publisher and developer. By making this single point of contact the main conduit of information between the two teams, the producers can work together to make sure that both teams are acting on the same assumptions and that important decisions are communicated to the right people on each team as they are made.

In brief, the responsibilities of the producer for the developer are as follows:

- Team leader for developer's team
- Main communication link between developer and publisher
- Schedule and budget for the production from the developer side
- Track and allocate resources as well as forecast
- Manage developer team to make sure deliverables are completed on time
- Motivate team and solve production related problems

Meeting the delivery schedule usually involves making some tough decisions during the course of the production; some of the producer's many responsibilities might include hiring or firing employees as well as saying no to excessive resource or spending requests. Ultimately, being a producer can be an extremely rewarding role. Producers interact with the contacts on the publisher's team more than the other team members. They might also be asked to represent the team in public, at conferences, or in the press. The office of the producer often serves as a "United Nations" for the production team—the place where everyone comes to air their grievances and concerns and, hopefully, to resolve them.

# Applying for a Job in Game Design



by Tom Sloper, President, Sloperama Productions

First off, it's important to understand that everybody wants the title of "game designer." It's the "sexy" job title in the game industry, akin to "director" in the movie/TV world. So even with a game design degree and a great design portfolio, it's tough to break into the industry in game design. You'll have to study what interests you, and apply for any game industry job you can get.

The key is getting in in the first place. Your first goal must be simply to get inside the industry. We're talking about a career—a way of life—not a sinecure.

When you are inside, you have to work hard, volunteer to help out in any way you can, learn everything you can, and prove yourself before you can gain the title of game designer.

After proving yourself as a game designer once, you will have to prove yourself time and time again. Know that ahead of time, steel yourself, and be willing. And you'll be fine. Okay, the necessary basic info is out of the way now. Here's how to apply for that game industry job.

*First, you must be prepared for the job.*

Presumably, you have completed the exercises in this book. Presumably, you are a high school graduate and have a college degree. Presumably, you are an avid game player. Presumably, you have already been participating in the online game forums, to wit:

- http://www.igda.org/Forums/
- http://www.gamedev.net/community/forums/
- http://www.gamecareerguide.com/forums/

*Next, you need to have a well-written résumé.*

I'm not going to tell you how to write a résumé. There are lots of books and Web sites about that. One way to sweeten your résumé, though, is to mention your personal design projects. You will differentiate yourself a lot if you list prototypes you've made, treatments you've written, mods you've created, game groups you've organized, newsgroups you participate in, etc.

*Next, prepare your portfolio.*

What's a portfolio, you ask? According to Merriam-Webster, a portfolio is:

- A hinged cover or flexible case for carrying loose papers, pictures, or pamphlets
- A set of pictures (as drawings or photographs) either bound in book form or loose in a folder

If you're an aspiring game designer, you can create a portfolio with samples of your writings and drawings, photographs of your paper prototypes, flyers, newspaper clippings, or photos from game events you

organized—anything that shows off your creativity and desirability as a job candidate. Just the best stuff, though. A portfolio should fit into a half-inch flexible three-ring binder. (It shouldn't be too thick; you'll only have a few minutes to show it off.) Protect the paper by encasing it in sheet protectors (available at office supply stores). And make copies of your portfolio so you have the option of leaving them permanently with numerous hiring managers.

Organize your portfolio with your most striking stuff in the front. In an interview, the interviewer might open the binder, look at the first few things, then close it. So you need to make the best possible impression with the first things right up front.

Don't put complete designs into your design portfolio—game companies almost always have prohibitions against receiving game concept submissions without signed agreements in place, and they might perceive your portfolio as a stealth submission. There shouldn't be more than about 20 sheets in a portfolio.

If you've created animations, audio pieces, or programs, collect those on a CD. Don't bring demos on Zip disks, 8-tracks, Syquests, or reel-to-reel tapes! But, as with the paper portfolio, make a copy.

So that's what a portfolio is and how it's used. If you can't make a spectacular portfolio, don't make a portfolio at all. It's okay to show up for an interview without a portfolio. However, having one is important if you want to set yourself apart from the competition.

*Next, you have to have a target list of game companies.*

I can't give you a target list; each aspirant has to make this for himself. Any game company worth working for has a Web site. And there are lots of game industry job Web sites. Assuming you're familiar with Gamasutra and Google, you will find them. Ideally, your list contains companies in your local area or in an area you are willing to move to on your own dime.

*Next, you need to educate yourself about your target companies.*

Read their Web sites. Learn their product lines. Find out about their stock, if they're publicly owned. It looks bad if an applicant comes in and says, "Well, I don't know anything about your company, but I'd like to work here."

*Now you're ready to contact the target companies.*

Don't pin all your hopes on one specific company. Have multiple companies to contact. You never know what's going to happen. Find out the name of a person to contact at each company. If you know someone who knows someone at a company, get in touch with that person and find out whom you should send your resume to. You need a name to put at the top of each cover letter. If you don't know anybody who knows somebody, call the company and ask for the name of the studio head (the VP in charge of the game production department) or for the name of the human resources head.

*Write a good cover letter.*

As with résumés, you can find information about how to craft a good cover letter on the Internet. Being a game designer means being a creative writer. Your cover letter should showcase your creativity and your communication skills. Mention the games you've created on your own. The cover letter (especially if there's basically nothing on your résumé) is arguably even more important than the résumé.

It's unrealistic to say, "I'm seeking a job as a game designer," and it's not helpful to say, "I'll take any job you have open." Find out what job openings are available. Figure out which opening is suited to your skills and interests. That's the job you should be applying for.

*Mail the résumé and cover letter or deliver them in person.*

If you do not live in the local area of the target company, mail your package to the person previously identified. But if you do live in the local area of the target company, call the person and request an interview. If you mailed your package, follow up with a phone call a week or so later. Ask the person if she's received your package. Your goal is to come in and meet with the person. A game company will not pay your airfare to fly out for an interview for an entry-level position, so don't ask.

When speaking with the person on the phone, be your normal, personable self. Don't say you want to come in for a job interview; just ask if you could come in to introduce yourself. You're interested in learning about the game industry, you're a college graduate, you've done some stuff on your own, and you'd appreciate a short chat.

Eight times out of ten, that straightforward approach will get you in the door. And that's exactly where you want to get—in the door.

*Attend the interview.*

Don't put on a three-piece suit. Nobody in a game studio (aside from some top executives) wears a suit. Wear clean, presentable clothes. Long pants. Shoes and socks. Bring two or three copies of your resume and cover letter, and bring your portfolio along with extra copies of that as well.

The main goody, the best thing you bring to the interview, is you. Be eager, attentive, charming. Your goal is to get a job, any job, so that you can eventually be a game designer. Find out what job openings are available. Figure out which opening is suited to your skills and interests. That's the job you should be angling for.

What the company is looking for is hard-working, smart, capable communicators first and foremost. That's the impression you want to convey through your appearance, your eye contact, and what you say during the interview.

*Show your portfolio, if possible.*

In an in-person interview, you could, at a logical point in the conversation, show samples of your work. If you're a game designer, sample game concepts might be construed as an unsolicited submission, making the game company liable to a lawsuit from you if they ever did anything similar. It would be wise to put your designs on your own Web site (like a free GeoCities Web page, for example), which would make them public knowledge (taking your portfolio out of the realm of "submission" and into the realm of "portfolio"). Letting the interviewer know this in advance could prevent what might otherwise turn into an awkward moment if someone perceives your portfolio as an unsolicited submission. And it shows that you are both savvy and sensitive to the company's needs.

Be prepared with your portfolio, in paper form, CD form, and/or Web form, but realize that the interviewer might not have the time to look at it during the interview. Do not expect the interviewer to navigate through whatever labyrinthine path you have on the Web or on a CD during the interview. It doesn't work like that. If you have the opportunity to show it, that's great. If not, don't be upset.

An important point about game concepts you developed on your own (oft stated on the game design Web sites): It's unlikely that anybody is going to steal your idea and make your game idea without you. It's

also unlikely that they'll take your idea and make the game with you. Game companies are teeming with more ideas than they can ever make. What game companies need is people, not game ideas. Your purpose in showing them your portfolio is purely to show them that you're a creative individual whom they should hire.

*What to do after the interview:*

It's unlikely that the interview will end with you walking out the door with a job offer in hand. That's possible, and that's desirable, but it's more likely that the interviewer will discuss you and your resume with others before any decision is made about offering you a job. When you leave the interview, you will probably have a sense of how well the interview went. If it didn't go very well, then just spend a few minutes thinking of what you could have done to make it go better. Then use that thinking on the next interview. When a stumbling block is in your way, use it as a stepping stone.

Send thank-you notes to the people who interviewed you. I know it sounds old-fashioned, but we're not talking about robots, we're talking about human beings with whom you want to build human relationships. Some folks send thank-yous electronically; some will tell you a paper letter is best. Here are some tips on thank-you letters from CareerBuilder (www.careerbuilder.com):

- Send the thank-you letter within 24 hours of the interview. The idea is to show them that you have follow-up skills.
- The letter should be one page max.
- Each one you send must be written specifically for the individual. If you met multiple individuals, get their business cards so you have proper spellings and job titles, and take notes immediately after the interview so you can recall details for personalizing the letters.
- An important purpose of the letter is to restate why you are a good candidate and also to answer any potential objections, especially those you might have heard the individual mention during your interview.
- Just like with a cover letter or résumé, the smallest writing error can spoil any good impression they may have gotten of you.

It can take weeks or even months to get called back to a company after your first interview. Keep in touch, but again, don't pin all your hopes on one company. Go for other interviews. The worst thing that can happen is that you don't get any offers. The second worst thing that can happen is that you get one offer. The third worst thing (the same thing as the best thing that can happen) is that you get more than one job offer to choose from.

## *About the Author*

*Tom Sloper's game biz career began at Western Technologies, where he designed LCD watch and calculator games and the Vectrex games Spike and Bedlam. Subsequently, he worked in designer, producer, and director roles at Sega Enterprises, Rudell Design, Atari Corporation, and Activision. Sloper participated in the completion of 127 game products—85 in the role of project leader, and 27 in the role of designer—winning six awards along the way. Sloper has produced games with developers in the United States, Japan, the United Kingdom, Australia, Russia, Europe, and Southeast Asia, and he lived for several months in Tokyo while working for Activision's Japan operation. Doing business as Sloperama Productions, Sloper is currently consulting, writing, speaking, and teaching at USC.*

There might also be an executive producer on each team whose job it is to oversee multiple productions or sometimes an entire development group. Additionally, there might be assistant producers and associate producers on each team whose job it is to support the producers. Most producers start out as assistant producers and associate producers then work their way up the ladder to producer, senior producer, and eventually executive producer.

As a game designer, you must work hand-in-hand with the producer. This means sitting down together at the start of any production and going over the design in detail. It is your job to make certain that the producer crafts a realistic schedule and budget, and the producer cannot do this without a clear understanding of the game you plan to make. If you do not clearly explain the entire scope and vision of the project, the producer will wind up using canned numbers or rough estimates, and both the schedule and budget for your game will be inaccurate, potentially insufficient, and the cause of a lot of unnecessary anxiety.

This means that to be a really efficient game designer, you need to understand the ins and outs of scheduling and budgeting almost as well as the producer. You do not have to create these documents, or be responsible for tracking them, but you should review them carefully and understand each line item. Make sure they match your vision of the project, and articulate any issues you see as early as possible in the process.

## Programmers

We use the term "programmers" as a catchall to refer to everyone involved in technically implementing the game. This includes high- and low-level coders, network and systems engineers, database programmers, computer hardware support, etc. Programmers are also referred to as engineers and software developers at some companies. Advanced positions in this track are senior programmer, lead programmer, and technical director, all the way up to CTO. Some companies break down the titles according to specific areas of specialization, such as tools programmer, engine programmer, graphics programmer, database programmer, etc.

In general the programming team's responsibilities include the following:

- Drafting technical specifications
- Implementing technical aspects, of the game, including:
  - ◊ Software prototypes
  - ◊ Software tools
  - ◊ Game modules and engines
  - ◊ Data structures
  - ◊ Management of communications
- Documenting code
- Coordinating with QA engineers to fix or resolve bugs

As a game designer, if you do not have a technical background, you might find it difficult to communicate your ideas to the programming team. While you do not need to become a programmer, if you are going to design digital games, you do have to learn the basic concepts of programming to have a common language with which to speak to the engineers. There is no right way to do this. If you learn best by reading, then buy a book on programming for beginners. If you need a structured environment in which to learn, then take a class. If you have a good relationship with a programmer, then ask him questions about his work. Everyone likes to talk about things they are good at. If you express genuine interest, most programmers will talk your ear off about how games are programmed.

After you have a strong understanding of how games are implemented technically, you can use this knowledge to write better design specifications and to describe your game concepts more clearly to the technical team. This, in turn, will make programmers more open and accessible to talk to about tweaks and changes to the gameplay as they are required.

Throughout the production cycle, you will find that almost every change you need to make to the gameplay requires alterations in the code. If you have designed your game modularly, as we discussed in Chapter 10 on page 304, this won't mean drastic repercussions to the entire system, but it will still

mean additional work for the programming team. To achieve the kind of relationship with the programming team that will allow you to suggest these changes without an uproar, you will need to use all your communication skills and your knowledge of programming.

Whether your team is large or small, there is likely a hierarchy you will need to respect to get things done. No matter how much you would like to circumvent the technical director, for example, and go straight to the database engineer to ask for a quick change, try to avoid such an action. This undercuts the technical director's authority, and there is no better way to create an adversary out of this person.

You need to partner with the technical director, lead programmer, or whoever is in charge of your programming team. It is this person's job to communicate your ideas to the other team members, and you want to establish a relationship where they will respect your ideas in the same way that you respect their expertise and contribution.

The goal is to have your programming team become active participants in the iterative improvement of the game. They will soon look for validation of their work by asking you when the next playtest session is, and you will have a solid partnership with one of the most important groups who will work on your game.

## Visual Artists

As with the term "programmers," we use the term "visual artist" as a catchall to refer to those team members who are tasked with designing all of the visual aspects of the game. This includes the character designers, illustrators, animators, interface designers, and 3D artists. Advanced positions in this track include art director, senior art director, and lead animator. In some companies there are even positions like creative director and chief creative officer, whose responsibilities include making sure there is a consistent look and feel across a company's entire product line.

Visual artists come from many different backgrounds. The best artists may or may not have a degree in the field. Some artists have always worked on computers, others might have come to computers after gaining a background in traditional tools. Before hiring your artists, you need to think about what skills your team will need. Will the game require predominantly 3D art? Will you need someone who can animate? Does your interface need to appeal to a specific market segment?

As you look at various portfolios, you will find that some artists are brilliant at creating intricate cityscapes and imagining 3D worlds, but when it comes to animating a character, they simply cannot do it. For this reason, teams tend to be structured around the key tasks required in the production, and artists will be hired for specialized tasks like 3D modeling, animation, texture mapping, interface design, etc.

Overall, the responsibilities of the visual artists are to design and produce all visuals for the game, including the following:

- Characters
- Worlds and world objects
- Interfaces
- Animations
- Cut scenes

Game designers and artists can also have trouble communicating even if there is no technical barrier of understanding, as with the programming team. It is the job of the artists to make the game as visually appealing as possible. Sometimes the needs of the game design can get in the way of a beautiful screen. You might find yourself in a situation where the wireframes you created, showing each important feature and detail of the design, have been only loosely followed. Artists might take it upon themselves to condense features to make the layout look better.

In a situation like this, your first reaction might be to insist that your designs be followed to the letter. This is one way to get things done. Another way might be to evaluate the work of the artists more objectively. After all, if they thought your design was convoluted, perhaps players will as well. You might be able to compromise and find that your designs become better and more intuitive as they are rethought by someone with a skilled artistic eye. Of course, you

need to make sure that features are not hidden or lost for the sake of beautiful artwork. Remember, it is your job to think about how a player will respond to these screens. They won't care about the beauty if they cannot find the feature they need to continue on in the game.

Another issue that might come up between artists and game designers is in the overall style of the game. As you work with different artists, you will find that they all have their own unique styles and techniques. While most artists are trained to work outside their personal style, they will always respond more enthusiastically to a project that mirrors their own interests more closely. To use an analogy, if you were starting a rock-and-roll band, you might think twice about hiring a percussionist from a philharmonic orchestra to play drums for you. In the same way, try to assemble an art team that is passionate about the look and feel you are striving for.

It might not be possible to choose the specific artists who will work on your project. If you are at a larger company, you might be simply assigned a team of artists. In this case, you will have to make a decision: Either change your vision to utilize the skills of the people you have, or find a way to communicate your ideas clearly enough so that the team can implement them.

Artists are visual people, and a great way to communicate with them is through visual reference material. Most art departments have a great deal of reference material—other games, magazines, art books, etc. For example, game artist Steve Theodore uses video to capture reference, as well as textbooks on human and animal motion to create visuals.[1] If needed, bring in your own reference material to get the conversation going. When Tracy and Chris, two of the authors of this book, were working on a game for Microsoft that had a retro space-age style, the art team collected samples of brightly designed 1950s fabrics from flea markets and scanned their patterns and colors to create the visual palette for the game.

As with the programming team, you will get the best results if you partner with the lead artist or art director in the process of design. Explain your vision, but listen to his or her responses. Chances are, your artists have seen and studied far more visual references than you have, and they might have some fantastic ideas that take your initial concepts much further than you could have yourself. Look at these references together, and be specific about what you like and do not like about them.

When you have decided on an approach, the artists will begin creating concept art, and you will need to start giving criticism. Keep in mind that the purpose of criticism is to move the project forward. Even if a sketch or design is not exactly what you want, there might still be some elements in it that are useful. Search for those elements before you start speaking. Try to see what the artist was going for. And when you do start speaking, it is always nice to begin on a positive note.

Giving and taking feedback is probably one of the hardest things to do in life. As you saw when players were critiquing your gameplay, it is often a complete surprise to find that people do not respond to a part of the design that is very close to your heart. Your most important ally in the process of giving feedback to the artists is the art director. You must work together with this individual to set the tone of the project. Listen carefully to your art director and try to come up with solutions that appeal to both of you. Remember, there is more than one answer to each design problem, and by creating an open dialogue, you might find another approach that neither of you has considered.

Ultimately, unless you have the skills to create the art yourself, you need to allow the artists some freedom to move beyond your initial concepts and bring their own ideas and passion to the project. If you have created a good working relationship with the art director, chances are that you will feel a strong sense of authorship in the final artwork, even if it is not what you initially imagined, just as the rest of the team will feel that they have contributed to the overall game design.

## QA Engineers

Quality assurance (QA) engineers are also referred to as testers or bug testers. Many game professionals start their careers as QA engineers, and then they

move to other tracks, such as producer, programmer, or designer. Advanced positions on this track are QA lead and QA manager. As noted on the team structure diagram, there are QA engineers on both the publisher side and the developer side. Publishers typically QA projects themselves before they accept delivery of the code.

The responsibilities of the QA team are as follows:

- Create a test plan for the project based on the design and technical specifications
- Execute the test plan
- Record all unexpected or undesirable behavior
- Categorize, prioritize, and report all issues found during testing
- Retest and resolve issues after they have been fixed

As the designer, you should take it upon yourself to make sure the QA staff has everything they need to create a comprehensive test plan. Do not assume that they have a complete understanding of the game just because you have distributed a design document. Offer any assistance they might need to create the best test plan possible. But do not be surprised if they want to experience the game first without your input; as with playtesters, it is often best if QA testers have some objectivity about the game when they begin the testing process.

QA testers can be the designer's best friends. Other than your playtesters, they are the last line of defense you have before your game ships out to the masses. Do not be upset if some of your design features come back listed as bugs. This is not a criticism of your design—this is QA's way of helping you make sure your design is working properly. Their job is to make sure your game is functioning both technically and aesthetically. If you get a bug back that says the font you have chosen for the character screen is illegible under certain circumstances, do not bristle defensively. Be grateful that you have the chance to fix it before the game goes to the players.

It might help for you to sit down with the QA team and observe their process. You can learn a lot by consulting with your QA engineers and going through the game element by element. Because they are seasoned testers, they might be able to provide you with insights no one else can.

Another consideration is to let your QA manager review your wireframes early in the process. They might find problems with your design before you even start to implement it. Starting the QA process early and making the QA team part of the design process will mean they are more invested in your game. This means that in crunch time, they will make your game a priority and put in the extra hours it takes to find every last glitch.

## Specialized Media

As we have seen, games have grown to include many specialized types of media—too many to address each possible role on all game productions. Your game might require the skills of writers, sound designers, musicians, or even motion capture operators, karate instructors, and dialogue coaches. We include these in a group as "specialized media" because they are too numerous to list. These types of individuals are usually hired for a short period of time on a contract basis, rather than coming on as full-time employees.

One of the most important things that you can do as a designer is to define what you need from these professionals as clearly as possible before they start working. When people are hired as contractors, they often charge by the hour or day. If you bring in contractors and waste time trying to figure out what to do with them, you can wind up wasting a lot of money that would be better spent elsewhere in the production.

Some of the most typical contractors that you will work with include writers and sound designers. In the case of a writer, the responsibilities can range from creating bits of dialogue where needed to scripting the entire story. How much writing you will need depends on what skills you have as a designer. If your strength is writing, you might not need a writer at all. If you are not a strong writer, you can bring a writer in very early and work with her throughout production.

# Advice from the International Game Developers Association (IGDA) on Choosing an Academic Game Program

by Susan Gold, Chairperson of the IGDA Education Special Interest Group (SIG), and Jason Della Rocca, Executive Director of the IGDA.

The International Game Developers Association (www.igda.org) means a lot of things to a lot of people. As a professional organization, it has a mission to advance the careers and enhance the lives of those working in the game industry. And as a part of this mission, the IGDA is interested in how they can help young people who want to make game development their careers. Today many students are looking at game programs as a way to learn the skills necessary for a career in games and are confused by the variety of programs available. How do you choose the right program?

The IGDA's Education SIG has developed curriculum framework recommendations that schools all over the world are looking to for guidance, and they are good place for potential students to find guidance as well. These recommendations advise schools that are starting a program to consider offering courses in a number of topic areas that are important to game studies. These include the following:

- Critical game studies
- Games and society
- Game design
- Game programming
- Visual design
- Audio design
- Interactive storytelling
- Game production
- Business of gaming

Depending on what part of game development you want to go into, you will want to focus on different requirements. For example, if you want to be a programmer, you'll want to make sure the program offers a strong set of game programming courses. Or if you want to be a visual designer, make sure there are plenty of courses on visual design for games. You can find more information on these core topic areas at http://www.igda.org/academia/curriculum_framework.php.

In the case of a sound designer, the task might be limited to creating special effects and music for the game when it is almost completed. Or, if you are striving for a more integrated sound design, it might encompass laying out a plan for the entire audio design for the project up front and working with you to make sure the audio supports the gameplay effectively. Sound and music affect players at a very emotional level; if you involve a sound designer more deeply in the project, you might be surprised at the improvement it can make to the player experience.

As productions continue to grow more complex, they will invariably require more media professionals in a diverse range of fields. As the designer, you will have to interact with many of these media professionals and give them direction and support.

Much of your decision will depend on your own focus and talents; however, there are some qualities of game studies that you'll want to make sure your potential school offers no matter what area of emphasis you are interested in. These include the following:

- Teamwork
- Rapid prototyping and the iterative process
- Giving students serious responsibilities
- Facilitating collaborative learning, especially across disciplines
- Pedagogical model capable of handling the intrinsic complexities of multidisciplinary work

We also encourage students to make sure their program encourages internships or apprenticeships, not only to make sure that they know what they are getting into after graduation, but to see what the real pressures are of working in the game industry. There are several common qualities and skills—no matter what type of degree you get—that lead to success in not only landing a job, but keeping that job. These include being a great team player, communication, and professionalism. An internship is a good way to practice these on-the-job skills. When you are applying to a game program, be sure to ask if they have an internship program already established.

Parents of prospective students often ask us which school is the best game school. This is not a question that has a simple answer. Some schools are at well-known institutions and have great connections with the industry. Others are small and found at local community colleges. Where you get your education depends on your own focus and opportunities, and it might be constrained by money or location. The most important thing is that you learn as much as you can wherever you are. Being curious and dedicated and working hard on your game design skills are more important than where your degree is from.

Many of the game designers and developers today didn't graduate from a game school. Game design legend Will Wright never even got a university degree. Other developers graduated with a degree in a related field, but they gained their understanding of games by playing and making them. If they were interested in how people played, they watched people playing games; they took human behavior courses and applied the knowledge to their observations and to their games.

The fact that there are schools that have game-specific degrees is a great opportunity if it is available to you, but it is not a requirement to have a game degree to be a great designer or developer. Knowing what you want to do and finding an educational environment that allows you to explore and grow is the best program for the future game developer. And, if you are not able to attend a school with a game-specific degree, the curriculum framework outlines almost every type of course you would need to take to be a well-rounded member of the game industry. So if you can't go to a school with a degree program, perhaps you can craft your own game program out of the courses available to you at your own school.

For more details on the IGDA curriculum guidelines, check out www.igda.org/education.

As you deal with people who might not work exclusively on games, it is important to communicate with them in terms they are familiar with. Many of these media professionals will not be hard-core gamers, and they might get lost if you use shorthand or game jargon. To bring out the best of their talents, you will have to learn as much as you can about their specialty, and act as their guide when it comes to game production.

## Level Designer

Games that are organized into levels will need someone to actually design and implement each level. If your project is very small, you might design all the levels yourself. On a larger project, however, the game designer often leads a team of level designers who implement their concepts for the various game

levels and sometimes come up with ideas for levels themselves.

Level designers use a toolkit or "level editor" to develop new missions, scenarios, or quests for the player. They lay out the components that appear on the level or map and work closely with the game designer to make these fit into the overall theme of the game.

Responsibilities of level designers include the following:

- Implementing level designs
- Coming up with level concepts
- Testing levels and working with the designer to improve overall gameplay

Level design is an art, and it is a great way to enter the industry. Good level designers often go on to become game designers; an example is American McGee, who won notoriety for several of the levels he designed while working at id Software. Other level designers might move on to become producers.

As a game designer, you will want to develop a close working relationship with your level designers. Levels are the structures within which the players will experience the gameplay you have designed. They might include story or character elements that are crucial to the development of the game. Because levels are so critical, sometimes game designers can become somewhat controlling of how they are implemented.

As with artists, however, you can usually achieve better results by fostering creativity in your level designers rather than making them toe a strict line. If you have created an amazing system of gameplay, it will inspire your designers to come up with combinations and situations that you might not have even thought of in your initial pass at the game levels. Try not to micromanage your level design team, and you will find that they will work harder and come up with better results than if they had implemented your designs to the letter.

The fact is that you are the designer of the game, and their hard work and innovations will only make you look better. So tuck any insecurity away and treat your level designers as partners with whom to experiment and take the game to places that even you did not think was possible.

### Exercise 12.1: Recruit a Team

Now that you know a little bit about the roles of team members in a game production, think about enlisting some friends or recruiting some talent to work on the original game idea you prototyped in Part II. Decide which of these positions you cannot fill yourself, and go out and try to fill them. Post notices on local bulletin boards or Web sites. You are sure to get a response because many people out there are eager to work on game projects.

## Publisher's Team

Publishing companies are often huge corporations, with offices in many cities and sometimes countries. They employ thousands of people whom you might never meet but who might work indirectly or directly on your game in the process of getting it to the shelves. Here we have focused on those you are most likely to interact with while working on your game.

### Producer

As with the producer on the developer's team, the producer for the publisher is also a project leader. Unlike the producer on the development team, however, the producer for the publisher will spend less time interacting with the production team and more time marshalling the forces of the marketing team, and making sure that the executives at the company continue to stay behind the game concept throughout development.

The responsibilities of the producer for the publisher are as follows:

- Team leader for the publisher's team
- Main communication link between the publisher and developer
- Schedule and budget for the production from the publisher's side