



Gama Network Presents:

Gamasutra.com

Guidelines for Developing Successful Games

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Gamasutra

August 15, 2001

URL: http://www.gamasutra.com/features/20010815/shelley_01.htm

Introduction

The title for this presentation includes two words that need defining at the start. I use the word "guidelines" in the sense of suggestions or check boxes, but not as a recipe. In addition, I use "successful" here to mean the commercial success of a game: sales and profits.

The goal of this presentation is to suggest policies, methods, and features that can lead to commercial success. The more guidelines you follow or incorporate into your development, the greater the probability of success from the resulting game.

There are some sources to these guidelines, but mainly they are derived from practical experience. That includes my 20 years of making and playing games of one sort or another, lengthy discussions with colleagues at Ensemble Studios, discussions with friends in the industry, and discussions with other colleagues in the past, most notably Sid Meier (many of the thoughts presented here, I first heard spelled out in one form or another from Sid).

Before moving on, I have two caveats. First, the guidelines I present today are applicable mainly to empty map games and strategy games. The emphasis is different for story-based, linear games. Second, this presentation was made with PC games in mind, although many of the guidelines can be appropriate for console games as well.

Reach for a Broad Audience

When you set out to develop a PC game, your potential market is basically everyone on Earth who owns a PC. Once you begin making decisions about your game (gory, sci-fi, RTS, shooter), you begin losing potential customers who are not interested in your topic, genre, or style. Commercially successful games hold on to a significant share of the market because they choose a topic, genre, and style that connect with a broad audience base. The acceptance of the PC by more world communities, different age groups, and women requires that games not be targeted solely to the traditional gaming audience of young males.

Games that have been traditionally strong with the hardcore gamers (young males), must remain attractive to that group, however increasing the appeal of the game can attract the much larger casual gamers. In these instances, we need the approval of hardcore gamers and rely on them to spread the word of their approval of the game to the market. This increases awareness within the casual market where the bulk of sales resides.

Achieving broad appeal requires that some aspects of the game is engaging to the hardcore gamers, while other features appeal to the casual gamer. Find out how the game will appeal to the different market segments, and why each will like it. This differentiation often requires both single and multi-player game options.

Strive to be the best game in your genre and your choice of the topic. The best games make the bulk of the profits, while the mediocre games suffer.

The rest of the article deals with what to do or include in a game, in order to entertain a large audience. This usually means creating something that is commercial art, not fine art. The best games entertain by engaging the player's mind, not by providing titillation (that wears off quickly).

Differentiate and Innovate, Don't Imitate

The majority of gameplay ideas in any game originate from other games. It is natural to be inspired by successful games, and practical to borrow from them when creating games of your own. To be successful, however, new games must be clearly differentiated from the competition and innovative as well. Games that imitate without differentiation and innovation are considered clones. Clones are usually commercial failures.

A new game will have competition from any game that is similar to it in topic, style, or genre. To succeed, the new game must match or exceed the competition in those areas where their game excels. The new game must also exceed the competition where it is weak. Identify important features and components that the competition is executing poorly or not at all. These are your opportunities. They are the principal ways that your game can be differentiated and distinguished in the market place from the competition. When *Age of Empires* was being developed, there were a number of opportunities available for improvement where the competition was completely lacking. These elements included historical theme, organic units, random maps, non-cheating AI, levels of difficulty, multiple victory conditions, historical notes, and stunning animations. *Age of Empires* was unique in all of these areas. Executing these elements helped establish the reputation of Ensemble Studios as masters of the real-time strategy genre. Analyzing the strengths and weaknesses of potential competitors in other genres, will reveal where the competition is strong, where it is weak, and where your opportunities are.



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Prototype Early

Prototype all-important systems and technologies to proof the concept as early as possible. Prototyping is not only useful from a technology standpoint, but is also critical for testing gameplay. Designers are usually left guessing until their games can be played. There are always surprises when a game is first played, some good and some bad. Prototyping for gameplay testing is especially useful for strategy and other empty map games that do not depend on pre-planned or linear story lines.

Design by Playing

Once a playable prototype has been created, play it every day and make adjustments based on testing, thereby creating new versions quickly, evolving the game in the process. Rely on your instincts as a gamer for guidance on what is working and not working. Larger test groups provide valuable testing feedback and create games of wider appeal. Test for both hardcore and casual gamers. Everyone at Ensemble Studios is asked to test our current projects at least once per week and provide feedback.

The downside to designing by playing is that it is difficult and often costly to predict the product. It does, however, lead ultimately to creating a fun game.

Interesting Decisions = Fun

Presenting the player with interesting and well-paced decisions is the rocket science of game design. Players have fun when they are interested in the decisions they are making, when they are kept absorbed by the pacing of the required decisions, and when they feel a sense of reward and accomplishment when good decisions are made. When the required decisions are too trivial or random, the element of fun lags. You risk boring the player and driving them out of the game. The *Age of Empires* series demonstrated that our customers consider automating trivial activities (queues, waypoints) a positive improvement.



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Good pacing can heighten interest in decision-making. Real time games have an inherent advantage versus turn-based games because the continual ticking of the game clock adds a sense

of desperation. If the player has a number decisions to make with a limited amount time, every aspect of the game becomes much more interesting.

When considering a new feature for a game, apply the interesting decisions test. Is this new element or twist going to add an interesting decision to what the player is doing? If the answer is not a strong yes, leave it out.

Provide a Great First 15 Minutes of Easily Accessible Play

A player must be actively engaged by a new game within 15 minutes of starting or we risk losing the player forever. There are three keys to getting a new player into a game: (1) an interesting starting situation; (2) minimal barriers to entry (interface, back-story); and (3) giving the player a few decisions to make initially, and increasing that number as the game progresses (this is the inverted pyramid of decision making). Get the player into the game quickly and easily so that they are absorbed and having fun without any frustration. When done properly, the player gets into the game successfully and significant time may pass before they are aware of it.

Games that require a lot of pre-play work from the player because of special controls, character introductions, or background story, must create tutorials or other clever ways to educate the player while providing entertainment. In-game tutorials are the best. Games that require uninteresting pre-play work or retard entry with frustrating interfaces are likely to fail.

The Player Should Have the Fun, Not the Designer, Programmer, or Computer

Although this principle seems obvious, many games fail because the wrong entity is having most of the fun. It is often the designer who allows feature creep to overrun the product or a designer performs a brilliant analysis and installs an amazing single path to victory that no one else could find. The producer can direct great graphics and cinematics to suck up the budget, making all the artists happy, but leaving little time for inserting actual gameplay. If a player finds himself waiting all the time while the computer grinds through some brilliant calculations, maybe the computer is having more fun than the player is.

Game development should focus on creating entertainment for players by engaging their minds. Everything the team does in development, and what the machine does in operation, is directed toward that goal. All code, game features, art pieces, sound effects, music scores, and computer operations should enhance entertainment. An exception to this rule may be elements included for marketing considerations, such as opening cinematics. There are two additional points to keep in mind when designing a successful game. First, the player should be the hero or heroine. Second, in single play, the player should sweat a little, but always win in the end.

Create Games that can Launch a Franchise

The newer a game is (i.e. genre, topic, artistic style, technology, developer, publisher) the more difficult it is to get shelf space, media coverage, web following, and customer awareness; all of which relate directly to commercial success. Creating a great franchise makes those tasks much easier and makes it possible to increase the customer base for each succeeding product. Choose genres and topics that capture the imagination of the market and the media, thereby establishing a new epic series of forthcoming related games. Publishers want franchises and are more willing to invest in them.

Set Production Values High

While excellent gameplay is the key to creating great games, graphics, sound effects, and music have important supporting roles. Graphics and sound effects are key elements in the game interface. Graphics must be attractive, enticing, and inspire inquisitiveness. Graphics and sound effects should convey information quickly with minimum player effort. Acting together, these three elements set the mood of the game and help the player forget that they are playing a game. Graphics and sound have important ancillary roles in helping to market the game.

High production values for graphics, sound effects, and music enhance the player's experience

and contribute to the game's overall cachet of quality. Low quality elements that are placed among higher quality elements stand out like off-key notes, greatly diminishing the overall impact of the product. A high standard of quality in production values enhances the reputation of the game, the developer, and the publisher.

Interface Goals: Intuitive, Easy to Use, & Minimize Frustration

The interface often is treated as an afterthought because it rarely has the ability to create the same sensation for the player as gameplay features, graphics, sound effects, and music can do. No one gets excited about how a game drops down menus or presents buttons. While the interface has little chance to dramatically enhance a game, there is a great risk, however, that poor interface design can do real harm. Keep in mind that capturing the player's imagination with great gameplay, visuals, and sound is only half the battle. Giving the player easy access to all of these cool effects without frustration is just as important. A confusing, difficult, and frustrating interface can ruin a game. Players encountering these problems in their first play session may easily lose interest and give up.

Minimize the layers of an interface (menus within menus), and control options (being able to play the *Age of Empires* series using only a mouse is a good thing). Providing an interesting and absorbing tutorial is important, otherwise learning controls and operations can be daunting if the player must learn a huge amount of information before beginning play.

Provide Multiple Gaming Experiences within the Box

To help reach a broad audience, include a variety of game types and adjustable game parameters that combine to create a range of different gaming experiences in a number different ways, all within the same game. Examples of different gaming experiences with the *Age of Empires* series are multiplayer death matches, single player campaigns, random map games, cooperative play games, king of the hill games, and wonder races. Victory conditions, map types, and level of difficulty settings are examples of parameters that can be adjusted to create different gaming experiences. Multiple options in each dimension (variable parameter) create a volume of different game types.

For example, we want the smartest kid in the school (a hardcore gamer) telling his friends that our game is his favorite. When those friends buy our game, they probably won't be able to compete with him, but by adjusting those parameters, they can still find a type of game that suits them while still providing an enjoyable gaming experience. The average kids and the smart kids can both enjoy our game, although they play different parts of it.

When we provide a variety of gaming experiences within the single box, we increase the number of people who can buy our game and be happy with it. Each of these successful customers becomes in turn a potential evangelist for our product.

Player Investments

Some of the most successful games require the player to invest in the experience of play by building empires, character statistics, or city infrastructures. Players enjoy creating within a game, taking possession of their creations, molding them to their personal taste, and using them to further their game goals. Examples of games requiring player investment include *Sim City* (city infrastructure), *Diablo* (character statistics), and *Age of Kings* (empire and technology). Building, defending, and using in-game investments create a strong bond between the player and the game.



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Facilitate Consumer Content

Players enjoy creating additional content for their favorite games, whether it is new planes for Flight Simulator, skins for their favorite shooter, or scenarios for *Age of Kings*. They get a chance to be a game designer, create the add-on they want (but that does not exist), and see their own work running on-screen. Players get a chance to be game designers. Consumer content lengthens the working life of a game, and helps increase awareness of it in the marketplace.

Replayability

It is better to create a game that can be played over and over, rather than one that is usually played only once. Providing replayability increases consumer satisfaction and the perceived value of the game. The *AOE* series provides replayability through randomly generated worlds, a variety of maps and game types, and multiple civilizations.

Story

The storyline in a game (or narrative) consists of a series of events that extend from start to completion (victory condition). A great storyline keeps the player intrigued and playing, thereby increasing satisfaction. The story told through gameplay depends on the topic and victory condition, plus the hurdles the player must overcome to reach victory. A great story uses plot twists, reversal of fortune, and other ploys to keep the player interested. Adventure games require that the designer writes the story and the player acts it out. RTS games usually provide an empty map instead of a story, like an empty page, where the player writes the story as they play.

Quality vs. Budget and Schedule

An extraordinary game that ships late makes its money in the long run, and has positive effects on customer satisfaction, the franchise, and developer/publisher reputations. A mediocre game that ships on time is a disaster (financial, brand, reputation).

Game development is more of an art than a science, and therefore difficult to predict. Developers

must demonstrate that a project is making good progress toward a goal, and publishers must assess that progress. There is no reasonable justification for major compromises in the quality of a product; make a great game or kill it early. One of the values of early prototyping is that it can reveal whether or not a game is going to work early on in development.

Gameplay vs. Realism or History

We are in the entertainment business, not simulation or education. Our priority is to create fun and engaging gameplay. Realism and historical information are resources or props we use to add interest, story, and character to the problems we are posing for the player. That is not to say that realism and historic fact have no importance, they are just not the highest priority. Any education that follows from playing our games is a very positive, though secondary, benefit. This is a great marketing point, and it adds to the reputation of the developer and publisher.

Polish the game

Reserve time at the end of a project to polish the game by adding the little necessary touches, bringing all of the elements to a high production value standard. Test rigorously to insure balance (where appropriate), to eliminate any potentially fatal gameplay flaws, and to insure that there is no single optimal winning strategy (or unit, or spell, etc.). When the game reaches the customer, we want them to feel that every aspect of the game was well planned and executed. Polish tells our customers that we took the time and made the effort to craft an extraordinary product.

Polishing a game increases customer satisfaction, enhances the reputation of the developer and publisher, and builds fan loyalty. Lack of polish has a negative effect on all of these areas, working against the goals of everyone involved in development. There is no acceptable excuse for not polishing a game. If you cannot afford to polish, you are in the wrong business or your team was inadequate (too small or unskilled). Nearly done is not an acceptable standard if you are going for the gold.

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