Destructive Testing in Video Games: The Ultimate Brand Protection

The evolution of video games has been substantial since the inception of Pong and Space Invaders. Today's games are complex digital worlds filled with intricate environments, detailed characters, and complex storylines. This level of detail and interactivity requires a tremendous amount of effort and resources from game developers and QA experts.

Therefore, ensuring the quality and reliability of a video game is of utmost importance. A game that is plagued by bugs, crashes, or performance issues can quickly lead to poor reviews, negative word of mouth, and a decrease in player retention. In today's highly competitive gaming market, player satisfaction is critical to the success of a game. A game that fails to deliver a seamless and enjoyable experience will not only lose its current players but will also fail to attract new ones. Furthermore, a game that is perceived as being of poor quality will damage the reputation of the game developer, making it more difficult for them to attract new players in the future.

Moreover, a video game that doesn't work properly can also result in financial losses for the game developer. A decrease in player retention and user engagement can lead to a decrease in revenue from in-game purchases and advertising. This makes it crucial for game developers to invest in a comprehensive quality assurance process to identify and resolve any issues before the game is released to the public.

What is Destructive Testing?

Destructive testing is the process of intentionally trying to break a video game. The purpose of this testing is to identify and fix any bugs, glitches, or other issues that may arise during gameplay. This type of testing is an important part of the quality assurance process, as it helps to ensure that the game is stable able to withstand the stress of intense gameplay.

- Destructive testing typically refers to the act of intentionally breaking or destroying elements within the game world. Here are some examples:
- Breaking structures or buildings in a sandbox game such as Minecraft or Besiege.
- Exploding vehicles or weapons in a first-person shooter game such as Battlefield or Call of Duty.
- Causing chaos and destruction in an open-world game such as Grand Theft Auto or Just Cause.
- Crashing and destroying aircraft in flight simulator games such as Microsoft Flight Simulator or IL-2 Sturmovik.

- Demolishing the environment in a racing game such as Dirt or Burnout.

The TestFly QA team excels in evaluating the boundaries and functionalities of our clients' game engines and physics systems through destructive testing. This aspect of our QA services serves as an additional layer of protection for our client's brands. We have a dedicated group of testers known as "destructive testers" who are skilled at thinking creatively and outside of the box.

Our destructive testers use unconventional thinking to identify potential bugs or glitches in the game. They contemplate the ways in which players may interact with the game in unforeseen and uncommon ways and then simulate these scenarios during their testing process.

The unique approach of destructive testers leads to the discovery of potential problems that might have gone unnoticed, resulting in an elevated level of game quality and a more fulfilling experience for players.

Why is Destructive Testing Important?

The importance of destructive testing cannot be overstated. In today's competitive gaming market, players expect a smooth, fun experience, and any issues with the game can quickly result in negative reviews and a loss of credibility for the game developer. Furthermore, bugs and glitches can be incredibly frustrating for players and can ruin the overall experience of the game.

By thoroughly testing the game under the most extreme conditions, our QA testers can identify and fix any potential problems before they become major issues for players. This not only improves the overall quality of the game but also helps to build trust and credibility with players, who expect a stable gaming experience.

Another benefit of destructive testing is that it allows QA teams to simulate extreme conditions and push the limits of their game engines and physics systems. This allows them to identify and fix any potential problems before they become major issues for players.

In today's competitive gaming market, players expect a seamless, high quality experience, and any issues with the game can quickly result in negative reviews and a loss of credibility for the game developer.

This can be incredibly damaging to a game's reputation, as well as the developer's bottom line. By thoroughly testing the game under the most extreme conditions, developers can minimize the risk of bugs and glitches, which can greatly improve the overall quality of the game.

In addition to improving the overall quality of the game, destructive testing can also help to build trust and credibility with players. When players know that a game has been thoroughly tested and any potential problems have been fixed, they are more likely to recommend the game to others and continue to play it in the future. This can result in increased player retention, as well as increased revenue for the game developer.

How is Destructive Testing Conducted?

There are several methods that Testfly QA teams use to conduct destructive testing, including:

- Manual Testing: This involves having testers play through the game repeatedly, trying to find new ways to break it. Testers may attempt to exploit bugs, perform actions in unexpected ways, or cause the game to crash by overloading it with too many variables at once.
- Automated Testing: This involves using automated tools to simulate large amounts of traffic or data sent to the game server. This testing method is referred to as stress testing, which serves to evaluate the capability of the game's server and network infrastructure to handle high levels of traffic or intensive usage.
- Performance Testing: This testing focuses on evaluating the game's performance and identifying any issues that may arise during gameplay. This may include evaluating the game's load times, frame rates, and overall performance on different hardware and software configurations.

When is Destructive Testing Performed

The optimal timing for conducting destructive testing is to schedule it towards the end of the development cycle once the game has undergone thorough testing to remove significant glitches. This strategy enables the testing team to concentrate on discovering and correcting any lingering bugs or issues before the game's release to the public.

At TestFly, we recommend performing destructive testing as soon as it is technically possible, to minimize development costs and time to market. In addition, we suggest performing this testing in controlled environments, such as isolated test environments or sandboxed versions of

the game, to minimize the impact on the development process and other aspects of the game. Doing so helps to ensure that the testing process is more efficient and effective and that any issues identified during testing are addressed.

Additionally, it is crucial to plan and coordinate destructive testing carefully and work closely with the development team to ensure any issues identified during testing are resolved. This helps to confirm that the game is as stable and reliable as possible when it is released and that the players have a positive experience.

The Benefits of Destructive Testing

There are several benefits to conducting destructive testing, including:

- Improved game quality: by thoroughly testing the game under the most extreme conditions, developers can identify and fix any potential problems before they become major issues for players. This results in a more stable and enjoyable game for players, which is crucial for maintaining a positive reputation and building trust with players.
- Increased credibility: by ensuring that the game is stable, developers can build trust and credibility with players, who expect a smooth and enjoyable gaming experience. Players are more likely to recommend the game to others and continue playing it for longer, which can result in increased player retention and revenue for the game developer.
- Reduced costs: destructive testing can also help reduce the overall game development cost. Finding and fixing bugs early in the development process is much less expensive than fixing them after the game is released. Destructive testing helps to identify these issues early on, reducing the overall cost of development and ensuring that the game is released on time and within budget.
- Improved user experience: destructive testing can significantly improve the overall user experience. A game that is stable and devoid of bugs leads to a superior gaming experience for players, making them more inclined to recommend it to others and to play it longer. This positively impacts player retention and revenue for the game developer and enhances the game's reputation.

Edge-case Testing Option

At TestFly, we incorporate edge-case testing into our destructive testing process when requested by our clients. Destructive testing focuses on intentionally causing harm to elements within the virtual world, such as structures, transportation, armaments, and surroundings, to

test the limitations of the game's engines and physics systems. On the other hand, edge-case testing involves testing the game under abnormal or unexpected circumstances, such as low memory or slow internet connections, which do not occur during regular gameplay.

This type of testing can identify and fix potential problems, ensuring the game remains stable and devoid of bugs even in challenging circumstances. This is a common request from TestFly clients who aim to provide a seamless gaming experience for their players.

Conclusion

In conclusion, destructive testing in video games is an essential aspect of guaranteeing the dependability and quality of the final product. Through rigorous and demanding tests on the game engines and physics systems, developers can spot and fix any problems before making the game available to the public. Thus, destructive testing is a wise investment for the success and longevity of a video game.