DX

Broken Games finds the **powerful game development** they need in Delphi

When founders Martin Lange and Tobias Tenbusch started their independent game company, they searched for a development environment and programming language with high performance, fast compile times, and superior code readability and maintenance. **They found their answer with Delphi®.**

GAME ENGINE FROM THE GROUND UP

Breaking into the gaming industry as an independent studio can be challenging. Broken Games evaluated the Unity engine but determined it was too expensive and reliability was a concern. Broken Games ultimately chose to develop its own game engine in Delphi.

This decision gave the developers control over their own update and bug fix cycles while reducing costs associated with external pricing models. Access to the source code allows their development team to quickly resolve bugs, while writing it in the elegant Delphi language reduced the learning curves for new tools.

CUSTOM GAME FONT RENDERING

Broken Games evaluated several options for custom font rendering in the game to balance quality, ease of implemementation and availability. DirectWrite provided the the font quality they were looking for, but implementation required a high level of effort.

FireMonkey (FMX)'s source code provided the solution by encapsulating DirectWrite for the Windows platform. Broken Games used FMX's TCanvas and TTextLayout to draw their custom fonts and then copy the image data into a DirectX 11 texture to display on-screen.

FMX provides Broken Games with options for future and additional platform support.

> " Even with today's optimizations, we estimate that **Delphi is still four times faster** than other language compilers. "

BROKEN GAMES

Tobias Tenbusch
CTO/Co-Founder

FLAGSHIP GAME: RISE OF LEGIONS

- Basic gameplay is free, but users can purchase in-game upgrades to skins, game progress, and more.

- The game is component-based. Every unit is put together with different components: a mesh component, image component, effects component etc. Every unit may have 30-50 components sending events to each other, all done with Delphi classes.

- As a multi-player online game, scalability is critical. Both server and client are written in Delphi, with TCP connections between the two.

MORE ABOUT DELPHI

- Delphi easily integrates with popular libraries for sound, animations, and more

- Delphi's high performance and compile times enable fast, iterative development.

- Easy-to-read Delphi language reduces headaches associated with maintaining game code year after year.

- When Broken Games is ready to expand their device support, Delphi enables cross-platform and mobile app development from the same codebase.