

Crytek and AMD team up to create new level of gaming experience.



GAMING COMPANY USES NEW AMD64 TECHNOLOGY TO DELIVER SUPERIOR PERFORMANCE AND BREATHTAKING GRAPHICS IN NEW RELEASE.



Challenge

While developing their debut release, *Far Cry™*, Crytek™ realized that the rich graphics and imagery they had planned for the game pushed the limits of their existing 32-bit technology.

Solution

Crytek ported *Far Cry* to AMD64 technology to deliver an end-user application that exploited its incredible performance and power.

Result

Far Cry's amazing graphics, expansive levels, and highly advanced 3D engine, CryENGINE™, made a huge impact in the gaming community and media worldwide.

Creating new worlds is a central theme in the highly competitive gaming industry. Developers must find ways to distinguish their games in an already crowded field.

Crytek CEO and President Cevat Yerli and his brothers, Avni and Faruk, knew their interactive entertainment development company, Crytek, couldn't just follow the well-trodden path of their larger, more established competitors. They quickly realized they had to "raise the bar" in every aspect of their business.

From the beginning, Crytek, which is located in the small town of Coburg, Germany, has done things differently. Their development team, which includes designers, producers, programmers, artists, and sound engineers, is comprised of gaming professionals from 16 different nations, each bringing a unique perspective to how Crytek creates and develops their products.

Their goal is ambitious: provide gamers with intuitive user interfaces, fast-paced, exciting gameplay, and revolutionary atmospheric visuals never before seen. To help them achieve this goal, Crytek developed a highly advanced 3D engine, called CryENGINE, designed to surpass both current and future expectations for blockbuster games.

The results have been impressive. Crytek quickly made a name for itself in the gaming community and media for its breathtaking graphics and imagery. As a result, this up-and-coming company joined forces with the well-known game publisher Ubisoft™ to market and distribute their debut game worldwide.

“With **gorgeous scenery**, real-time weather patterns, great sound, long and **expansive levels** which you’re **free to roam** as you wish... Far Cry is shaping up to be **one killer FPS title.**”

— GamersDepot.com

This early success prompted the Yerli brothers to expand their expectations for updates of current games and future titles to have more depth, create more immersive worlds, and deliver shockingly real, cinema-like graphics. However, as Crytek’s developers continued work on Far Cry, they realized that they were pushing the boundaries of their existing 32-bit technology.

AMD delivers for Crytek.

Far away from Coburg, AMD was in the final stages of developing their revolutionary AMD64 technology. This unique technology extends the ubiquitous x86 architecture to perform 64-bit processing. For users, this means that for the first time, they can maintain 32-bit compatibility and migrate seamlessly to the superior performance of 64-bit technology.

For the gaming industry, whose applications require large memory addressing and maximum performance for realistic and cinematic consumer experiences, this new technology has huge implications. Essentially it means that the power and performance of the high-end engineering workstation now can be brought to the consumer desktop. Developers can now implement dramatic capability improvements in such areas as 3D modeling, rendering, animation, and simulation software development.

Even though the initial buzz about AMD64 technology was extremely positive, AMD knew they needed some real-world proof to show just how much impact it could make in both developers’ day-to-day jobs and gamers’ experiences. Thus, AMD and Crytek saw a good match between the amazing possibilities of Far Cry and the powerful capabilities of AMD64 technology. Both saw the opportunity to port Far Cry to the AMD64 platform in order to deliver an application to end-users that exploited the power of AMD’s new technology.

Initially, Crytek’s developers were skeptical because they expected to have to change equipment and learn new technology. But in just a matter of weeks, upon seeing how seamlessly they could utilize the new AMD64 technology, the developers’ reception changed to universally positive.



AMD64 technology enables Far Cry’s next-generation engine to push the threshold of action gaming with unprecedented AI, Polybump™ mapping, advanced environmental physics, destructible terrain, dynamic lighting, motion-capture animation, and total surround sound. CryENGINE’s unbelievable 800-meter draw distance redefines the idea of long-range gameplay.

Crytek and AMD raise the bar in game development.

In their debut game, Far Cry, Crytek has the perfect testing ground. They plan to showcase the latest artificial intelligence (AI) and physics technologies to create the most believable character movements ever seen. The game is set in the year 2010 on a Pacific island and the creators envision a strong, scenic, tropical paradise background and also a number of incredibly complex interior locations. In addition, the game features real-time, 3D atmospheric sound rendering, weapons, bullets, footsteps, and more. Essentially, the developers want the user to feel as if they're actually in the game.

With AMD64 technology, the developers quickly realized that they now have the platform to equal their vivid imaginations. In the 32-bit version of Far Cry, AMD64 technology enables industry-leading performance and visual quality. In the 64-bit version, the technology expands the game's capabilities on an exponential scale. Because a native 64-bit application can access much higher amounts of memory at one time than a 32-bit version, maps can be over 10 times as large. And because AMD64 technology doubles the number of integer and multimedia registers over those of x86, gameplay is much smoother and frame rates are higher. This enables better AI and more realistic characters that can act an almost infinite number of ways. The result is that Far Cry delivers emergent gameplay at a never-before-seen level.

Critics agree. Far Cry was recently named Best PC Game at the 2003 ECTS show. And GamersDepot.com wrote, "With gorgeous scenery, real-time weather patterns, great sound, long and expansive levels in which you're free to roam as you wish...Far Cry is shaping up to be one killer FPS title."

Enabling a bigger, better world of gaming.

Just as important, the mod community and commercial licensees can take advantage of the ease of use and advanced features of CryENGINE. Its CryENGINE Sandbox Editor enables users to toggle back and forth between the editor and gameplay to view updates and changes in real-time for true "what you see is what you play" feedback, making game modifications much easier than in other games. CryENGINE, which is available for licensing to other commercial software developers, comes with many



Far Cry is set in a carefree utopia of white sands, emerald jungles, and crystal waters fit for the inviting pages of a travel brochure. AMD64 technology enables these huge worlds that are rendered at very high frame rates to create a truly immersive, cinematic experience.

powerful, state-of-the-art tools to increase performance, add effects, and expand game levels. And since CryENGINE is optimized for AMD64 technology, the results are limitless. "With AMD64 technology, AMD gives leading-edge game developers like Crytek the platform they need to create truly emergent AI and realistic games. They now have capabilities that will go as far as their imaginations can take them—and AMD processors will be right there every step of the way," says Marty Seyer, vice president and general manager, AMD's Microprocessor Business Unit.

The future looks great for Crytek and AMD.

So what does the future hold for Crytek? Yerli says they are already planning new titles that will be bigger and better than Far Cry—games with more levels, infinitely more characters, smoother frame rates, and truly seamless transitions. The goal is nothing less than a true-to-life gaming experience where the line between the real and virtual world is completely blurred. And according to Yerli, one thing's for sure: AMD will be a part of it. "We will support AMD64 technology, no matter what happens," he says.



About AMD

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