

Big on Graphics

August 2020 Edition



Tips, Tutorials, Examples, Snippets, Pitfalls, Discussions and News

Realistic Hair

(Hair Types and the Tessellation Shader)

Skin "Fluff"

(Subtle elements for realistic skin)

Optimizations

Profiling performance bottlenecks

Water

Fracturing

(Procedural smashing of materials)

Can one person write a high quality game from scratch?



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Inspiring Creativity



Kenwright

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EDITOR-IN-CHIEF, BIG ON GRAPHICS MAGAZINE Kenwright



BIG ON GRAPHICS

Welcome to **Big on Graphics**: a magazine of a new kind. With its broad scope bridging (yet not limited to) computer graphics while taking into account software engineering, artificial intelligence, applications and hardware technologies, the magazine is dedicated to challenging and questioning rather than to simply agreeing and repeating existing media. The magazine aims to stimulate debate and and raise questions for thought. This combined with educational material to help you understand how computer graphics works, how it functions, the limitations, benefits and trends (taking a look under the bonnet) - including indie, experimental and homebrew topics. Recently, Computer Graphics technologies have become an essential tool in nearly every walk of life - mobile, visualization, computation, entertainment, movie industry and more.

There are currently a number of organisations and research programs around the world that explicitly or implicitly focus on computer graphics. Yet, despite impressive successes and growing interest in the graphics domain, wide gaps continue to separate different approaches from each other necessary to rise and address some of the biggest graphical challenges of our age. While disjointed technical communities may speak different languages and pursue independent goals, at least they're pushing the limits of computer graphics. In this situation, the mission of the magazine is to foster a wider understanding of the unifying graphical topics and highlight interesting areas for concern. In doing this, the magazine will provide insights for important questions. e.g.: which is the best computer graphics architecture for real-time environments? What are the aesthetic and computational limitations for state of the art CGI models? How to give human-like emotional feeling and creativity to visual models? Both mature and new cutting edge research are welcomed by the magazine, provided they have a strong topic of interest and aligns with the magazines theme (opinion reviews, ad-hoc approaches, mathematical concepts simplified for readers and so on).

Without a doubt, a lot of has happens in computer graphics in recent years, some things have been really, really amazing and deserve recognition for their worth and value they have made to the industry. Of course, computer graphics is multidisciplinary subject, and can really make a difference to the world. Unfortunately, a lot of discoveries and advancements don't always make a substantial impact, usually because of the technical challenges or are difficult to accept (stuck in certain ways/old approaches). The magazine hopes to share information and help explain some of the jargon and headaches circling the computer graphics world.

Computer graphics makes most of us devout believers due to the inherent beauty that is possible - which stimulates our imagination. You might not agree, or you might say it's a bias, but how can you not love the computer graphics discipline. While the topic is challenging on many levels, the mathematics, software engineering and the artistic component, the rewards at the end are worth the effort. However, unlike some subjects, **computer graphics is constantly changing and evolving (stay on your toes and you must also evolve and adapt)**. You can't watch a film, play a game or use your mobile phone without computer graphics getting used.

This magazine is not for financial gain, it's done for the passion of the subject. The love of code, mathematics and how they come together to create a banquet for the eyes.

THE INDEPENDENT GUIDE Big on Graphics Magazine is an independent guide to technologies in and around computer graphics. Our mission is to explore, question, explain and review computer graphics (software and hardware). Importantly, the purpose of the magazine is to remain objective and relay a variety of interesting information from facts.

CONTACTING EDITORS We welcome comments from readers. Email your comments to the editor-in-chief. We welcome articles and illustrations, however, before submitting manuscripts or material, please get in touch to discuss your proposal

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