

# “The Blacksmith” Real-Time Short Film

Real-Time Live!

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“The Blacksmith” was created by a team of three people working full-time: an artist, an animator, and a programmer. External contractors were used only for asset creation, motion capture, and audio.

The film makes extensive use of physically based shading in the Unity 5 game engine, which allows achievement of high visual quality and a cinematic look in real time. It takes advantage of real-time global illumination, which was applied in an innovative way in the film's production. It makes per-camera lighting and shot dressing, typically a process used in offline CG and traditional filmmaking, possible also in real time. This allowed the authors of the film to control props, characters, and both small and large environmental assets; change their positions between shot switches; and instantly change a scene's entire lighting rig between shot switches.

The fast iteration and low resource requirements of real-time filmmaking lead to considerably reduced production time and costs for high-quality film projects. In this way, real-time game engines could democratize the filmmaking process.