

# Valve Technology

From Valve Developer Community

Valve's Source engine technology--the same used to power Half-Life 2, Team Fortress 2, and Portal--is available for license to any game developer.

Source is widely recognized as the most flexible, comprehensive, and powerful game development environment available. Source combines leading-edge character animation, advanced AI, real-world physics, shader-based rendering, and a highly extensible development environment to produce some of the most popular computer and console games. These games deliver the most intense, visually-stunning gameplay experiences on modern hardware, while scaling smoothly on older systems, enabling developers to reach a diverse range of gamers.

At its core, Source is designed with a modular, component-based architecture that enables the seamless integration of new features and technologies. Since its 2004 debut to third-party developers, Source licensees have benefited from the very latest tools for level design, modeling and character animation, online play and communications, console development, and more—all available at no extra cost or additional licensing fees.

Source's updated animation system brings expressive characters to life with an unlimited palette of facial expressions that allow them to convey a message without having to say a word. These characters possess the industry's most advanced artificial intelligence, making them extremely capable allies and foes.

Characters populate beautifully rendered and physically simulated worlds that, thanks to Source's integrated and versatile physics system, immerse players in realistic and responsive environments. This allows developers to break from authoring the pre-scripted events featured in previous generations of games, and opens the door for the creation of completely new styles of play.

Source's multiplayer platform supports some of the world's most played online games—including Counter-Strike and Team Fortress 2—and one of the largest online gaming cultures in the world. Robust networking and multiplayer features include support up to 32-player LAN and Internet games, an integrated server browser, and voice and text messaging.

## A Comprehensive Set of Tools and Technologies

Create state-of-the-art games with the same tools and content used to build Half-Life 2, Portal, and Team Fortress 2:

- Valve Hammer Editor, the Source map creation tool
- Plug-ins for popular 3D art and animation programs, including Autodesk Maya
- FacePoser, the facial expression tool for crafting speech and emotions
- Source Model Viewer
- Particle Editor to create dynamic particle effects and preview them in an integrated in-engine view
- Material Editor, which allows designers to manipulate Source material parameters and view the changes in-real time
- Commentary Editor, a tool to add commentary nodes which add value by providing insight into your game
- Performance monitoring tools

- Multiplayer network features, including feature-rich server browser and instant messenger
- Complete source code for Half-Life 2, Portal, and Team Fortress 2 included
- Comprehensive documentation images and examples, complimented with in-depth community tutorials

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