



## John Carmack and *Id Software*: Why Problem Solving and Math Matter

Some of you may think that problem solving and math are not “cool”. Is driving a Ferrari to work “cool”? Ask John Carmack.

**John Carmack** is one of the most widely recognized and influential programmers ever. He is the brain behind certain games that you just may have heard of: Doom, Quake, the Wolfenstein series...etc. He's also a self-professed nerd, a co-owner of *ID Software*, and self-made multimillionaire. He drives a Ferrari to work every morning. These qualities are well-known. What is not always said is that **John Carmack is also a problem solving wiz**. Thinking long and hard, Carmack came up with some graphics algorithms (e.g. surface caching and Carmack's reverse) that allowed programmers to create true 3D games that could run very smoothly and efficiently. Today, his graphics engines and algorithms have been incorporated into all major FPS games (Medal of Honor, Half-Life, Max Payne, etc.).

### Carmack On Key to Success and Problem Solving

*"Focused, hard work is the real key to success. Keep your eyes on the goal, and just keep taking the next step towards completing it. If you aren't sure which way to do something, do it both ways and see which works better."*

*"Programming is really just the mundane aspect of **expressing a solution to a problem**. There are talents that are specifically related to actually coding, but **the real issue is being able to grasp problems and devise solutions** that are detailed enough to actually be coded."*

### Research Activity

Find information on another individual (other than Bill Gates) who became very successful because of exceptional problem solving skills. Write a brief summary of the person's achievements and how problem solving skills played a central role in their accomplishments. **(To be handed in one week from today.)**

#### *Additional Info*

[http://en.wikipedia.org/wiki/John\\_Carmack](http://en.wikipedia.org/wiki/John_Carmack)

<http://slashdot.org/interviews/99/10/15/1012230.shtml>

#### *Credits*

This article is courtesy of Mr. R. Dobias (student teacher from York University, Fall 2004).