

# Tipping Point Commentaries

## New Processors in Old Jobs

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[rwclark@cyberanalysis.com](mailto:rwclark@cyberanalysis.com)

From the pages of the New York Times comes a story of how a video chip manufacturer has, through its open design, provided programmers with links (literally) to specialized functions that were formerly optimized for video rendering. Those functions are now being called into the service of other number crunching.

from:

### ***Nvidia Chip Speeds Up Imaging for Industrial Use***

By ASHLEE VANCE

Published: September 22, 2008

Figuring out the best way to transform a frozen pizza into a perfectly warmed pie, gooey on top and crispy on the bottom, is as much a computer problem as a work of culinary art.

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To speed up the task, General Mills turned to computers containing high-powered graphics chips from [Nvidia](#), a Santa Clara, Calif., company best known for making video games look more realistic on game consoles and personal computers.

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If the company's expensive gamble pays off, Nvidia could break out of its graphics niche and become a far more significant player in the computing landscape.

To the reader that is not well versed in this niche processor, what Nvidia has risked on is publishing a rather more elaborate, functional description of its chip's interior processes. For programmers, this is called a software API (application programming interface) which is half index and half recipe book on all the functions performed within the chip. This manual describes how to call those functions, how to characterize the data being applied, and how to interpret the results once the processor has finished crunching that data. That data is typically a block of an image that needs functions to perform shading or the application of a skin to a framework figure. In the video world of active graphics, this is computationally intensive and has a level of sophistication that is concomitant with the demand for speed.

When users with interests that transcend the needs of representing a 21<sup>st</sup> century pacman approach this chip, they apply the computational horsepower and sophistication to problems that are foreign to chasing ghosts, or carjacking autos in the latest release of ***Gone in 60 Seconds*** video game. This list of obscure usages ranges from that mentioned above with General Mills performing Pizza models for testing their backing properties to the article's lead in cancer research with sifting images for tumor recognition. What Nvidia has allowed for, is the wild card application leading its chip into uncharted waters of commercial use that could suddenly widen its appeal into new branches of applications.