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NVIDIA to offer CUDA
for mobile devices
NVIDIA

[NVIDIA to Offer CUDA for Mobile Devices too](#)

The company plans to enable CUDA on all its graphics solutions

Graphics card manufacturer NVIDIA is reported to plan using its CUDA parallel computing technology in all its graphics solutions, including its Tegra system-on-a-chip designed for mobile devices. It is already known that the company's CUDA architecture is a C language environment meant to offer developers an easy way to write software to solve complex computational problems by tapping into the multi-core parallel processing power of GPUs.

According to Jen-Hsun Huang, co-founder, president and chief executive officer of NVIDIA, the first version of Tegra will not come with CUDA. As [previously announced](#), Tegra is expected to hit the market sometime in mid-2009.

When talking about CUDA, Huang also said that the architecture is part of the company's strategy of promoting its GPUs as general-purpose, parallel computing processors. Moreover, the graphics processors will allow for a wide range of usage, in a variety of scientific and commercial applications like financial computing. It is already known that NVIDIA's graphics solutions are excellent in high-end graphics and for gaming.

"We believe that a GPU is not just for graphics anymore and can be really used for anything that involves a lot of data and mathematics," Huang added.

NVIDIA [revealed](#) a few days ago the GPU-based Tesla Personal Supercomputer, which takes advantage of both the company's Tesla GPUs and its CUDA technology to offer the power delivered by a cluster of computers in the form of a standard desktop workstation, while also considerably reducing costs. The company announced that computer makers like Dell, Lenovo, Asustek and Western Scientific would offer Tesla Personal Supercomputers.

According to Huang, a new computer architecture can be spotted, one that combines the power of traditional CPUs and that of GPUs and other types of parallel processors. "The CPU is excellent for sequential processing, but there are many types of problems that you can operate on in parallel," he added.

Huang also stated that GPUs are able to offer higher performance levels than CPUs, mainly due to the integration of hundreds of processors. He shared that the Tesla Personal Supercomputer is an example of 240 processors running in parallel. Moreover, Huang said that gamers were the first to realize how important a heterogeneous architecture could be, as they could observe improvements in their video games and 3-D graphics while running both powerful CPU and GPU.

NVIDIA does not believe that GPUs could replace CPUs. "We are not trying to replace the CPU, as we believe it is necessary," said Huang. He added that the company is currently working with application developers to port their software to the CUDA architecture. According to him, programming using the C language allows sophisticated users like researchers to write themselves the programs for the new supercomputer.