Danny Shapiro, Senior Director of Automotive, nVidia

TITLE
The Future Car-- Horsepower replaced by Computing Power

ABSTRACT

The art and science of computing has been dramatically transformed by the invention of the graphics processing unit or GPU over a decade ago. Not only are GPUs used extensively in industries such as video games, movie production, product design, medical diagnosis, scientific research, and energy exploration, but they play a vital role in the automotive industry. From concept styling and design, to engineering and simulation, to advertising and point of sale marketing, the GPU helps designers and engineers make better, safer, more energy efficient and more affordable cars.

However while these applications of graphics and parallel processing have focused on the creation of cars, we are now seeing the need to increase the computing power inside the vehicle as well. Many cars today have numerous microcontrollers and run millions of lines of code, however tomorrow, your car will be the most powerful computer you will ever own. High-performance mobile computing and innovative sensing technology has both automakers and Silicon Valley re-thinking what the promise of a car means to consumers.

Developments in computer vision, image processing, machine learning and augmented reality – all fields that rely heavily on the GPU -- will help define the automotive experience of the future and pave the road to the self driving car. In vehicle supercomputing and connections to the cloud will forever change owning, driving and riding in a car.

BIOGRAPHY

Danny Shapiro is Senior Director of NVIDIA's Automotive Business Unit, focusing on solutions that enable faster and better design of automobiles, as well as in-vehicle solutions for infotainment, navigation, digital instrument clusters and advanced driver assistance systems. Most recently, Danny was the Director of Marketing for NVIDIA's Quadro line of professional graphics solutions for automotive design and styling applications. He is a 25-year veteran of the computer graphics and semiconductor industries; prior to NVIDIA, Danny served in marketing, business development and engineering roles at ATI, 3Dlabs, Silicon Graphics and Digital Equipment. Danny holds a BSE in Electrical Engineering and Computer Science from Princeton University and an MBA from the Hass School of Business at UC Berkeley. He lives in Northern California where his home solar system charges his electric car.