

Future Ideas

Here is a letter I wrote to Tesla Corporation in 2014.

Automobile Boutique Concept

My name is Chuck Stewart and I have been an avid car buff my entire life. I've subscribed to *Road & Track* for over 40 years, designed and built a couple of custom cars back in my late teens and twenties (full-scale mock up, molds, fiberglass body pieces, assembly, complete frame and running train design) used in the movie industry and custom car shows (won first place), and more. Now that I am 60 years old, I've noticed the past decade that my choice in cars has shifted. No longer do ultra-fast cars fascinate me with their excessively high-powered engines. I enjoy their design but just don't desire excessive power, i.e., more than what is adequate. In fact, my next project is to drop a Toyota Prius engine/drive train or some all-electric system into a Ford GT40 kit car. I've always been more interested in car design.

That has gotten me thinking. I love automobile design but I'm not interested in extreme power, extreme speed, or extreme cost. I wonder, "Why can't we have wonderful design in a mid-priced car with an eco-friendly power train?"

Idea

There are a couple of maturing technologies that could allow the greatest explosion of automobile design—all electric vehicles and 3-D printing.

A number of years ago, General Motors displayed the "skateboard" concept. The idea was that a hydrogen (or electric) power system would be built around a flat frame that included the entire drive train. The body was something that mounted to the skateboard with all control systems (steering, brakes, accelerator, air conditioning, etc) hooked by "wire" to the skateboard. I've included a photo of the GM Skateboard as reference. Of course a manufacturer could easily make a number of variations of the Skateboard to accommodate models with greater range or power.



An all-electric system would easily fit into the Skateboard. This would free an automobile manufacturer to create any body design.

The second part of this idea is 3-printing. 3-D printing is quickly becoming more powerful and capable of making much larger panels. I could imagine that, soon, software and computer capabilities would allow the 3-D printing of all body pieces external and internal of a full-scale car (which is termed *direct digital manufacturing*). Although printed individual panels would cost more than mass produced panels using molds, the premium price these cars would sell at would cover this “exclusivity” of design.

There are so many show cars that we have drooled over the decades that we just wished the manufacturers would produce. With 3-D printing, it would become possible to create a car design on the spot. For example, I’ve always been interested in the Bertone Stratos of the late 1960s, or the Chrysler Atlantic in the 2000s and similar concept cars. Now, limited runs of these cars are possible. Or, how about a recreation of the Lamborghini Muria or Dusenbergs or Ford GT40 or some other rare car. Of course rights would have to be secured in these cases, but you get the idea.

Of course, people could come in with their own designs. In a way, you could become a customhouse able to knock out fully functional designs for other manufacturers to turn into full production cars.

By freeing the chassis, power and drive train from the body, you have the opportunity to put any body on the Skateboard. With 3-D printing, you have the capability of producing limited runs or even one-of-a-kind vehicles.

Anyway, this is my idea. I don’t think I’m the only person on the planet who is mostly interested in car design and not extreme power or speed. I don’t feel the need to brag that my car has 600 hp or can do 0-60 in under 4 seconds. Then, again, I may be wrong and apologize for wasting your time. I just felt that Tesla was the perfect company to use the Skateboard idea and to expand into customized body design.

Sincerely,

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Visit www.ChuckStewartPhD.net to learn more about me.

My first degree was in physics and then automotive engineering. I worked in aerospace (yes, a rocket scientist with Rocketdyne), and others. Unfortunately, I'm openly gay which closed many doors to working in the automobile industry. I have resorted to teaching math and science, writing academic books on LGBT issues, and work as the Executive Director of a number of professional gay organizations. I would love to work on this idea with some automotive company.