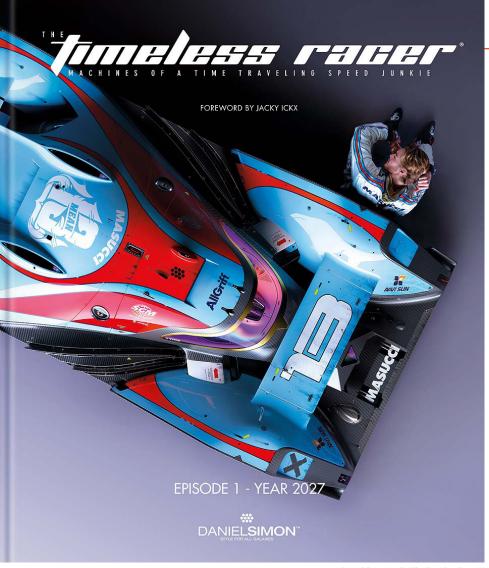


# IMELESS DESIGNER

Whether traveling backward, forward, or parallel, acclaimed concept designer & author Daniel Simon is running on all cylinders.

By John Vondrak

Daniel Simon loves machines. He is intrigued by how they work and consumed by how they look. For many vehicle designers and aficionados of transportation modes, his affection is not uncommon. As children, my late brother and I were obsessed with aircraft. His—World War II era, while I, to this day and from the most basic line drawing, can easily identify all forms of World War I airplanes. Both of us were (and I remain) 60's Mopar muscle car enthusiasts. Admittedly, our love of machines is not entirely unique, but when you listen to Daniel Simon speak about them, the full-throttled passion you hear in his voice is. To him, a vehicle is not merely something you drive, sail, or fly from point A to point B. And it's also more than just a work of art. These machines are part of a universal story—an integral part. So for Daniel Simon, vehicle designer, the only thing he enjoys as much as creating fantastic looking machines, is crafting the back story that accompanies them.



Daniel Simon LLC / The Timeless Racer™

### THE TIMELESS RACER

Where <u>Cosmic Motors™</u> presented (from concept to completion) photorealistic spaceships, pods, race cars, trains, warships, and balloons from planets within a faraway galaxy called Galaxion, Timeless Racer delves much further, presenting Simon as both artist and storyteller. "One day, I want it to be the Star Wars of motorsports," he confides unabashedly. He initially set out to create a parallel world, a definitive picture book of high-resolution renders focused on a vast universe of racing machines that would all be connected—from 1920's motorcycles and 50's era airplanes to futuristic cars, sea vessels, and spaceships. He just needed a way to tie it all together. The solution came in the form of a fictional character named Vic Cooper, a time-travelling race car driver. "He's the hero of the story," explains Simon, "and each episode introduces us to one of his time travels to a specific race, the first being an endurance race in 2027." I ask Simon what he likes better—creating the vehicles, or creating the story.

"What I learned over the last years, especially here in Hollywood," he replies, "is that it would be helpful if you can do both at the same time." With his design background, he learned to be a problem solver, giving shape to a vehicle that has a certain purpose scripted, yet still leaving countless visual possibilities. "Being told to just do whatever you want is shockingly boring," he says. "The more challenged you are in thinking up something truly purposeful yet original, the more interesting and conceptual the design will be. Of course, sometimes I come up with a random machine that I fall in love with visually, but then say 'I better make up a story for this."

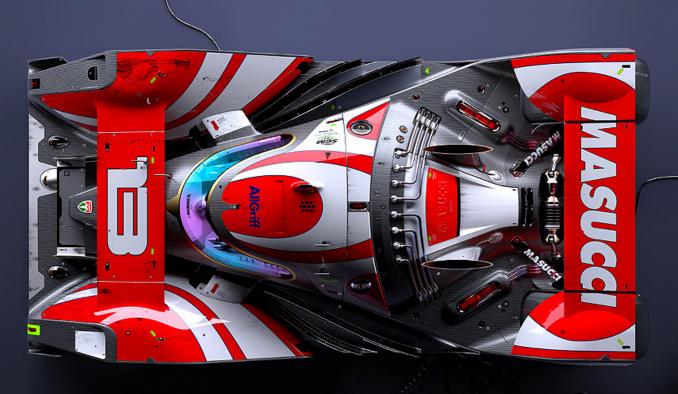
Born in Germany, Simon began his professional career as a designer at Volkswagen and Bugatti. After stints in Spain, England, Brazil, and Japan, the concept designer, producer and author now calls Los Angeles home. It is here where he creates iconic fantasy vehicles for Hollywood blockbusters like Tron: Legacy, Captain America: The First Avenger, Prometheus, and Oblivion. His client list ranges from Warner Bros. and Universal, to Disney, Formula1, Lotus, and Hamilton. He hasn't "gone Hollywood" and abandoned other pursuits, however. Simon continues to offer automotive design services and lectures, all while creating his own vehicle fantasy worlds, first in the book: <u>Cosmic Motors™</u> followed by his latest work, The Timeless Racer®: Machines of a Time Traveling Speed Junkie: Episode 1.

Simon adds that one of the most important things he has learned through film work is that a designer must let the design "fill in the blanks" of the story. So with that in mind, and inspired by the likes of Ferrari, Lotus, and the genius daredevils who set out to break land and air speed records, Simon created the character of Filomeno Masucci, an Italian constructor whose team includes a British race car driver who dies tragically when he crashes in his Masucci automobile. The story doesn't end there, of course. The driver is survived by his seven-year-old son, Vic Cooper. Unfortunately for the lad, before you can say "legacy," Masucci's despondency over the elder Cooper's demise prompts the Italian legend to fold the race team. Upon reaching manhood, and robbed of an opportunity to carry on his father's racing legend, the adult Vic must now rely on what The Timeless Racer® refers to as "spins" or mental time travels—experiencing dream racing adventures with the Masucci team, leaping forward and backward in time.

And for all this futuristic time travel, what is the alternate environment like in general? Quite nice, as a matter of fact. Unlike most current science fiction, *The Timeless Racer®* portrays a universe at peace. "The fact that it is mostly peaceful was important to me," says Simon. "A lot of sci-fi is very brutal, war-like, dystopian. I wanted to draw an optimistic, daylight future—of course there might be some setbacks. That's what fascinates me with Syd Mead, one of my most influential heroes in concept design. He would usually draw a very positive future. I understand that big budget entertainment needs high-stakes adventure tales, but those don't need to always be the last man standing, end of the world, we're-all-going-to-die stories."

As refreshing as this world concept is, it doesn't arrive at the origins of <u>The Timeless Racer</u>, i.e., the race car driver as mental time traveler. From where did that blossom? "What I'm fascinated with is that we take so much for granted that today is today and everything we look back at exists and that everything we look toward tomorrow will still have to be created," says Simon. Taking this concept and moving it along the time axis is what fascinates him most. "If nothing bad happens like in Hollywood films," he laughs, "year 2400 will arrive and gear heads will have 400 more years of cars and planes to geek out about, which will compress our very diverse today into just a chapter. There is so much more to come. It's very fascinating."

Daniel Simon LLC / The Timeless Racer





featuring vehicles of all sorts—from cars to ships, to motorcycles, to spacecraft and airplanes—in order to understand their history. When we spoke, he had just returned from Airraces in Reno, the annual summer air show that attracts aviation enthusiasts from all over the world to the Nevada desert. The experience provided Simon with more food for thought and a logical explanation as to why he plans for Timeless Racer to be a series of books. "For each branch of machines you break into," he explains, "there are 200 more doors you can open. You find guys who know all about delta wing jets from the fifties, another guy who only likes hydroplanes, and all that just fascinates me. With each new Episode, I want to take the reader not only through different eras, but through different kinds of machinery. You can't buy something like this today."

Simon credits his world travels to making him receptive to so many different things. "I love the variety of cultures," he says. Yet he has also discovered that often times, the more you know, the less you know. Simon has seen firsthand, that each culture (in terms of its interests and passions) has its own particular bubble in which they feel most comfortable—and sometimes take for granted. "I meet people who say let's go to a F1 race and they know the names of all the drivers and all the screws on each car," says, "but they may not know a single lndy 500 winner, and vice-versa." As for his new home turf, the United States, Simon is quick to highlight NASCAR. "Big engines, bold graphics, and beer," he says. "But if you go to Japan, it's a different vibe with sophisticated tech like high pitch engines and mechanics in white overalls. This shows me there are so many stories to tell."

### THE ENGINEER'S SON

Simon began drawing as a child, but as the product of a shipbuilding family (Simon's father was an engineer and both parents worked in the German fishing boat industry), his early output was skewed more toward ships than automobiles. We briefly discuss the building of model kits, something that both of us engaged in throughout our youth, and quickly arrive at the consensus that planes were the preferred choice since boats did indeed "suck to build." By the age of 16, however, Simon admits to becoming a "complete car nerd." He also came to the realization that designing automobiles could be a profession.

He entered design college, yet surprisingly didn't learn 3D design—by choice. "I didn't care about it at all," he remembers. "I skipped most classes about Alias and 3D because it was purely cumbersome and most importantly, there was no aspiration. I didn't see any reason to invest all that sweat and pain. There was no artist out there that could use the software in a way I could imagine it." Besides, his idol, Syd Mead, used a brush. In those days, there were virtually no images of note that would possibly inspire a student to pursue 3D design, so ironically, Simon has actually became what was missing in his design formation. Now he meets young students who clearly find something in his work that drives them to learn 3D or design.

As his bachelor's thesis approached, Simon decided that since he was going to design automobiles for the rest of his life, he would seize this last opportunity to step outside of that box and do something different. He wrote a fantasy story with a princess and airships in the desert which tapped a creative vein inside of him. But upon graduation, he went to work for Volkswagen, stepping right back into the automotive design box. The fun he had creating that story however, still lingered and after working for the famous carmaker all day, he would spend his evenings drawing spaceships "just for fun."



Daniel Simon LLC / The Timeless Racer®

Influenced by the release of Star Wars Episode 1, Simon launched a website in 2001 to showcase his futuristic designs. Although much more commonplace now, at that time, such an endeavor was quite revolutionary as designers were not known to display their work online. In 2005, Simon left Volkswagen and just about that same time, the L.A. based publishing house Design Studio Press, based upon what they had seen on the website, approached Simon about creating a book of his works. "They didn't realize that what they saw on the site—that was it," Simon confesses. "800 pixel, low resolution images, I had no higher quality, there was no need. But with a prospect of having my artwork printed in books to be sold worldwide, locked into physical paper for years to come, I needed to supercharge my visualization skills— way before the arrival of plug-and-play render tools. With the help of online tutorials and trial-and-error, I learned to build shader networks and scenes in Autodesk® Maya® and mental ray®. The complexity was rather joyful and rewarding—getting photorealistic images after experimenting like a digital mad scientist···" The result was <u>Cosmic Motors</u> and because of its subsequent success, Simon began to understand the power of 3D.



Further adjustments and design modifications are often based on real functionality. "When you start building them for real," Simon says, "you enter a completely different universe." In fact, the bubble ship in *Oblivion*, although it couldn't fly, was a genuine, working prototype with actual, watertight, electric doors.

### LIGHTS, CAMERA, ACTION

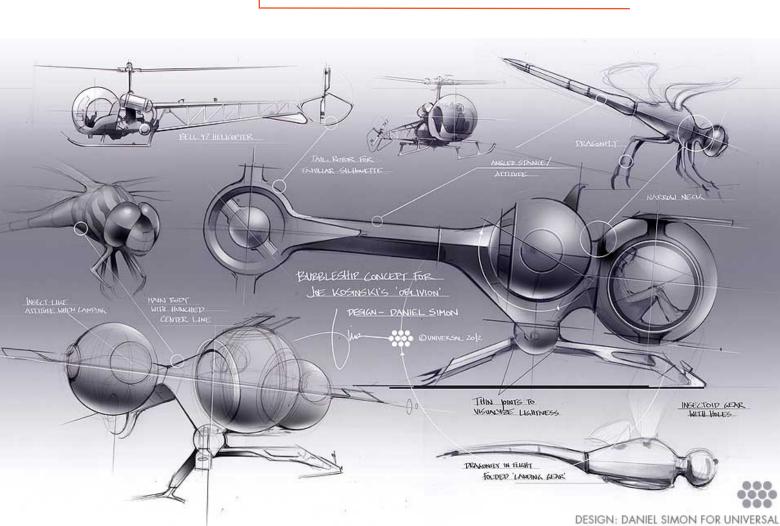
Hollywood understood as well, and it wasn't long before they came calling—an occurrence that Simon says was never an end goal simply because he had no idea what sort of job he would fill in a film project. "They found me," he says. "Nowadays, most artists have a website or Facebook page. You could barely find anyone online in 2005. You could watch a DVD or VHS about the making of a movie, but who were those people? Where do they fit? What's their job? So I had no aspiration. My goal, and quite frankly because I'm very German and therefore like to organize things, was a book. It's a great tangible product to organize your stuff and kind of finalize it." He viewed the book as an opportunity to do his very best work and then file that one particular chapter of his life away. He pushed science fiction vehicles to the limit and the Alias software as well. "Cosmic Motors™ was my test bed for Alias," he recalls, "my test challenge to learn 3D, to learn Photoshop, Paint, atmospheres, and learn about photography. How does light refraction work? How do wheels touch the shadow? I was fascinated with the whole complexity of what a photorealistic image needs."

To my eye, one of the most compelling characteristics of Simon's vehicles is that they often look used, including dirt, surface scratches, and exhaust markings, thereby heightening the sense of reality. "Dirt is a very popular thing to add," he laughs. "It's an art form in itself. I see many young concept artists using it and being done, but there needs to be so much before you add the dirt—it needs to look even better without it." He also remarks that when designing futuristic vehicles, the whole concept of dirt can be a bit of a struggle. "There might not be dirt in the future," he proposes. "Self-healing paint and nano structure coatings are in development, were everything just peels off, it is quite mind blowing. In Timeless Racer, I struggled with it, because my race cars from 2027, and yes they have dirt on them, may in reality be coated to look pristine after 48 hours of racing in the rain, with all sponsors still clearly visible. This is a tough challenge for visual storytelling and making your digital creations look real or used."

For Simon, creating vehicles for motion pictures is an experience profoundly different from his books. "It's a different field," he admits. "My mind has to switch completely. Movie design is design service. I'm providing service to a client. Everything that the film is about is the story."

I ask him about "design service" and how much sway the film's director holds over his designs. "The director is by far the most important person and whatever he wants, you put that into your design," he says. "Where you come in as a creative and what differentiates you from another designer is your interpretation of it. But it's not that we as film designers invent a whole lot of concepts. Most of it is already defined by screenwriters in a script. Our job is mainly to find the look of it." Although Simon once worked with a director who did request a thousand sketches based upon the premise that he would perhaps like one of them, the designer reassures that such practices are far from the norm. "It really depends upon the director," he says, "but (directors) Joe Kosinski (*TRON: Legacy, Oblivion*), Ridley Scott (*Prometheus*), or Joe Johnston (*Captain America*) were extremely precise about what they wanted."

In order to create his movie vehicles, and just like any actor, director of photography, production manager, or other key player involved in a film, Simon relies on the script. "It tells you everything," he says, citing *Oblivion* as an example. In one scene, the lead character must jump out to the side requiring Simon to design the door large enough for an easy exit. Perhaps the actor is required to fire a mounted gun toward the rear of the vehicle, which means the weapon must be able to rotate. "But they couldn't because I had this nice antenna there that I like so much," Simon laughs. "But you have to get rid of the antenna." Further adjustments and design modifications are often based on real functionality. "When you start building them for real," he says, "you enter a completely different universe." In fact, the bubble ship in *Oblivion*, although it couldn't fly, was a genuine, working prototype with actual, watertight, electric doors.





On the flip side, Simon admits that the light cycle seen in *TRON: Legacy* was never actually built for the film—just a show bike for the red carpet premiere. As a member of the production crew, Simon follows the usual film hierarchy, reporting to the production designer. However, depending upon their interest and emotional involvement with the production design, he does have a good bit of interaction with the film's director. As a kid fascinated with Alien and Blade Runner (and still a fan of those films today), I have to ask him about working with famed director Ridley Scott on *Prometheus*.

"It was five weeks," Simon recalls. "It wasn't planned and I had to fit it into the schedule, but it was an unforgettable experience. "The production designer was Arthur Max, but Scott is also a hands on guy." He describes Scott as a passionate filmmaker and a "really nice person" who seemed more at home with Max, Simon, and the art department than in his office taking phone calls. Scott would draw a lot and occasionally offer tales from his long career—although not necessarily ones related to his iconic films. "He told us stories about commercial shoots he did in the 1980's," laughs Simon. But the vehicle designer also confides that Scott challenged him to think in a different way. "Ridley Scott thinks about silhouettes," he confides. "It's something I start doing a lot now and that's a completely different approach—2D thinking of 3D objects. What is the outline of something? Ridley shoots a lot of backlit. We all know Alien, Blade Runner—a lot of steam. You're looking into the light source with the vehicle in the frame and all you see is the outline of it on the rim glow which is a totally different way of shooting than say, Kosinski who uses bright light. Ridley was more interested in silhouettes, which challenged me to rethink my design process."

When talking about *Captain America*: *The First Avenger*, I mention my appreciation for the Hydra vehicles (particularly the Schmidt coupe) Simon created for the film. The designer responds by crediting his work on that film as partial inspiration for *The Timeless Racer*<sup>®</sup>. "Cap was the first time I was asked to do something which was not futuristic," he says. "I'm mostly hired to design machines for the future, so I learned a lot." His *Captain America* design research led him to many discoveries, especially in regard to World War II aircraft, vehicles, and technology. We discuss how the first jet engine plane, a German test model, flew prior to 1939, and when one considers how simplistic automobiles were built at that same time, it's a startling juxtaposition. But Simon makes it clear that by acknowledging these types of differences within the parallel world of *The Timeless Racer*<sup>®</sup>, where no actual brands exist and everything is fictional, he still adheres to a timeline and maintains an effort to be historically consistent—at least for the time being. "I didn't want to reinvent things throughout the design process," he says.





# **THE PROCESS**

Speaking of his design process, I ask Simon to take me through it. He admits that it is different on every project and that whether or not it is for a client or his own creation is also a determining factor. On <u>The Timeless Racer</u>°, he describes a period of months to formulate what he actually wanted to do, researching the type of vehicle, the year, the cost, whether it was a high-end machine or consumer grade, mass-produced, built in a garage, or a billion dollar project funded by the military. I'm curious as to how far Simon's attention to detail extends, so I ask if the features of his vehicles are designed with real engineering in mind, i.e., are they part of the mechanics (real or fantastical) of the vehicle or do they exist only for aesthetic appeal?

"It's not really my intention," he admits. "It comes more from my education. I'm not forcing myself to execute my fantasy designs in a technically feasible way, but with my dad being an engineer. . ." He goes on to describe the Airraces show again and how fascinating it is to observe the bolts on the prop and how the manifolds extend out of the plane. But he reminds me that these mechanical features are not permanent and are destined to evolve in the future. "The many things that have to be built will have to change dramatically with the arrival of new manufacturing processes," he says. "Rivets on a plane or bulk heads, certain struts—this is an old aesthetic. That challenges you for future design. A cockpit could be empty. You don't need arrays of switches and gauges, only the visor of your helmet. But where is the fascination when you want to present that machine? There's a huge transition going on soon with vehicle design but it's hard to be part of it, so as a story teller, it is best to create a romantic mix of cutting edge technology with old-school interfaces. You as the person looking at my book or the movie vehicle should feel connected somehow— seeing a steering wheel and knowing it is for someone to take control. A big dial, lights, and shifters provide tangibility. Brain control is hard to illustrate. Even a pilot with Google glasses will make it harder to tell a story."

Simon begins by designing in his head which he says happens mostly in the gym, while driving, or after going to sleep. "I see things," he says, "but sometimes it's hard to later illustrate what I saw in my mind." He readily acknowledges the broad spectrum of creative processes, but he tends to visualize it, and try to get it out. "Sometimes I don't even have very good sketches," Simon admits. "Maybe one little sketch tells me already that that's what it was in my dream and I go right into Alias and re-create it. The problem with this is that it doesn't work with all clients. Before they spend all the money, many need to see the drawing. And I understand that completely."

But even the time-honored tradition of creating intense sketches has been impacted by technology. Many design clients favor 3D, so now Simon will do a mix of sketches and very rough 3D models in Alias. "I would maybe draw a very precise mapping where I have shut lines and details," he says, "even shadows, sometimes things that are not in a 3D model, but I'll map that as a 3D model and let them see something in a day or two."

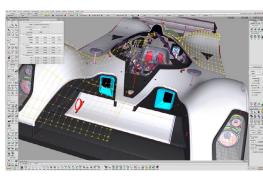
In terms of design challenges, Simon relates his personal experience to the creation of <u>Cosmic Motors</u>, a portfolio book vs. <u>The Timeless Racer</u>, a storybook. There is very little consistency in a portfolio book as it's a collection of projects. But for <u>The Timeless Racer</u>. Simon was bound by it. "You're digging a big hole if you make a storybook and that was, by far, the most terrifying challenge," he says. "You have to call it quits at some point where you change something on page 70 and you really, really, want to change it, but that will change ten other pages in the book."



But just as the designs of his cinematic vehicles take their cues from the script, his <u>The Timeless Racer</u> designs were mostly influenced by the stories he wanted to tell about them. He wants to set one race in the 1980's, so that car has features details closely associated with the era—like big windshield wipers. In contrast, a vehicle from the future has no wipers at all thanks to nano-technology coating on the windshield which keeps the windshield clean at all times. "Wheel nuts in the past look very different than today," says Simon. "Tire profiles tell a lot of stories and headlights are great examples. In the 80's, there were huge halogen lights—beautiful because they could create a lot of character with it. Today you have LED, which have a very different look and feel."

Does Daniel Simon have a design philosophy? "I have catch phrases that come to mind," he laughs. I remind him that BBC Top Gear magazine, when reviewing Cosmic Motors<sup>™</sup>, described his work as "Barbarella, F1, Star Wars and James Bond in a blender!" He admits that he likes the quote, but then goes on to describe another aspect of his work that truly fascinates him. "I have a nephew who loves Ferraris," says Simon. "But he's never seen a real one. All of his information comes from books, TV, it is all in his head. That's one of my biggest fascinations—that you can re-engineer this! There's no reason why someone can't have the same fascination over something that doesn't exist. That's what I want to try and do with *The Timeless Racer®*. Create the never seen before collection of Masucci racing machines, over 699 years with so many stories, so much reason to exist that there can be a little spark of fascination about them other than just looking at them." He explains further by offering an example of two identical images of a spaceship descending on a landing pad. One description begins with the generic opening, "A spaceship touches down..." while the other reads, "Retired space captain so and so, after his long journey from planet...you get the idea. That is almost more work than creating the spaceship itself," says Simon. "That is somehow my design philosophy—storytelling."





## **BOXX: A REAL PIECE OF MACHINERY**

In recent years, Simon has also been known (on his website and at public presentations) to strongly endorse his hardware of choice—BOXX Technologies' workstations. "I think the first time I heard about BOXX was probably through ads in computer magazines or maybe a 3D magazine around 2010," Simon recalls. "They ran a BOXX feature with test reports and branded them as cutting edge, high-end visual effects machines tailored to the artist."

At the time, Simon was using a highly customized Dell, ordered directly from the company's website. He used Dell systems at the company he was working for and felt comfortable with them. His personal model featured one NVidia Quadro FX 4500 graphics card, the largest at that time. A deep interest in BOXX though, wasn't piqued until he became intrigued by the possibilities of GPU rendering. "I work with software companies like Autodesk and Bunkspeed," says Simon, "and it was through Bunkspeed that I got in touch with NVidia. I had been using their cards for twelve years and at that point, I wanted to know what chassis I should get. From NVidia, I learned that you can do more with four cards instead of one. On Oblivion, a coworker had a liquid-cooled BOXX and it was super quiet. So when I got my hopefully silent BOXX, it was this GPU monster with all these graphics cards running in it. I learned later that much of the noise comes from the GPU fans, but it didn't matter. I wanted to have four slots for GPUs to render in iray via Bunkspeed at the fastest speed, solid state drives for quick booting, and powerhouse processors for Alias, Photoshop and Premiere. My 3DBOXX 8550 XTREME features 24 cores in hyperthread mode and was the fastest commercially available workstation at that time, so why not?"

"I feel a ruggedness to it like that thing is a workhorse. It's industrial, like a real piece of machinery — elegant, heavy-duty machinery. It's nicely built."
-Daniel Simon

So how does working on the BOXX differ from the Dell or any other system he ever used. "Does it just come down to the speed?" I ask. "I feel a ruggedness to it like that thing is a workhorse," says Simon. "It's industrial, like a real piece of machinery— elegant, heavy-duty machinery. It's nicely built. I have the side panel removed. I installed all the graphics cards myself. The cables are nice and it's all very clean looking." Enough about how it looks, I think. I ask how the BOXX runs. "I'm again rendering hard-core on the GPU for sometimes 48 hours in a row and that thing is just running high-voltage, high wattage," says Simon. "Consumer service is big too, no doubt about that. The tech support hotline feels more personal and is very responsive. If you call Dell, your call is probably going to a call center in India, unless you are a big corporate client. With BOXX, it feels real. I know they're in Texas. The machine feels like it is made by people who do what I do. I don't know if that's true, but it somehow feels like it is." I ask Simon if he envisions himself as a BOXXster from this point forward. "Sure," he says, "I'm going to upgrade in the next few months to the new chassis, four GPUs, the newest generation of NVidia . . . should be fun."





### A CHARMED LIFE (FULL OF HARD WORK)

Is Simon surprised by his success? Yes, but he is also quick to credit the speed of technology for helping him reach it. "I'm incredibly happy living in these technologically exciting times for artists. The internet alone is mind blowing. Imagine trying to share my work with a letter and a stamp on it. This is phenomenal—the access and reach we have." As Simon and I continue to discuss his work, I tell him that when I speak to BOXX customers, industry types, and others, I can mention his name and they will know who I'm talking about. He definitely has his fans. Between designing cars, creating futuristic vehicles, working in films, and the publication of his second book, I accuse him of living a reasonably charmed life. Simon just laughs.

"People don't always see the work that comes with it," he says. "I'm in the office about 14 hours a day and there's a lot of brain control you have to do because as good as the internet is, it can easily work against you. You have to protect your work in a way which is very time attentive and very costly. It's a very fast business. The movie work is very challenging too. You get jobs from one day to the other and you have to make decisions. Also, a big part of freelance concept design is what not to do. It's almost the harder choice. And then there's trying to keep up with technology. I got the 3DBOXX 8550 two years ago and the machine is great, but in those two years, NVidia came out with an entirely new generation of graphic cards and when I began my 3D design career in 2001, that pace was not in existence. Back then, you upgraded your system maybe every five years. Now software has a new release every year. Alias is yearly, Autodesk Maya is yearly. Fortunately, prices have come down, but it's crazy how fast everything moves. Keeping up with it as a student is easy, because when you're young and fresh, you aspire to find things. But if you're an established artist, you want to settle a little bit to let your creativity take over, but you can't. You have to keep being an eighteen year old crazy person, day after day."

For more of Simon's work, go to <u>his website</u> or follow him on <u>facebook</u>. Click on these links to order The Timeless Racer® or Cosmic Motors $^{\text{m}}$ .

