

haraldbelkerdesign

## Concept design innovation

Transportation concept designer leverages Adobe® Photoshop® CS3 Extended to create ingenious designs for major entertainment industry productions



When Harald Belker graduated from the Art Center College of Design's Transportation Design program in 1990, little did he know he would go on to design one of the most recognizable

vehicles in cinematic history: the Batmobile. It was a car magazine with an ad for the Art Center that first sparked Belker's interest in transportation design. Already in his senior year of college, Belker switched gears and spent the next four years honing his newfound craft.

Now a successful freelance concept designer, Adobe Photoshop software is Belker's rendering tool of choice. Today, he uses Adobe Photoshop CS3 Extended to design everything from gadgets and games to vehicles and consumer products. "Working with Adobe Photoshop CS3 Extended makes my life as a concept designer unbelievably simple," says Belker.

After 10 years designing for the film industry, Belker is exploring new concept design avenues. Using Adobe Photoshop CS3 Extended, he's able to create unique product designs and see them brought to life.



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**Harald Belker**

#### **The road to success**

After graduating with honors, Belker went to work for Porsche in Stuttgart, Germany, but soon returned to the Los Angeles area to work at the Advanced Design Studio for Mercedes-Benz. His first project at Mercedes was the development of the subcompact “smart car.” In 1995, Belker decided to venture out on his own to make a living as a freelance designer. An Art Center colleague called with an opportunity to design a vehicle for a project at Warner Brothers, and eight bat-vehicles later, he had a new career.

Since starting his freelance career, Belker has worked on a variety of industrial design projects. His portfolio includes a series of electric bikes for Lee Iacocca, sunglasses designs for Kaenon, computer game concepts for Digital Anvil, Hotwheels cars for Mattel, and consulting projects for companies such as Porsche Style in Huntington Beach, California and Nissan Design International.

Of course, it is his extensive movie industry concept design work that comprises the majority of his portfolio. Belker designed vehicles and props for numerous motion pictures including *Batman & Robin*, *Armageddon*, *Deep Blue Sea*, *Inspector Gadget*, *Battlefield Earth*, *Spider-Man*, *Minority Report*, *XXX*, and *The Cat in the Hat*. “My most satisfying project was *Minority Report*, which featured a handful of futuristic vehicles,” says Belker. “It was a once-in-a-lifetime chance to design and realize a truly futuristic mode of transportation.”

After 10 years designing vehicles and gadgets for the film industry, Belker has no intention of putting on the brakes. He’s now looking into furniture design as another avenue for his creativity and continues to take on freelance concept design projects. “I enjoy using my concept design experience, together with Adobe Photoshop CS3 Extended, to create new ideas that don’t already exist.”



To organize his library of designs, Belker uses Adobe Bridge CS3, where he can filter content by metadata properties such as file type, file modification date, keywords, aspect ratio, and orientation.

### A layer by layer approach

Belker uses his own concept design workflow, which he's documented in a series of instructional DVDs for the Gnomon Workshop. First, he sketches his designs in pencil, scans the sketches into Photoshop CS3 Extended, and then renders the line drawings in color to show off the design. With a car design, for example, Belker starts with a line drawing of the side view of the vehicle and scans it into Photoshop CS3 Extended. Next, he turns the line drawing into an active layer placed on the top of multiple layers. He uses sub-layers to hold the color and shading in his designs because they don't interfere with the original line work.

"Layers in Adobe Photoshop CS3 Extended let me explore different variations in my designs while filters and effects deliver quick results," says Belker. Working with large, soft brushes, Belker also uses the dodge tool for highlights and the burn tool for shading to portray the vehicle's body and changes in surfaces. "Concept designers all have their own style, which extends to how they work in Adobe Photoshop CS3 Extended," explains Belker. "I am a path person; I use the path tools in Adobe Photoshop CS3 Extended for a ridiculous amount of things because it so controllable."

Once the car is sculpted, he adds the details and light sources that bring the rendering to life. The History palette enables Belker to undo and redo any set of editing steps in an open image and automatically track all editing steps within his files with the Edit History log. He also uses Smart Filters to visualize changes without altering original pixel data. "Light behaves differently on different items—such as taillights, signal lights, and mirrors—and they are all crucial in making a believable image," explains Belker. Lastly, he adds some sparkle, incorporates a background to add depth, and then erases the original line work, except in areas such as door cuts and grooves.

To organize his library of designs, Belker uses Adobe Bridge CS3. If he wants to reference a previous design, he can quickly locate the file using the Filter panel, which filters content by metadata properties such as file type, file modification date, keywords, aspect ratio, and orientation. He can also group related images into collapsible stacks and use the stacks to organize multiple versions of the same file or group files for a particular project.

### Company

Harald Belker  
Marina Del Rey, CA  
[www.haraldbelker.com](http://www.haraldbelker.com)

### Challenges

- Create photorealistic entertainment design concepts for producers and directors
- Collaborate effectively with 3D industrial designers
- Manage design assets from various projects

### Solution

- Use paths and layers tools in Adobe Photoshop CS3 Extended to speed production
- Transfer 3D models between CAD programs and Adobe Photoshop CS3 Extended
- Organize and track concept design assets with Adobe Bridge CS3

### Benefits

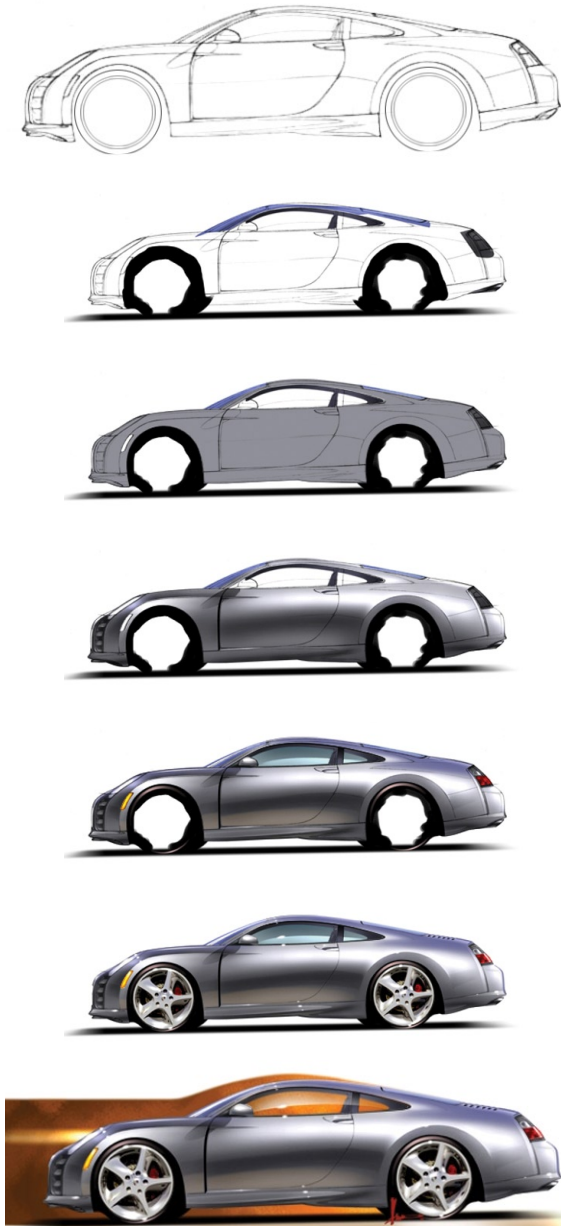
- Create smooth, collaborative workflow connecting concept design and 3D modeling processes
- Meet fast entertainment industry production schedules with simplified concept design workflow
- Produce unique entertainment and consumer product designs

### Toolkit

- Adobe Creative Suite® 3 Design Premium. Components used include:
  - Adobe Photoshop CS3 Extended
  - Adobe Bridge CS3
  - Adobe Illustrator® CS3

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Belker uses layers in Adobe Photoshop CS3 Extended to transform an initial automobile sketch into a fully rendered, color concept design.

### **Powering 3D collaboration**

Depending upon who is receiving his designs, Belker may keep things very "sketchy" or fully render an object and put it in an appropriate environment. When communicating with other designers, sketches of concepts are often enough. However, movie producers or directors need to see exactly how a vehicle or gadget will look, so Belker renders these designs in Photoshop CS3 Extended to a photorealistic level before presenting them.

In addition to occasionally using Adobe Illustrator CS3 software for graphics, Belker has started working in Google SketchUp, a 3D software tool, to set up perspectives of environments. He then imports the 3D designs into Photoshop CS3 Extended for texture mapping. "Being able to import 3D Google SketchUp files directly into Adobe Photoshop CS3 Extended is fantastic and saves a lot of time," says Belker.

After receiving approval for his initial concept designs, the next step is to use 3D CAD software to create full 3D renderings. While Belker does not do the full 3D rendering himself, he is excited about being able to import 3D file formats into Photoshop CS3 Extended, adjust colors or other surface qualities, and open the files again in the 3D software.

"Previously, if I needed to make changes to a 3D model, I was limited to working with screen shots," says Belker. "Adding 3D capabilities to Adobe Photoshop CS3 Extended dramatically simplifies this process and enables me to collaborate more efficiently and effectively with 3D designers."

With Photoshop CS3 Extended, Belker can work quickly to deliver creative concept designs for entertainment industry clients who value his insight and originality. While manufacturing takes just a few months, post-production on a film can extend over a year. The long wait is worth it, though, when Belker sees his vehicle design brought to life on the big screen.



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**Adobe Systems Incorporated**  
345 Park Avenue  
San Jose, CA 95110-2704  
USA  
[www.adobe.com](http://www.adobe.com)

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