



DGFdesign Studio Associato di Architettura e design.

# Ferrari Aurea: The Road to Concept with Autodesk 3ds Max

Elegance, seduction, class, and personality—the Ferrari® brand epitomizes Italy and its unique style that's admired throughout the world. In Maranello, Italy, the hometown of Ferrari, people also identify the Ferrari brand with additional qualities: ingenuity, precision, design excellence, craftsmanship, quality, speed, dedication, and the love of beauty. These qualities also form the basis of most 3D artists' love for their work and are at the core of the Autodesk Media and Entertainment mission to provide superior creative tools that free your creative genius. Tools such as Autodesk® 3ds Max® software.

For most of Ferrari's history, the cars they have produced at their factory in Maranello have been crafted by hand. From the most experienced engineer to the youngest intern, all Ferrari employees are united by the love of their job and their pride in building sensational sports cars. When people buy luxury cars, it is often to fulfill their wish to possess a status symbol. But sit in any Ferrari for a moment, and you'll realize the accuracy and beauty of workmanship in every small detail.

It is craftsmanship, love of details, and dedication to innovative design that led four University of Florence architecture students to come up with a rather wild and ambitious idea for their Masters dissertation—designing a new concept Ferrari as their final joint project.

Alessandro Debenedetti, Emiliano Fiordi, Marco Francesconi, and Pierpaolo Garripoli, from the School of Architectural Technologies and Design, asked their professor at the time, who has since passed away, Professor Roberto Segoni, if they could design and model a Ferrari. To achieve this goal, they wanted to use several design tools and proposed using Autodesk 3ds Max to create the virtual model.

The answer was yes, providing they could design a model fit for *real* production. This meant getting Ferrari's help in studying the concept for the new model. It was to be not just a question of style. The students' car needed to be an exquisite blend of exceptional design, mechanical, electronic and aerodynamic engineering, accuracy, and power. In other words, the four young architects had to produce a model of a Ferrari that a customer would want to buy. This was the challenge that Professor Segoni posed to his students.

"From the beginning, we wanted to transfer the DNA of a Formula One car into a car that anyone could buy and drive... provided they could afford it," says Marco Francesconi, one of the four designers of the *Ferrari Aurea* (the English translation of *Aurea* is *Golden*). "Our point of view is that Ferrari represents tradition and innovation simultaneously. We wanted to create a bridge between past, present, and future in the name of Ferrari."

"There was a particular model produced in the 1940s, called the *Ferrari Barchetta*, which we saw as the perfect synthesis between the sports features of a Formula One model and a street car. The side of our first model closely resembled the *Barchetta*, especially in aerodynamics and the general design. However, we did take other models as our inspiration, models like the *Enzo*, the *456*, and the *360 Modena*. We realized that if we wanted to create a feasible, production-ready car, we needed to work closely with Ferrari. So we picked the phone up and called Maranello."

The engineers at Ferrari were extremely helpful. Amedeo Visconti, Ferrari's Project Manager, Stefano Carmassi (Fluid Dynamics Manager) and Luca Caldirola (Performance Aerodynamics Engineer) devoted time to help the architectural students in their quest to create a new Ferrari model.

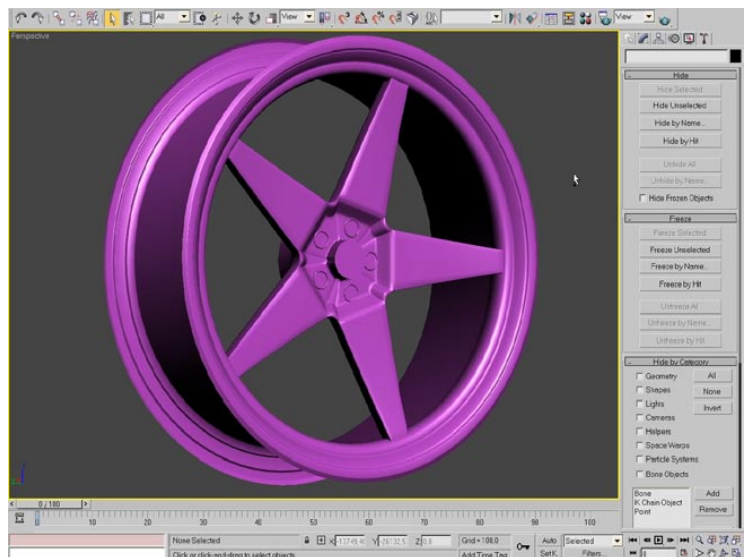
"From the first meeting at the factory," Francesconi continues, "it was clear that if we wanted to design a *real* Ferrari, we had to take into account issues that we had never even considered. The law imposes a vast number of regulations defining what is—and isn't—permitted in a street car. We had technical questions, such as materials to use for parts of the car. These things make the difference between a nice project and a real car. Our initial ideas about the *Barchetta* were integrated with more modern and realistic elements from the *360 Modena*. After much consideration, we created four different versions of the new *Aurea*: the GT, the Roadster, the Spider, and the *Berlinetta*."

After gathering precious technical information from the Ferrari engineers, Marco and his colleagues created early renderings and 1:8 scale models of the *Aurea*. All the elements were now theoretically in place: the technical details, the engine, the interiors and materials, the style, and the different versions. Now the actual design and 3D work needed to take place.

Marco and his fellow students had no doubt about which software to use—Autodesk 3ds Max. "We used 3ds Max software because it's a tool that we can adapt to our needs, a tool that doesn't get in the way of the creative process. With 3ds Max we didn't need to change our process because of software limitations.

"By the time we reached the modelling stage, the focus on the university project had moved to the back of our minds. We were designing a Ferrari fit for the road! We couldn't talk to the makers of the most desired cars in the world one minute and then have to start all over again. We could not compromise on our creative ideas just because modelling software was simply not professional or powerful enough. This is why we chose 3ds Max software—the flexible, fast, and reliable environment required to produce complex design projects like a Ferrari.

"We were talking to state-of-the-art car manufacturers and we needed to work with state-of-the-art software. During a period of three months, we designed the entire model using 3ds Max software, including the interiors, the rims, and the engine space. The photorealism of 3ds Max is especially useful for a project that needs to be this precise and accurate."



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The four architects received top marks for their university project which, after the sad death of Professor Segoni, was supervised by Professor Massimo Ruffilli. The *Ferrari Aurea* project has received honors and awards from Ferrari experts and the most prestigious international bodies that judge new car models. The young architects are now teaching a Masters course at their alma mater—the University of Florence School of Architectural Technologies and Design.

Three of the four architects, Debenedetti, Francesconi, and Fiordi, have gone on to open an incredibly successful design facility, DGF Design. The *Ferrari Aurea* may or may not become a reality in the future, depending on Ferrari's strategic decisions. But the model is there for all car lovers to admire and study. And so is the 3ds Max software.

"The best Ferrari is the one that I have still to build"  
*Enzo Ferrari (1898-1988)*