

MCPHERSON YACHT DESIGN

ICEM SURF FROM DASSAULT SYSTEMES

McPherson Yacht Design provides a high-quality design service to their clients, whether it be Class A surfacing for manufacture, initial GA planning, or exterior styling services. The founder Rob McPherson has been a transportation designer for over 26 years, during which he has worked across the automotive, aerospace and marine industries. Rob's time in these industries saw him working with companies including Airbus and Jaguar Land Rover. About 12 years ago Rob moved into freelancing within the marine industry, which is when McPherson Yacht Design was born. With a portfolio of 3D models stemming from a 95m motor yacht, to a 116m Gentleman's yacht, through to a flying wing airliner – inspired by Rob's aerospace days. Rob has an undeniable talent for turning designs into stunning 3D models.



Björn Johansson Design

Customer:

- McPherson Yacht Designs

Industry:

- Marine

Business Challenges:

- Producing quality surfaces
- The analysis of surfaces
- Speed of delivery

Solution:

- ICEM Surf
- Majenta Solutions Training

Keys to success:

- Partnership with Majenta Solutions
- Dassault Systèmes Technical Team
- Majenta Solutions Training
- Majenta Solutions Helpdesk

“ I provide my customers with 3D models, which I create from 2D sketches or 2D drawings of their designs - I develop their 2D designs into 3D, taking designs to a visualisation stage and also prepare a model's surfaces ready for manufacture. A lot of the work is about creating impressive visuals to place in front of the client for design sign-off. The process often sees changes made to the design once the 3D model is reviewed, these changes are implemented into the 3D model again to re-visualise and then re-present. ”

Rob McPherson, Founder of McPherson Yacht Design and Transportation Designer.

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01. Business Challenges

Creating high-quality surfacing and styling are essential to achieving great product design and producing a flawless end product. When you are working as an external element of that design process as McPherson Yacht Design are, it is imperative that they can produce a high standard piece of work, to deliver the client's creative style and consider engineering performance. One of the challenges facing McPherson Yacht Design, however, was the inability to consistently deliver, in their opinion, the best quality surfaces and be able to analyse the curvature continuity of these surfaces.

“ I was using NURBS modelling software, and it was a massive struggle to get good quality surfaces from these pieces of software. ”

With the marine industry moving at a fast pace, the design process also moves quickly, and McPherson is challenged to produce and deliver 3D models to the client with a speedy turnaround.

“ I wasted too much time trying to get my current software to produce the quality of model I desired. I needed the world's best surface matching algorithms. ”



02. The Majenta Solution

It was immediately clear that ICEM Surf would solve the challenges of better quality surfaces, surface analysis and efficiently developed designs for McPherson Yacht Design. Rob himself was also already an admirer of the high-quality surface modelling software.

“ Many years ago, while working in the automotive industry, I used to see the ICEM Surf 3D models from the styling department, and they were always so perfect to work with throughout the design process. So, I had known for a very long time that ICEM Surf was the top software package to aspire to and in 2017 I was able to purchase ICEM Surf through Majenta Solutions, and it has been absolutely fantastic. ”

ICEM Surf allows Rob to create a better match between the surfaces of a 3D model, increasing the quality of the 3D model significantly, and reducing the time required to achieve good single span surfaces. The software solution allows the 3D model to be fully functional,

“ allowing me to tweak the surfaces to make them beautiful and perfect. ”

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03. Keys to success

We worked closely with McPherson Yacht Designs to fully understand their business, clients, objectives and the challenges that they faced.

“*Majenta solutions have been fantastic throughout the whole process and working with Rashpal Mundi is great, he made sure that my needs were fully understood.*”



We spent time with Rob and Nick McFerran, CATIA Design Centre of Excellence, EURONorth Senior Solution Consultant for Dassault Systèmes, to ensure that ICEM Surf was indeed the software that McPherson Yacht Designs needed to overcome their challenges and to provide Rob with the opportunity to see its latest features and capabilities. Following the software purchase, we arranged a training plan through our in-house Training Academy and our technical team at Majenta Solutions were made available when the yacht design company made the switch over to ICEM Surf, to support and answer any questions.

“*You’re always going to have questions when moving to a new software solution. Majenta Solutions’ Helpdesk was made available for me, and the guys have been fantastic, very responsive and whenever I’ve had a problem then answer has always come back the same day.*”

04. The Future

“*I first met Majenta Solutions at their annual event at Silverstone Circuit, where I was exposed to the 3DEXPERIENCE platform from Dassault Systèmes. It was very clear to me that the Creative Designer Role was the software that was perfect for my creative pipeline. The vision that Dassault Systèmes has of taking the design process from sketch through to 3D model, through to class A refinement and then to visualisation; presenting to the customer over the web, to encompass that whole design process in one software package I think is an absolute genius. And I can see that working fantastically for my company as a creative pipeline.*”

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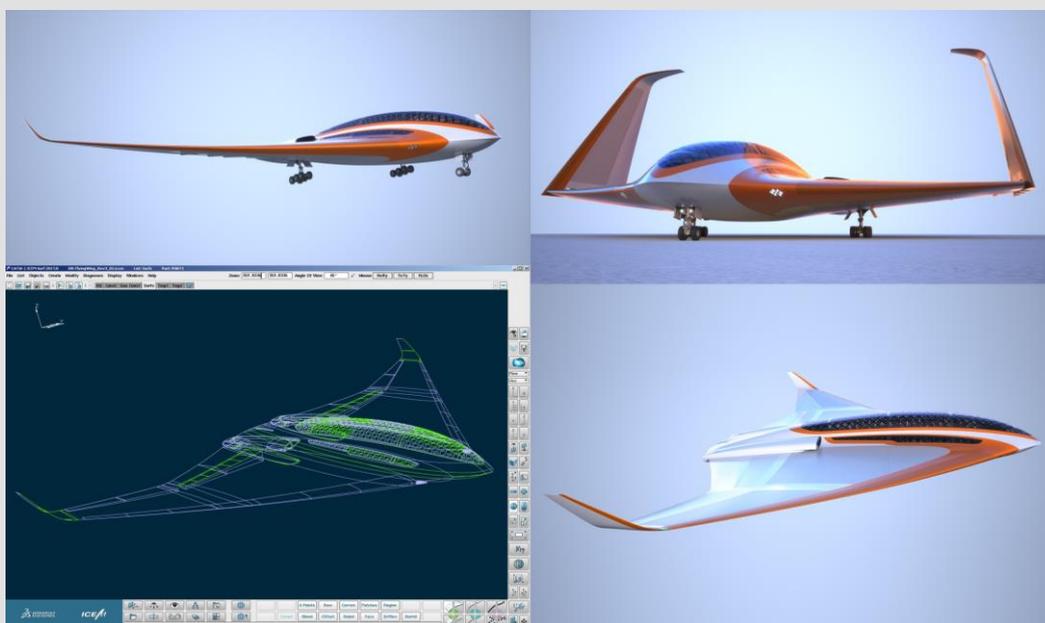
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“ I also want to explore VR and what it could bring to our creative process, to integrate VR into the modelling so that I could make decisions on form and shape very quickly and with confidence would be very valuable. I would also save a lot of time throughout the design process by requiring fewer physical mock-ups. Majenta Solutions and Dassault Systèmes have a great vision with VR, and I think it's fantastic ”



Rob's first 3D Model using ICEM Surf was his autonomous Flying-wing Airliner.

“ The concept was designed to accommodate the same passenger numbers as the current A380, powered by two large Rolls Royce Trent 1100 sized engines nestled within the aft of the wing structure. With an estimated wingspan of around the 100m mark, there would be a need for folding wings as per the Boeing 777x to reduce span while on the ground so as not to bring the airports to a complete standstill! ”



Rob and McPherson Yacht Design continue to thrive, and Rob is in such great demand he is also currently completing projects for a great Automotive neighbour of ours. We are proud of how Rob has embraced ICEM Surf and as we continue to build a partnership with him, we hope that we can see many more beautifully created 3D models with flawless surfacing in the future.

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