

INNOVATIVE SOLUTIONS

The technologies of 3D computer graphics are generating new products and services. These include the design review, where all parties involved in the draft can 'dive into' the 3D model by means of virtual reality, the three-dimensional nautical chart facilitating an unprecedented form of navigation, or the application of virtual training environments for crew training measures.



FULL STEAM AHEAD WITH THE THIRD DIMENSION.

The user's benefit always comes from an appropriate combination of hard- and software, the proper data processing and process design.

OFFER AND BENEFIT

The **3D maritim** network offers a central point of contact for all parties interested in the application of 3D computer graphics for ship building, ship operation, offshore and maritime technology. It addresses users wishing to tap the potential of this key technology to improve their value-added processes as well as IT companies wishing to adapt existing or future products to the requirements of this market segment. Increased safety at sea and the far-reaching protection of the environment are typical challenges in which 3D solutions can manifest their strengths.

Specific benefits include:

- Consulting on the application of 3D computer graphics and on the technical implementation
- Contract research to create highly innovative solutions
- Development of customized hard- and software according to the client's specifications
- Training for the successful introduction of 3D applications at companies

YOUR CONTACTS

Prof. Uwe Freiherr von Lukas
Kristine Haase
Eva-Maria Mahnke

3D maritim
c/o Fraunhofer IGD, Joachim-Jungius-Str. 11, D-18059 Rostock
Phone: +49 381 4024-152, Fax: +49 381 4024-199

info@3dmaritim.de
www.3dmaritim.de

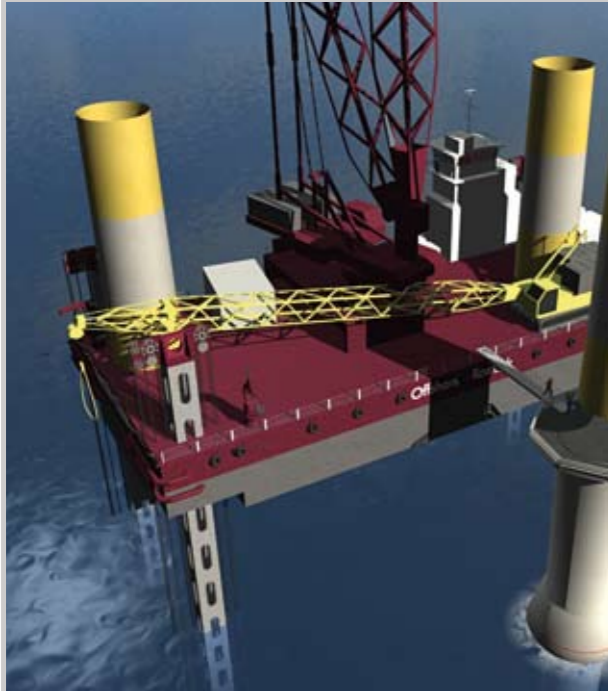


NETWORK OF EXCELLENCE FOR THE APPLICATION OF COMPUTER GRAPHICS IN THE MARITIME INDUSTRY

POSITIONING

Ships and offshore sites are speciality products with high demands for efficiency and quality throughout the entire product life cycle. The administration and use of the complex and very large data amounts as well as the environmental conditions, which this capital equipment is exposed to, require customized IT solutions. All processes, from draft via production all the way to operation, can be effectively supported by 3D computer graphics. In the future, real-time capable visualizations and image processing are to secure designs, provide guidance for maintenance and repair or route captains.

The development and introduction of 3D graphic solutions for the maritime industry is the common goal of the partners in the **3D maritim** network of excellence. The group covers all areas of 3D computer graphics and provides a comprehensive range of products, design and consulting services for maritime applications.



3D maritim
ALLROUND COMPETENCE

The **3D maritim** network is a worldwide unique pool of specialized IT companies, research institutions and users driving the application of 3D in the maritime industry. The complementary specialist expertise of the network members covers all areas required for the various application scenarios. Due to the joint initiation and implementation of innovation projects, the network's competences are continuously enhanced and adapted to the requirements of the maritime industry.

The following priorities illustrate the application of the various technologies of 3D graphics and highlight the services offered by the partners in **3D maritim**: 3D reconstruction, semantic enrichment of 3D data, Virtual and Augmented Reality, man-machine interface or computer vision.



3D maritim
APPLICATION EXAMPLES



INVENTORY AND RETROFIT

There is an increasing need for ships already in service to be retrofitted for new tasks or to implement legal regulations (such as environmental standards). To support this work, **3D maritim** provides robust and efficient procedures combining real and virtual objects or even illustrating how reality deviates from the target model.

VISUALIZATION AND INTERACTION

Complex 3D models created in shipbuilding, for instance, are still challenging for 3D computer graphics due to their large data amounts. **3D maritim** is devoted to innovative approaches in software, hardware and user interactions in order to provide various users (engineers, managers, technicians) with quick and intuitive access to the 3D data.

3D IN THE LIFE CYCLE

The efficient use of 3D data in design, production, marketing, training and operation as well as recycling or retrofit raises a series of technical and organizational issues. **3D maritim** is facing up to the industry-specific challenges in terms of data exchange, know-how protection and conversion of 3D models. It is therefore possible to tap the full potential of 3D throughout the entire life cycle of maritime products.

VR TRAINING CENTER

3D maritim pursues the vision to make ship crews aware of the ship and its operation by using Virtual and Augmented Reality. A higher flexibility in training as well as reduced costs with a constantly high training level are the motivation for this topic.

MORE SAFETY WITH THE VIRTUAL SHIP

Safety at sea commands top priority, not only for the welfare of crew and passengers. For the environment as well, shipping disasters can have a devastating impact. The continuous application of 3D models enables **3D maritim** to continuously improve safety aspects in terms of design, but also when it comes to training and operation. In doing so, the cost-effective development of virtual training environments is an important criterion.

3D maritim
THE NETWORK PARTNERS



3DInteractive GmbH

AIDA Cruises - German Branch of Costa Crociere S.p.A.

ANOVA Multimedia Studios GmbH

eSZett GmbH & Co. KG

EvoLogics GmbH

FORTech Software GmbH

Fraunhofer IGD and Fraunhofer AGP

Germanischer Lloyd SE

Hochschule Wismar – University of Applied Sciences

Howaldtswerke-Deutsche Werft GmbH

ibmv Maritime Innovationsgesellschaft mbH

Ing.gesellschaft f. Maritime Sicherheitstechnik u. Management mbH

InnoTeamS GmbH

Institut für Sicherheitstechnik/Schiffssicherheit e.V.

MarineSoft Entwicklungs- und Logistikgesellschaft mbH

MEYER WERFT GmbH

Siemens Industry Software GmbH & Co. KG

University of Duisburg-Essen

University of Rostock