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Videoworks presented one of the first practical AI applications for yachting at the Monaco Yacht Show 2024

- The first implementation of AI, curated by Videoworks on Rossinavi's *Seawolf* catamaran, was presented during a press conference at the Monaco Yacht Show 2024
- Sergio Saponara of the Department of Computer Engineering of the University of Pisa illustrated the possible applications of AI to boating
- *Seawolf*, a 42m hybrid-electric catamaran, represents the ultimate expression of Rossinavi's new sustainable philosophy called BluE
- Also on display in the Videoworks stand were the new TV screens by Loewe (the champions of design and technology), the SD WAN system (to optimise Internet connection on yachts) and the ETO Panel, for the control of all onboard functions

The over 25 years of experience and hundreds of innovative audio/video, entertainment, IT and lighting & comfort systems, installed on board superyachts sailing around the world, are the hallmarks of Videoworks. Bolstered by this experience and achievements, the Italian company is always looking ahead. Yet again this year it surprised the press and operators in the sector at the Monaco Yacht Show 2024 (25-28 September) by presenting the first real implementation of AI (Artificial Intelligence) on *Seawolf*, a Rossinavi hybrid-electric catamaran. This preview is in addition to three other new products on display: the new TV screens by Loewe (the champions of design and technology), the SD-WAN system (to optimise Internet connections on yachts) and the ETO Panel, for the control of all onboard functions.

AI IS READY TO SAIL THANKS TO VIDEOWORKS

During the press conference at the Monaco Yacht Show, Videoworks presented the AI installation assembled on *Seawolf*, a catamaran that is a champion of sustainability also thanks to the systems developed by the Ancona-based international company.

It was up to Sergio Saponara, Director of the Department of Information Engineering of the University of Pisa, to introduce the topic, first with a description of the state of the art of the technology and then explaining the opportunities for implementation in the nautical world. *"The collaboration between the University of Pisa and Videoworks has demonstrated the great potential of the application of AI to the world of luxury yachts,"* he said. *"Through the creation of digital models, it is possible, on the one hand, to monitor all onboard functions and, on the other, to optimise them, which has the added benefit of improving guest comfort and, at the same time, reducing energy and environmental impact. In practice, here is the confirmation that combining the world of large yachts with the world of sustainability is possible. A further evolution in the use of AI for yachting will be the implementation of robotic technologies. In addition to giving suggestions for the correct management of the installed engineering plants, these technologies will also be able to manage the execution and automatic control phases."*

Claudia Rossi, Rossinavi's Chief Commercial Officer, was given the task of diving deeper into the entrepreneurial vision that led to the introduction of AI on *Seawolf*. *"The installation of an Artificial Intelligence (AI) system focused on power management aboard yachts represents a significant innovation*

in the maritime sector, aimed at optimizing fuel consumption and supporting the crew. This approach not only facilitates more efficient navigation but also marks a tangible step toward the yachts of the future. As a shipyard, while we do not have control over the fuels of the future, we recognize that, for now, diesel remains the most efficient. However, the ability to build yachts with a BluE infrastructure equipped with AI designed to reduce emissions gives us a competitive edge. We are already accumulating a wealth of valuable information through machine learning, which prepares us for future developments in propulsion. To provide a concrete example: a traditional 500 GT vessel consumes between 45,000 and 55,000 liters of diesel to travel approximately 3,500 nautical miles. In contrast, Seawolf X, a catamaran equipped with AI, covers 3,800 nautical miles using only 15,000 liters of fuel." said Claudia Rossi.

Maurizio Minossi, CEO of Videoworks, then explained what had been done. *"With Rossinavi, Videoworks has developed an onboard Artificial Intelligence system, called Rossinavi AI, to improve comfort and maximise the yacht's ecological potential. Artificial intelligence constantly analyses how the ship functions, learning from behaviour observation and then predicting the needs of guests on board. Rossinavi AI dialogues with crew members, recommending low-impact behaviours and teaching them to sail with full environmental awareness."*

Everything on board *Seawolf* has been designed to maximise energy efficiency and reduce environmental impact. Since 2022 (after meeting Videoworks and professor Saponara at the MYS), Rossinavi, in collaboration with Videoworks, has revolutionised its approach to innovation, prioritising environmental impact in the design of its yachts. The BluE philosophy is embodied by hybrid-electric yachts, powered by batteries and solar panels. Inspired by phytoplankton's ability to harness sunlight to produce energy, BluE represents a new era in superyacht design. Like phytoplankton, these yachts absorb sunlight during the day and use photovoltaic technology to convert it into energy, which is then stored in technologically advanced batteries and released at night, creating a bio-luminescent effect.

Depending on the distance it is supposed to travel, *Seawolf* can complete short cruises in fully electric mode and transoceanic journeys in 80% electric mode. When moored, it minimises energy consumption by returning the energy generated by its systems to the dock or to a private property - it is enough to power an entire villa. The two onboard diesel generators can quickly recharge the batteries, ensuring a constant energy reserve (the batteries can also be recharged via ground connection in just five hours). All this obviously occurs under the careful "eye" of the AI.

Videoworks' installation is based on two main pillars: the first is the AI algorithms (which have benefitted enormously from the computational power of modern systems), while the second is the layout of *Seawolf's* connections and sensors which, combined with the latest generation automation systems, guarantee total control of the onboard systems. From air conditioning to video-audio systems to lighting, they are all connected in a single network. Added to this is a series of sensors that check if guests are present in the cabins, and also an external light sensor that lowers the intensity of the lights during the day (when the sun is shining) and increases it at night. The catamaran is therefore equipped with a system of sensors that is significantly more advanced than the normal sensor systems on a yacht.

Maurizio Minossi also mentioned a detail that is a perfect example of the great opportunities offered by AI on a yacht. *"Following a specific request from the shipowner, who was very involved in the project from the very beginning, a game was also implemented, initially designed for shipowner's children, but then extended to all guests who want to take part,"* he said. *"In practice, thanks to AI, the energy consumption of each individual cabin is monitored and, at the end of the cruise, an award is given to the*

guests in the most virtuous one."

This is just an amusing application, but there are many other AI opportunities that increase onboard comfort while helping limit energy waste. For example, when the yacht is sailing in favourable and sunny weather, and therefore the cabins are empty, the blinds can be lowered so that the rooms do not heat up, which means the air conditioning does not overload. In terms of crew areas, there are yellow, green and red lights in the technical areas, which have a specific purpose: for example, in the laundry room, if there is a green light, the steward does the laundry and uses the dryer, but refrains from doing so if the light is red (if it is yellow, the steward will ask the manager for permission).

Rossinavi's *Seawolf* is a 42.75 m catamaran with a 13.75 m beam, 499 GT and aluminium frame. The futuristic exterior design was curated by Fulvio De Simoni Yacht Design, while the interiors were designed by the New York-based Meyer Davis Studio. Externally, *Seawolf's* profile is similar to a sports car's and the deck is organised into three distinct areas: a well-deck with a pool, a large sun lounge and a bow area with a hidden pool and home theatre. The interior has five cabins for 12 guests.

THE EXCLUSIVE LOEWE TELEVISIONS

This brand has a long history that began with the first radios in the 1920s in Kronach, Bavaria, where the company still has its headquarters. Under the impetus of a new investor, Loewe has returned to playing a leading role in the world of televisions, aiming to offer, with its new Stellar range, something more exclusive than the well-known products. Stellar televisions are exceptional in terms of design but also in terms of functionality: the model exhibited in Munich, thanks to its versatility (including shape-wise!), offers shipyards, designers and shipowners the chance to indulge in adding monitors to the installations. So it is no longer just a matter of a TV hanging on the wall - here is a screen that becomes an integral part of the furniture and can be used to create a different layout in the living room and in the cabins. All these opportunities were well described by Loewe technicians, who at the Videoworks stand offered an in-depth look at all the potential of the new Loewe Stellar range.

INTERNET AS AT HOME WITH THE SD-WAN SYSTEM

With the spread of low-orbit satellites, such as Starlink, and with 5G connection, more and more shipowners are accustomed to enjoying audio and video content on their yacht as if they were at home. Satellite TV is a thing of the past, and now shipowners and guests stream on Netflix, Sky or Now, watching anything from sports to movies, using the Internet via IP and Sky decoders. However, in order to benefit from all this in an even more efficient way, in particular with the address of the country of origin and not of the one in which they are browsing, shipowners and their guests need SD-WAN to watch their favourite programmes from the Internet with an Italian IP address, regardless of where they are in the world. This is necessary because, for example, programmes available with an Italian Sky subscription cannot be viewed with a Thai IP address; SD-WAN technology allows the optimisation of Internet traffic and, ideally, can be used to manage TV services. In the Videoworks stand, Wednesday was dedicated to the presentation of SD-WAN technology to shipyards and shipowners: from Munich, it was possible to view a Sky Italia programme and, at the same time, stream a US film normally only viewable in the States.

WITH ETO PANEL ALL THE YACHT IS UNDER CONTROL

In recent years, the presence of a specialist dedicated to the management of the ship's electronic and electrical equipment has spread to large yachts. To simplify their work, Videoworks has designed the ETO Panel, an interface viewable from a tablet or smartphone that guarantees complete control of the audio-video system, the computer system and all onboard systems. This means that dealing with alarms, managing any emergencies but also preventing failures can all be done through a single device. Videoworks has implemented it in the most recent installations, with excellent feedback, as it was greatly appreciated by shipowners and crew. A fully functioning ETO Panel was obviously also on display in the stand.

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