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MEMBER PROFILE



Böning Ship Automation

Pushing the cutting edge of marine technology

In a part of Germany once ruled by kings and emperors, there is a small town named Ganderkesse that is the unlikely home of a company that provides high-tech solutions for recreational and commercial vessels of all sizes. The company is

Böning and it supplies monitoring and automation equipment from the engine room to the bridge.

When you step into Böning's project building, it's like walking into a space-age laboratory. From the hallway you can see touch displays, LED lights and all kinds of electronics inside each office. On the side of each workstation, a vessel simulation—maybe a 50 foot boat or a 300 foot megayacht—connected to the Internet allows the technicians to program and simulate hazardous conditions on board that would trigger a fire, flood-

ing or low fuel alarm. What you're looking at is a production line of customized automation and control systems that are installed on world-class boats around the world.

The Böning team and its partners work on new constructions and refits. Refitting can be a very detailed task, says Sergio Corredor, Service Manager of Böning USA. "For example, sometimes customers like to replace small, old displays with 24 inch touchscreens with full HD resolution," he says. "It's a challenge to fit the new devices and keep the character of a classic bridge. It involves ana-



Günther Böning started the company in 1977 in his house. He pioneered the use of serial transmission of data from sensors in the engine room to the bridge. Böning explains that with parallel communication, linking 90 sensors to an engine room panel would require 180 cables while serial communication would need just two.

lyzing the existing cables, interfaces, switchboards, power supply, and, of course, the space available on the dashboards.” Böning offers sizes screens from 4 to 24 inches as well as custom sizes to meet such challenges.

In the beginning

Günther Böning founded the company in 1977. “I started a small production of devices in my own house,” he says. “Because we develop and manufacture our own devices, in our own facilities, we are in control of the whole product life cycle. During the life of the boat, the availability of spare parts is something very important. Never happened that we could not help a customer that needed a spare part. All devices that we have supplied, we have in house. Still today, we can deliver a part initially released 20 years ago. That’s very important for the owner.”

The Böning company is a pioneer in applying microprocessors for monitoring machinery. “At that time, it was the beginning of electronics and automation. The connection between machines and electronics was very fruitful,” the company’s founder says. In the early 80’s, one of the challenges was how to bring the information from the engine room to the bridge. “Back then, I knew people who connected sensors in parallel to the bridge. I think I was the first one to transmit data serially. This was not common, and generated many savings for my customers.” He explains that if a monitoring panel had 90 sensors coming from the machinery, one would need 180 cables connected to the engine room panel, and these 180 cables ran to the bridge. In serial communication, all you need is a pair of cables, transmitting the information to the bridge bit by bit.

Fulfilling customers’ needs

Another important step for Böning was the partnership with a German marine engine manufacturer. “In 1996, we met MAN, and we developed a lot of devices for them,” says Böning. “In the best years, we delivered over 3,000 engine systems.” Böning has developed more than 200 part numbers for MAN, from onboard computers to color LCD displays. The experience of working for over 20 years with engine electronics puts Böning in the forefront of this technology.

Hatteras Yachts is a more recent customer. “We chose Böning after much review and investigation to what was and is available for total ship management,” says David Clubs, the boat builder’s Director of R&D. “Böning



Böning supplies monitoring and automation equipment from the engine room to the bridge. Hatteras Yachts’ Director of R&D, David Clubs, says the German company has the “most versatile and robust solution with the ability to communicate in any protocol and incorporate multiple different network structures all in one system.”



Q&A

Kai Lindermeier, Böning’s Head of Development

Why choose Böning?

Because our system is flexible, innovative, customizable and integrated. You can find vendors that can meet one or another of these points. Böning fulfills them all.

What Böning offers?

A complete and comprehensive solution for automation and navigation. That is a big deal, because normally these subjects do not mix. Some companies have expertise in just navigation, others just in automation. That is changing, and Böning is ahead of it.

Who should contact Böning and when?

Integrators, installers, shipyards, and ship owners.

What are the future development plans and strategies?

We want to make the process of configuring the system faster and easier.

had the most versatile and robust solution with the ability to communicate in any protocol and incorporate multiple different network structures all in one system. The hardware is superior in function, safe design and seemingly adaptable to perform any function of system management and monitoring. The iOS app is already developed and works flawlessly with the system and is maintained by Böning.

“The round-the-clock engineering support and knowledge available has been paramount in our specific development project and has brought multiple new innovations to our industry, including other supplier interface capabilities that were made available only through the innovative hardware and software all designed and manufactured by Böning for a seamless intuitive user interface for

any control and monitoring request on board.”

Fleming Yachts is another customer. “We chose Böning because whilst the exterior styling of our yachts is timeless and traditional, the systems and technology inside our yachts has to be state-of-the-art,” says Director Duncan Cowie. “Clearly displayed data and automation is very important, especially as most Fleming owners don’t have a captain and run the boats themselves. They need to be able to control and monitor all the yacht systems from the helm, and even know what’s going on when they are not onboard. Through an app customized for each vessel, the Böning system offers the possibility to receive information from the engines, tanks, electrical systems, cameras, etc. An SMS text

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message will alert an owner to any alarms or change of condition onboard.

"We have over 100 yachts outfitted with Böning solutions. Every time, we implement the newest technologies available, so we are never behind our competitors. Böning offers this advantage via the ability to completely customize the monitoring systems to our requirements."

Consistency and training

Böning stresses that it provides dealers with a trustworthy brand to represent and to offer their customers. "A history of 40 years is not so

common," says Böning. "This consistency is something very valuable for shipyards and owners." The company has delivered systems for approximately 16,000 vessels, of which 12,000 are yachts.

It offers free training for qualifying dealers and integrators. "Experience with marine electronics is essential," says Luiz Barbarini, General Manager of Böning USA. "Our dealers also count on a 24/7 hotline to assist them on technical issues. As long as there is Internet available, we can remotely access the boats, help the local staff to troubleshoot a problem."

Böning has offices in six strategic locations: Germany, Italy, Croatia, Spain, USA and Brazil. Sales and service partners are located all over the globe, from Canada to Argentina, from Dubai to Australia. Since 2015, the Böning office in Florida coordinates and supports system integrators in the US. "We presented to the US market a successful and reliable technology that is very well-known by the most demanding and selective shipyards. Our references are our best sales tool," says Barbarini. "Our dealers and integrators in the USA can cover pretty much the entire American territory."

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RTCM Report *(Continued from page 18)*

The International Electrotechnical Commission (IEC) is the world's leading organization for the preparation and publication of international standards for shipborne electrical, electronic and related technologies so equipment can "speak" a common language. It establishes testing standards to measure satisfaction of the IMO's performance standards and technical standards from the RTCM and others.

The International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) is a non-profit, international technical association. It gathers marine aids to navigation authorities, manufacturers, consultants, and scientific and training institutes to exchange experiences and achievements. It aims to foster the safe and efficient movement of vessels through the improvement and harmonization of marine aids to navigation worldwide. It has been especially effective in the use of Radar Beacons (RACONs), the Automatic Identification System (AIS) and helping facilitate the exploding uses of this system via Application Specific Messages (ASMs) for applications such as virtual Aids To Navigation (ATON).

The Comité International Radio-Maritime (CIRM) with offices in London exists to promote the application of electronic technology to the safety of life and efficient conduct of vessels at sea. They strive to foster relations among all organizations concerned with electronic aids to marine navigation, communications and information systems.

Enabling all these programs to serve us requires scores of dedicated public servants with years of experience. However, to be effective there must be constant communications among them and millions of users. Major goals for the RTCM and NMEA include facilitating this vital dialogue via daily work and periodic meetings such as the joint NMEA/RTCM conference to be held in late September 2018. Our staffs are always available to assist you, and we put together programs at these conferences for you to meet and dialogue with representatives to all of the above organizations and many more.

Please join us routinely or at conferences to provide and receive information. Our job is to facilitate this dialogue and provide interpretations as necessary between English and acronyms.

As your final test, please decode and consider this. Some of us were there back in 1983 when acting on recommendations from the IMO, the ITU at its WRC-83 provided 406 MHz to improve alerting requirements for the Cospas-Sarsat Program's EPIRBs, ELTs and PLBs; more than 40,000 lives were affected by this outcome. This was made possible by extensive pre-conference work by the ITU-R, RTCM, NMEA, CIRM, IALA and others.

About the author

Rear Admiral Gilbert served for 35 years in the USCG in mostly general duty and telecommunications assignments. He led U.S. Delegations to the IMO during the formulation of the GMDSS, maritime programs during the early periods of the Cospas-Sarsat Program, and he was the senior technical advisor for the U.S. Delegation during ITU's 1983 Maritime WRC that enabled the GMDSS. He owns a maritime telecommunications company and is vice chair of the RTCM's Board of Directors.