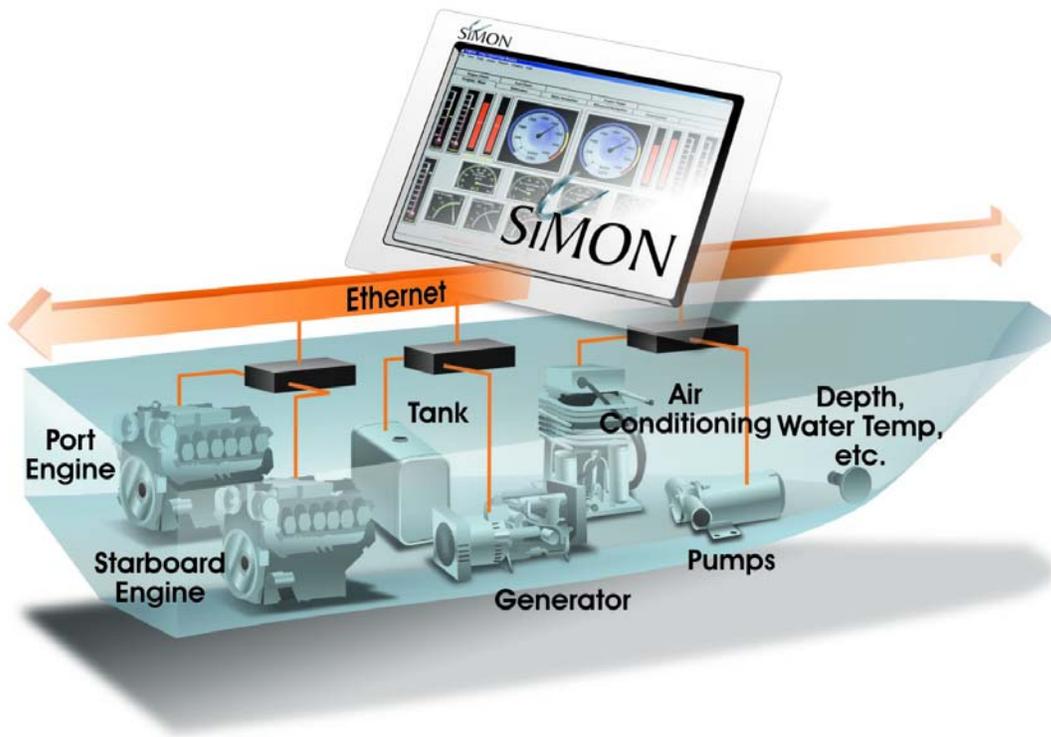


SiMON

Ship's Information MONitoring

Nordhavn 68, Hull #5



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Introduction

Welcome to **SiMON** and the future of ships systems monitoring, alarming and control. **SiMON** offers the latest technology in vessel monitoring systems and has the capability to become the single-point resource for integrating your vessel's operational data. **SiMON** collects real-time information from strategic sensors monitoring all the critical systems and notifies the Captain and/or engineer of any deviation; allowing them to be proactive versus reactive to system changes. **SiMON** serves as an extra engineer aboard the vessel, constantly vigilant of critical functions while allowing the Captain to focus on the demands associated with navigating a modern vessel.

This **SiMON** proposal is especially prepared for:

Nordhavn 68, Hull #5

We are confident that you will find **SiMON** to be an invaluable tool on your vessel, monitoring and protecting critical systems, and providing you with a level of confidence that your crew, passengers and yourself are always safe. The information provided by **SiMON**, the associated data collection capabilities and the trend analysis, will enhance your knowledge of the systems on your vessel and allow you to optimize their performance.

Advantages/Benefits of SiMON

I. Alarm Auto Paging and Remote Access

SiMON monitors all sensors for critical operating conditions. In the event that SiMON receives data that deviates from the presets or is irregular when compared to normal conditions, an alarm is activated. SiMON will then auto call/page the Captain, Crew, and/or Owner so that immediate actions can be taken to correct the cause of the alarm. This provides peace of mind to the Captain/Owner, knowing that he is “in-touch” at all times with his vessel. In addition, our Remote Access allows authorized personnel to view yacht operational data (sensors) from an Internet terminal anywhere in the world. This option is available as part of our SiMON Remote Access solution.

II. Immediate Access to all Systems Being Monitored

SiMON offers immediate access to any of the monitored systems by choosing the related tab at any of the monitors installed throughout the vessel. Remote access is available by transmitting SiMON information over land/sat/cellular phone communications.

III. Early Warning-Alarms

Alarm values for each sensor point can be customized by either the Captain or vessel Engineer or Owner, to predict future trend conditions. As SiMON interprets the critical data produced by the vessel’s monitored systems, it is constantly comparing this data against the alarm limit set points. Once a condition exists that warrants early warning, a cautionary alarm will appear in a popup window and an audible alarm sounds through the system’s computer speakers. SiMON also offers an audio/visual alarm terminal with reports throughout the vessel. Alarm histories are maintained, recording the date and time (and Latitude/Longitude if interfaced to GPS) that a critical event has occurred along with when it was acknowledged and the corresponding sensor values. False Alarms are a thing of the past with SiMON. Our customized, conditional alarms can be set and managed by senior crew eliminate the annoying false alarms which were characteristic of early alarm systems.

IV. Data Management

Historical data recording is available for tracking information for specific passages. You can also use the data for trend analysis of the monitored systems. A special optional feature for recording performance parameters is “The Ship’s Recorder”. The Ship’s Recorder is a “behind the scenes” black box recording function that is constantly logging the performance of the monitored systems. Its purpose is to maintain the complete history of all the vessel’s monitored systems. SiMON is not required to be running for the Ship’s Recorder to be functional. The only requirement is for the computer to remain on.

V. Redundancy

Every Owner/Captain is concerned with the potential for system failure should the SiMON computer stop operating. With SiMON there is the capability for built-in redundancy. Our solution runs in a standard Windows XP environment, so no special software or processors are required. Additional processor computers may be added for redundancy. Each computer runs in a *peer-to-peer* architecture so that no single master terminal can take the system down. Should one system go down for any reason, simply turning on the redundant back up system brings you fully back on line. Since our system runs on the ship’s Ethernet continuous data is shared by all in line connected systems.

VI. Global Standards

SiMON has been developed using the open architecture, Ethernet protocol. SiMON Controllers gather information and convert sensor data into data packets, which are then broadcasted on the vessel’s Ethernet. The Ethernet allows all computers; towers, notebooks and pen based tablet PC’s, to receive all SiMON data either directly or remotely via wireless accessories. As noted earlier, it runs on Windows 2000 as well as Windows XP.

VII. Expandability

SiMON’s architecture is designed to be open-ended and is a modular system solution. As new SiMON features become available or the needs of the vessel change the system can be easily be upgraded by adding:

- *New software features*
- *Additional controller boards*
- *Additional PC’s and displays*
- *Additional sensor points*
- *Additional controllers*

The power of the SiMON system is self evident in that as the scope of the systems to be monitored change SiMON can be upgraded with relatively simple programming changes provided to the vessel.

VIII. Ease of Installation and Low Maintenance

SiMON's instrument accurate sensors do not require periodic re-calibration. Our sensors are of the highest quality presently available, in many cases exceeding those that can be found as standard equipment on marine engines. The sensor cable is high quality braided, tinned, shielded and Teflon clad to resist corrosion and chafing and will not emit toxic fumes if exposed to flame. All SiMON sensors are provided with waterproof connectors allowing for ease of installation and maintenance. Standard CAT5e Ethernet cable is used to link the ship's computers to a SiMON NEMA 12/13 waterproof Controller(s). Detailed installation instructions tailored specifically for this vessel are provided as part of our approved installation proposal.

IX. Ease of Use

SiMON was designed to be intuitive to use and navigate which makes it one of the easiest systems to operate and more importantly to understand. Simple TABS at the top of each screen provide a road map of the entire system at a glance. Two clicks on any of the TABS and the crew can be at specific information pages. Add a touch screen or Tablet PC, and SiMON becomes easier yet to manage and use.

IX. Configurable

Another major feature of SiMON which separates it from other systems is that it is designed to *“place the power of the system in the hands of the user”*. This means the system, gauges, alarm values, charts, sensors, etc., are all completely customizable by the user. If you decide that you want the look and feel of a particular display to change you can easily do so without engaging SiMON's engineers.

The above summarizes the advantages and the key features of our integrated solution that allows you to proactively manage the complexities of today's modern and increasingly complex vessels. It is intuitive, sophisticated yet uncomplicated. It is a system that will become indispensable in the operation of your vessel, and has become the system by which all others are measured.

Nordhavn 68, Hull #5

SiMON is delivering a solution for integrating the vast array of equipment on both today's and tomorrow's yachts. All the data and critical inputs will be illustrated by SiMON through the ship's computer. SiMON is very much like having an additional engineer on duty 24 hours a day: an engineer who is capable of monitoring all of the yacht's critical systems, thousands of times a second. As we know, no human is capable of such high activity repetitive tasks; therefore, it is SiMON's analysis and alarm capabilities that free the Captain to concentrate on the functions of yacht navigation.

The richness of this capability includes the building of conditional alarms based upon decision tree logic. In addition, by using a greater number of linear sensors in place of the digital sensors, a larger quantity and variety of alarm set points can be established. The graphical interface within SiMON provides the user a "yacht view" into the operation of each of the monitoring systems. Analog and digital values can be displayed along with trend charting of values for any of the sensor points being monitored.

The SiMON system also comes with the capability of displaying up to 15 Ship's Displays (MIMIC), which is usually the yacht line drawings of the vessel with sensor indicators positioned on these drawings. These replace the typical plastic panels engraved with the yacht's line drawings, with LED indicator lights. By monitoring and displaying this data (bilge alarms, fire zones, navigation, lights, etc.) within SiMON, the yacht receives the added benefit of redisplaying views/information at other locations on the vessel including rebroadcast on the entertainment system for viewing in the Owners and/or Captains quarters.

SiMON goes beyond the normal monitoring systems with an interface to the bridge electronics via the NMEA 0183 data. By connecting the SiMON computer to the depth, wind, GPS outputs, SiMON displays and alarms on a variety of navigation data, which extends the integration of yacht data. These are all standard features of the SiMON system.

We are confident that you will be able to see the functionality and usefulness of SiMON as an integration system on your yacht(s). The remainder of this document details our proposal in a format that maximizes the functionality and usefulness of SiMON for Nordhavn 68, Hull #5.

SiMON Proposed System: Nordhavn 68, Hull #5

The following is a breakdown of components and services for this installation, which includes monitoring for **199** sensor data points. The SiMON Computer will be supplied by the customer with the specifications to be determined upon agreement between the customer and Palladium Technologies. This computer will be sent to the Palladium Technologies offices for SiMON software setups and system test.

| | | |
|----|--|------------|
| 1. | Sensor hardware | |
| | Palladium sensors | 88 |
| | Shipyards sensors | 0 |
| | Customer sensors | 0 |
| | Electronic Engines and Power Measurement sensors | 111 |
| | * Total Sensor Points | 199 |
| | SiMON controllers | 2 |

* A complete sensor list is shown in the Attachment.

2. **SiMON Management Software for:** ***Complete SiMON Software System, 220 Sensor points***

SiMON comes completely configured for each of the sensor points as identified in this proposal. This means that sensors are assigned to gauges, which are configured, and basic alarm set points are defined. All of this is tested by Palladium Engineers prior to delivery at the commissioning stage of the project. There are dozens of screens within SiMON to display all this sensor information, in a rich pleasing format, and is included as part of the base SiMON system.

Alarm processing is a major feature/function of SiMON with a standard of 4 levels (High Caution, High Critical, Low Caution, and Low Critical) of user definable set points per sensor. This along with the Conditional Alarm processing, SMS cell phone alerts and detail alarm processing to meet the requirements of the classification societies are all part of SiMON.

SiMON also includes the Ship's Recorder feature, taking snapshots of all sensors at definable intervals. Then with our dynamic trending/charting feature, the user can perform trend analysis on any 6 selectable sensor points within the defined time

periods.

3. **Ships Views**

Sometimes called Mimic Panels, our Ships Views are graphic views/representations of the yacht with indicators overlaid on top of the images. These views can be a photograph of the yacht underway, GA (General Arrangement) drawings, such as plan and profile views, or they could be flow diagrams of the fuel system. Indicators (LED's, digital readouts, switches, etc.) are "dragged and dropped" by the ships' operator on the image and then assigned to a sensor point. These could be fire zones, bilge high water levels, fuel tank volumes, and navigation lights. Upon a trigger, these indicators will change colors and flash, drawing the attention of the operator.

This proposed system will include the capability for up to **15** of these screens. If the yacht provides the Palladium Engineers with the graphic images, we will build up to **5** of these screens as part of the initial implementation.

4. **Strobe-Amber (quantity - 1)**

Engine Room

Micro Strobe with amber lens, operating from a input voltage range of 12 to 80 VDC.

Micro Strobe with amber lens, operating from a input voltage range of 12 to 80 VDC.

5. **Alarm-Piezo-Red-24 (quantity - 1)**

Helm

Distinctive Warble Alarm sound with 95dB output, in a NMEA 4X, 12 format. Color is Red and this Alarm Sounder is intended for w

Distinctive Warble Alarm sound with 95dB output, in a NMEA 4X, 12 format. Color is Red and this Alarm Sounder is intended for weatherproof, indoor or outdoor environments. 24VDC

6. **SiMON Trax-050 (quantity - 1)**

Helm

Panel mount 50mm track ball, visual and audible alarm notify. Trackball illuminates to indicated the current status of Alarms

Panel mount 50mm track ball, visual and audible alarm notifier. Trackball illuminates to indicated the current status of Alarms on the SiMON system.

All of our systems include the following items upfront, rather than pricing them as add-ons after the contract is signed:

- *Custom developed Engineering CAD drawings specific to this SiMON installation.*
- *Detailed Installation Manuals for the installer, which reduce confusion and installation costs.*
- *Two sets of all manuals, providing one set for yacht's documentation files.*
- *Fully configured and delivered SiMON system installed on the yacht's computers. This includes the SiMON hardware and software.*
- *Palladium Engineers as defined below, on-site for the final commissioning, which includes customer training.*
- *Full follow-on support, via Palladium customer service engineers.*
- *Worldwide support via Palladium's dealer base*

Pricing

The total price for the above system will be provided by Larry Smith Electronics. This price is inclusive of the Palladium equipment, drawings, sensors, software, and configurations for this SiMON system. Payment is 50% at time of issuing the purchase order, 40% is due upon shipment availability of the Controllers and other hardware with the remaining 10% due upon completion of sensor calibration, software installation and training. This quote will remain in effect for 30 days.

Travel expenses outside of the Ft. Lauderdale area for the man days onsite are not included and will be invoiced separately. Additional labor required will be billed at *Palladium's* standard labor. Travel time outside the US and Canada will be billed also at our standard rates with an 8-hour day maximum. No additional charges will be incurred without prior approval of the purchaser. All amounts are in US dollars, unless so noted.

Labor for system installations, check-outs, commissioning, sea trials, etc. is not included in the above pricing. Nor are consulting fees as incurred on behalf of the customer by classification society surveyors for system checkouts of Palladium systems. If interface to Caterpillar Electronic engines, then customer must supply Caterpillar user interface, "PL1000E Communications ECM", and cables.

The above pricing does not include, shipping charges, taxes, custom duties, etc., where applicable. Freight charges will be FOB Palladium's main offices, Fort Lauderdale, FL.

The system drawing attachment illustrates how the major components of the system detailed above will come together.

Software License

An unlimited site license for the vessel is granted to each purchaser of the SiMON system. This allows the purchaser to use SiMON at as many locations on the vessel as they desire without purchasing additional licenses for each location. The license is transferable upon resale of the vessel.

Installation Assistance

Upon acceptance of the proposal, *Palladium* will prepare and deliver a detailed installation guide specifically for the vessel. The guide will include the following:

- Basic installation instructions
- A checklist of items to be observed
- Installation tips
- Sensor data sheets showing full specifications and pictures
- Drawings, which show installation of the SiMON controllers and ICB's.
- Sensor to ICB CAD drawings providing wiring layouts and specifications

Along with this installation guide is *SiMON Certify*, which is a software utility, designed by Palladium Technologies. This program is provided at the last stage of installation to verify the complete and accurate installation of sensors, sensor wiring, controllers, and networks prior to commissioning, thus saving costly and sometimes unnecessary trips by the final commissioning team.

Our intention is to provide a clear and concise view of all aspects of the installation for the installer. Our goal is to make the installation as trouble free as possible. The drawings will be specifically tailored for this vessel. Attachments are provided which include a sample system drawing, along with sensor listings and descriptions.

Project Plan

Upon acceptance of the proposal, a detailed project plan will be developed using Microsoft Project for the implementation of SiMON. The following actions need to be taken:

| <u>Tasks</u> | <u>Responsible Party</u> |
|--|---------------------------------|
| Detailed wiring diagrams | Palladium |
| Installation of SiMON Controllers | TBD |
| Wiring of Sensors to SiMON ICB's | TBD |
| Ethernet Cable Wiring (if needed) | TBD |
| Final Hook-up of Sensor wiring to SiMON Controllers | TBD |
| Installation Check Out using SiMON Certify | TBD |
| Calibration of all Sensors | TBD |
| Computer and Software Configuration | Palladium |
| SiMON Commissioning | Palladium |
| User Training | Palladium |

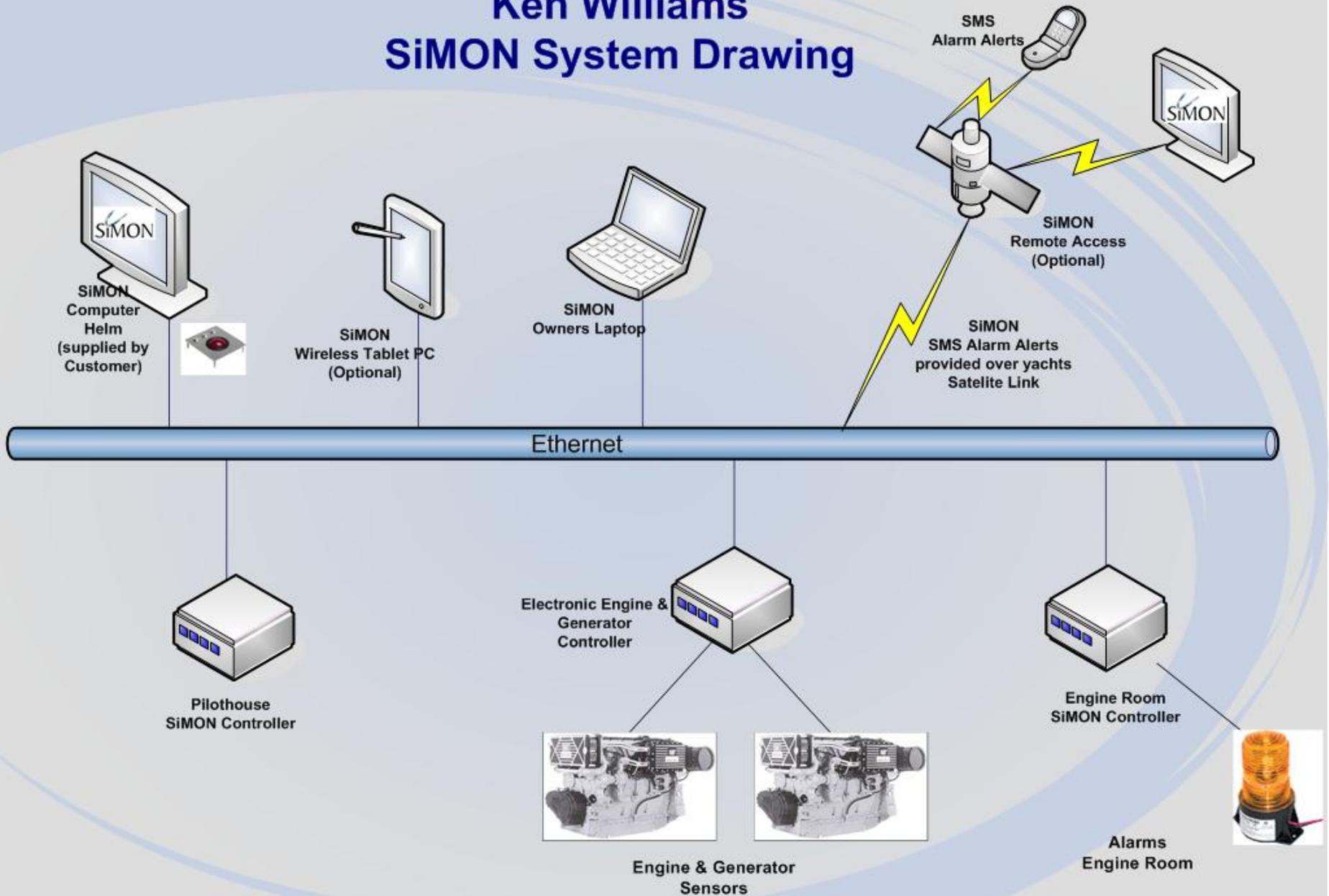
Summary

We want to thank you for your interest in the SiMON system. As shown in this proposal, SiMON offers advanced technology in monitoring systems. It is designed to enhance the performance and value of a vessel while providing a safer, more comfortable cruising experience for *Nordhavn 68, Hull #5*.

Nordhavn 68, Hull #5

System Drawing

Nordhavn Ken Williams SiMON System Drawing



Nordhavn 68, Hull #5

Sensor Points

Nordhavn 68, Hull #5

SiMON Data Sheets