

interschalt maritime systems AG

Presentation

INTERSCHALT maritime systems AG

Engineering & Automation

Software Solutions

Maritime Services

References

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Engineering & Automation

Software Solutions

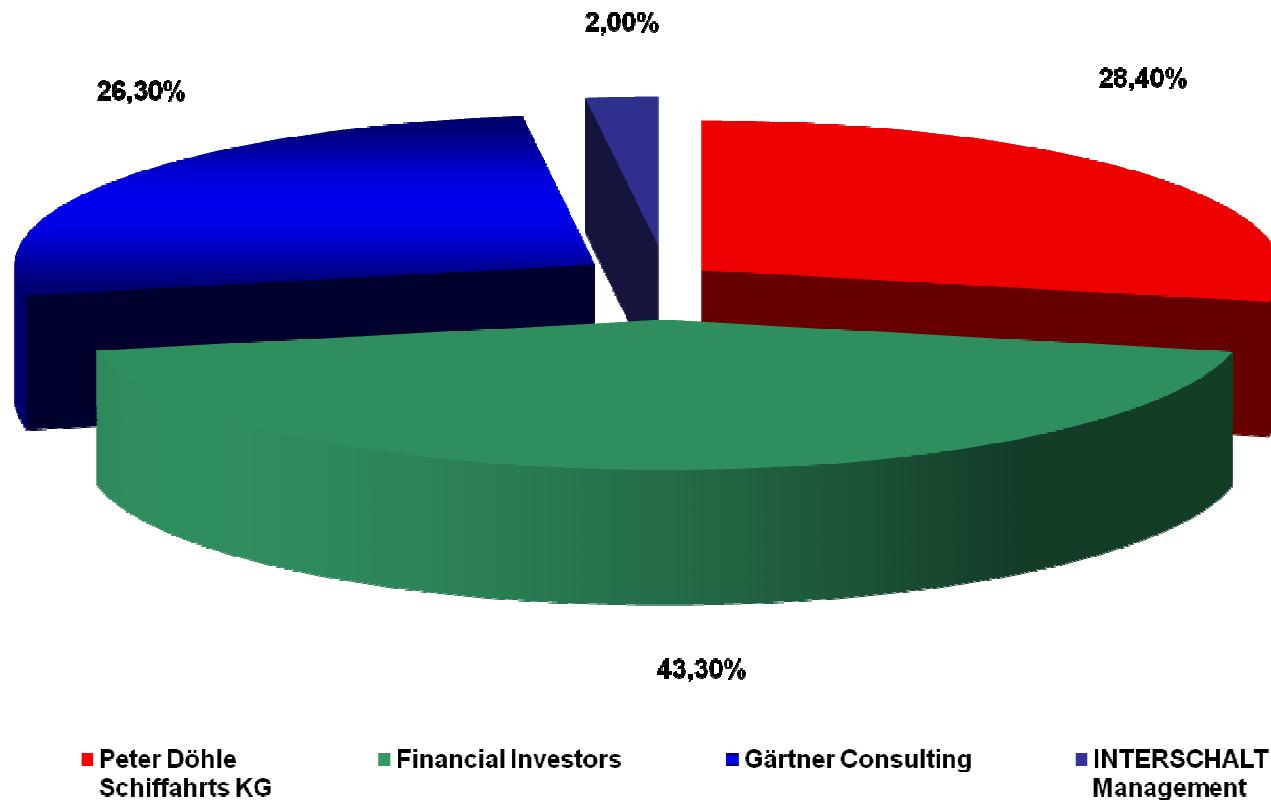
Maritime Services

References

Our vision is to be the partner of choice in the maritime industry.

Our comprehensive product portfolio stands at the forefront of technological and market demands.

We offer the best working environment for high potential people, who are really our greatest assets.



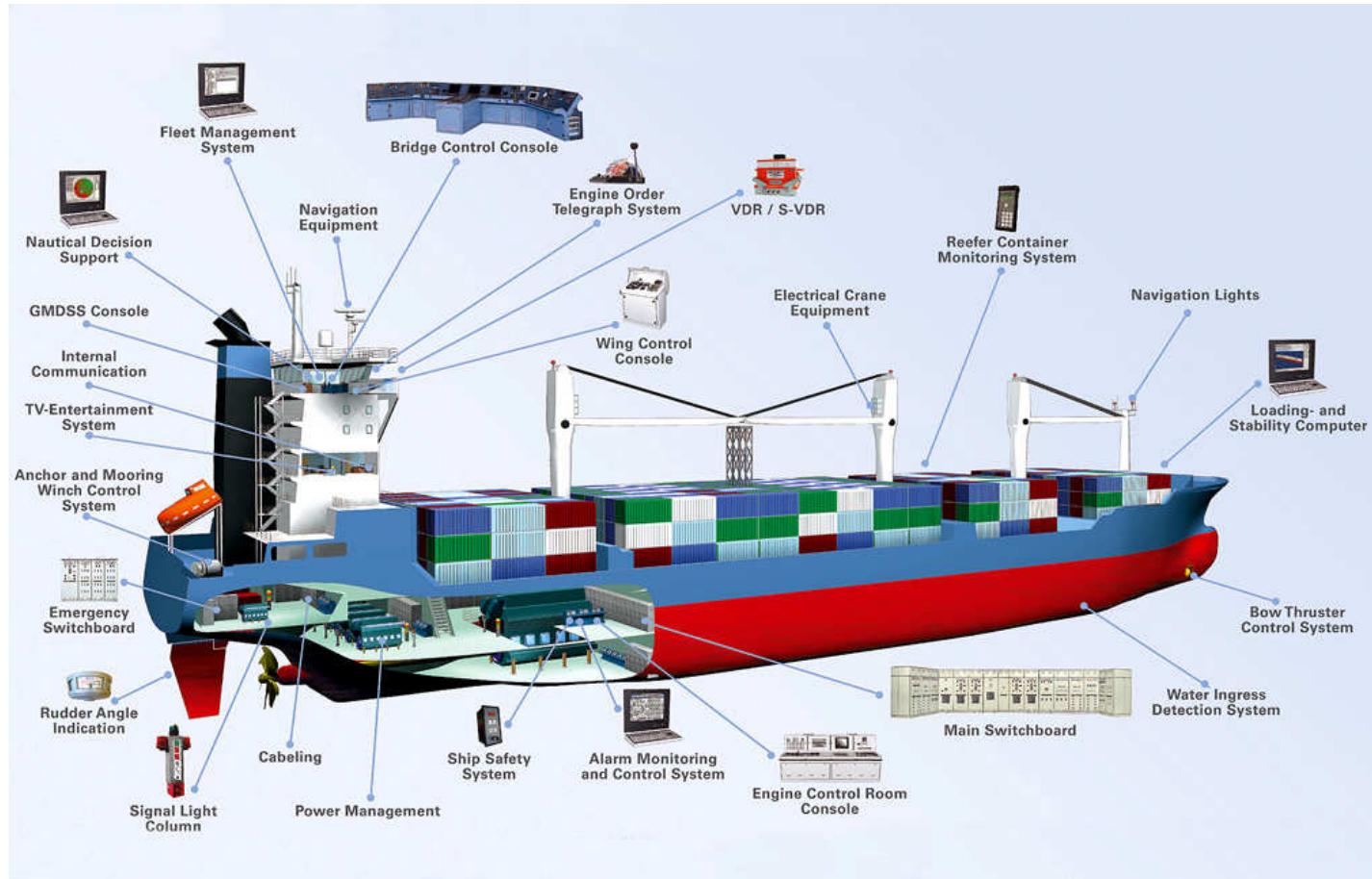
Focus on mutual success:

- Strategic partnership with Peter Döhle Schiffahrts KG



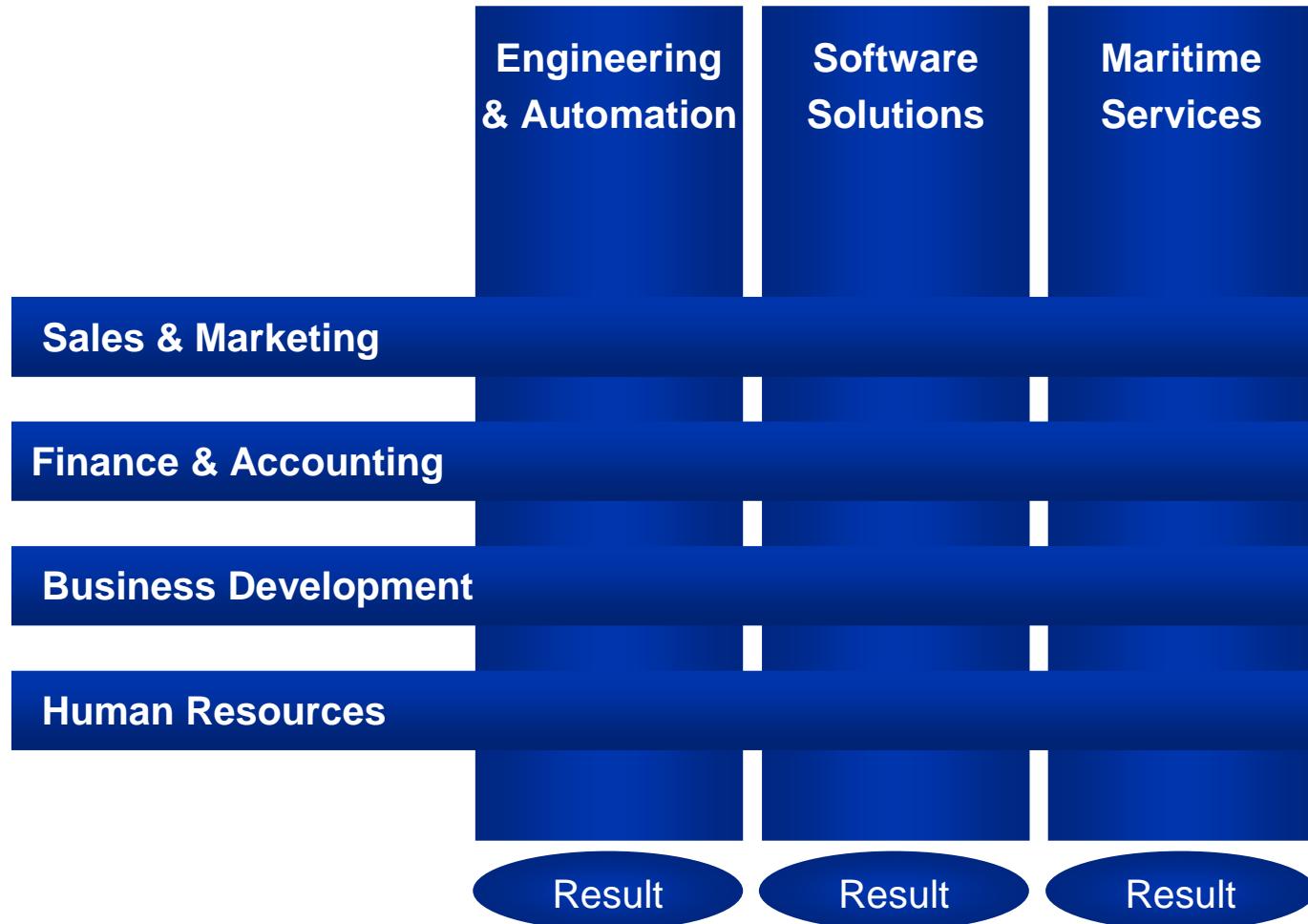
To the benefit of all:

- Added value from integrated products and services
- Partner for the maritime industry



System integrator for all electronic parts:

- Comprehensive product portfolio
- IS products cover a vessel's entire life cycle
- System integration for own and third party products



Focussed business structure:

- Customer oriented business structure
- Profit centre structure
- Central functions serving all business units

Engineering & Automation

- Over 50 years of process management experience
- Over 100 years in realising automation projects
- More than 10,000 vessels equipped with automation products
- More than 1,500 Voyage Data Recorders installed

Experience

Quality

Reliability

Innovations

Software Solutions

- More than 4,600 Loading Computer installed at over 10,000 user
- More than 2,200 Ship Management licences sold

Our customers benefit from our experience and quality focus:

- Various references stand for experience, quality and ability to innovate

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References



Advantages:

- Modular setup (functional groups)
- Low maintenance, user friendly
- Switch on and Start
- Communication – compatible
- Shipspecific design

Interschalt Switchboard & Distribution

Significant Features:

- Load depended start/stop of diesel generator sets (PMS)
- Conditional connection of heavy consumers with fixed or variable load
- Conditional reefer container connection, controlled by Power Management System
- Main bus bar up to 8,500 A with max. Initial-short-circuit alternating current < 130 kA
- Ultra – Rapid power switch for higher short-circuit currents
- Moulded case circuit breaker fixed mounted or plug – in type



IS interschalt Control Console

- **Significant Features:**
 - Implementation of custom-tailored design
 - Engineering and Integration of different communication- and navigation systems
 - Consoles in high-grade steel-, aluminium-, and steel design
 - Wiring according to EMV standards
 - Ergonomically created design
 - Optimized arrangement of equipment
 - Compliance with different class regulations
 - Shockproof production of the welded construction
 - Marine consoles in special paintwork
 - Compliance with MIL-Standards
 - Special fabrication of user surface, e.g. of wood or leather

Production of consoles for:

- Special vessels
- Container vessels, Bulkers, (Tankers)
- Pilot vessels
- Ferries
- Megayachts
- Offshore Patrol Vessels
- Marine (e.g K130, T45)



IS steinsohn Automation

Significant Features:

- Easy integration of third party systems
- 'Plug and Play' interfaces to all system components
- Modular setup of system, central or peripheral
- Process Control Panel (back-up level)
- Off-watch operation by 'XAS'

Advantages:

- 10 years warranty on all I/O components
- Exchangeable control elements with engine in operation
- User-friendly interface
- Redundant bus systems
- Separate bus system for Extension Alarm

Applicable to:

- Engine Monitoring
- Auxiliary System Control
- Fuel and Bilge Management
- Ballast Water Management
- Power Management
- Cargo Management



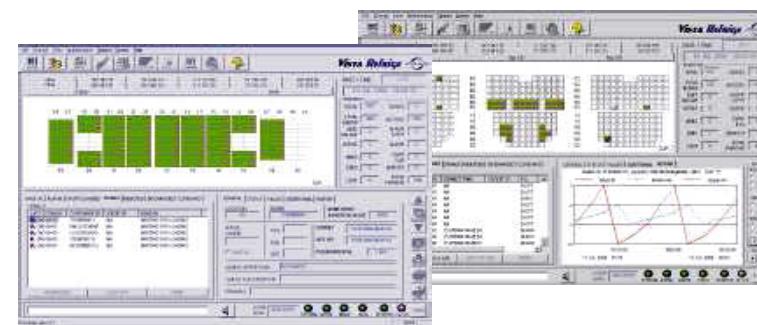
Advantages:

- Software replaces manual surveillance of containers
- Contribution to the sureness of the cold chain
- Graphical presentation of the container positions
- Trend illustration for supply air and return air

IS steinsohn Reefer Monitoring

Significant Features:

- Safety reports can be transferred to Microsoft Excel File
- Communication with all types of Loading Computer Systems
- PCT with high- and low data rate according to ISO 10368
- Applicable for up to 1024 Reefer Containers on board
- Mobile Terminal with scanner function for all reefer containers without modem





Advantages:

- Modular setup
- Electric Wave (Modbus-RTU)
- MT - Function (Modbus-RTU)
- Interface to main engine remote control
- Interface to VDR
- Emergency - MT Function

Steinsohn Engine Order

Significant Features:

- Engine order telegraph and wing control console are connected by the “Electric Shaft”
- Each lever can be operated as “Master”
- Two-ways operational mode:
 - as control element for engine remote control
 - as engine telegraph
- Counterpart to engine order telegraph is the MKR lever
- Monitorial receiver in engine room for indication of lever position of engine telegraph
- Permanent control of total system by MT – Bus Controller



Further Systems:

- Signal Light Column System
- General Alarm System
- Nautical Alarm System
- Cold Room locked-in Alarm - / Hospital Call System
- Rudder Position Indication System
- Emergency Engine Telegraph System

IS steinsohn Ship Safety

Significant Features:

- Watch Alarm / Personnel Alarm System
- New development for use on the bridge or in the engine control room
- Functional design with numerical display
- Small dimension of operation- and terminal module
- Compliance with latest rules and regulations of IMO Resolution MCS. 128 (75)
- Key switch for mode selection
- Dimmer function
- Integrated buzzer with changeable tone and volume
- Easy and individual handling of parametrization
- Count-down time indicator



Steinsohn VDR G4

Significant Features:

- Modular, decentralized system and slim design
 - Easy to service
 - Decentralized installation of modules close to signal source
 - Modules connected and power supplied over Ethernet
 - Easy to service, exchange of modules by ‘plug and play’
 - Digital interface to radars (several types)
 - Replay software with ECS functionality

Advantages:

- Modular and slim design
 - Scalable
 - Service over GSM
 - „Plug & Play“ modules

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Advantages:

- Complete redesign
- Microsoft .NET technology
- User-friendly
- Add-ons for each individual vessel type and special purposes
- More than 4,000 onboard installations

IS seacos Cargo Management

Significant Features:

MACS3 Loading Computer System

- For all vessel types
- Automatically ballast tank optimization
- Interfaces to tank level- and draft gauging
- Interfaces to container booking systems
- Client / Server architecture

Selected Add-ons:

- Dangerous goods- and safety management
- Calculation of lashing forces and cargo securing
- Graphical stowage planning
- Ballast Water Exchange Management
- Crane Operation Module



Vorteile:

- Experience from 25 years software development
- Data base technology
- Modular architecture

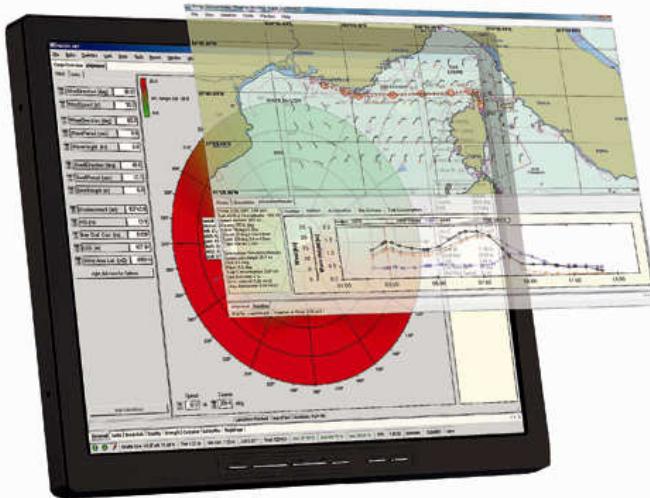
IS seacos Fleet Management

Significant Features:

New: **Bluefleet**

Follow-up from IS avecs Fleet Management

- Modern Microsoft System with SQL server database
- Modular Structure
- One database for all ships
- Easy way to generate statistics and overviews
- Capable of handling large amounts of documents
- Ready to use broadband satellite communication
- Fleet wide overview about technical status of ships



Advantages:

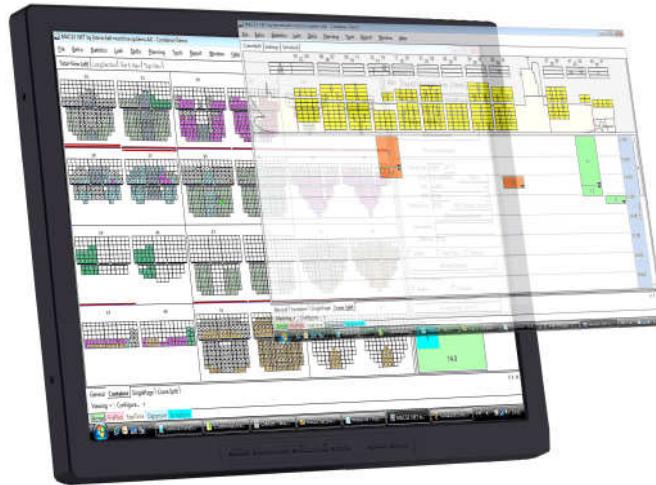
- Optimal routing
- Fuel economization
- Early danger detection
- Avoidance of damages
- Avoidance of cargo loss
- Prevention of seasickness

IS seacos Nautical Decision Support

Significant Features:

Bluwave

- Weather routing- and decision support system
- Online processing of weather data
- Dynamic real time representation
- Indication of optimal course and speed
- Integrated electronic sea chart system
- Interface to sensors (GPS, weather etc.)
- Precise prediction of vessel motions
- Avoidance of nonlinear dangerous phenomena (parametric rolling, broaching and surf-riding)
- Interface to the Seacos Cargo Management System



Advantages:

- Optimal stowage planning
- Maximum safety
- Rapid planning
- Efficient cargo handling

IS seacos Stowage Planning

Significant Features:

STOWMAN

- Automatic stowage recommendation
- Optimal cargo handling
- Total voyage planning
- Optimal crane operations sequences
- Cargo compatibility check
- Ship's stability calculation possible
- Extensive database of vessel profiles

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Maritime Education & Training Center (MET)

ISMaritime Education & Training



Approval Certificate **GL**

Simulation facilities:

- Four visual bridge systems with 120° to 270° view
- Full mission engine room simulator

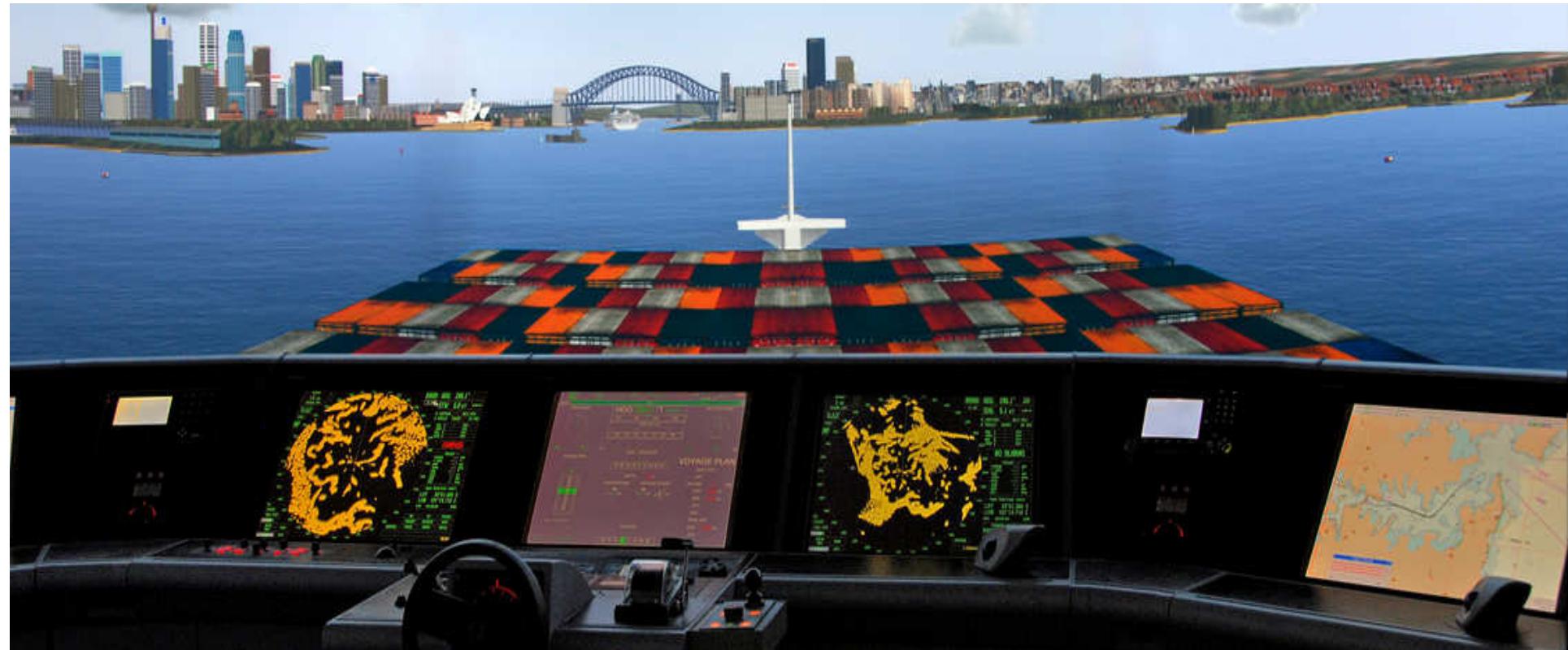
Main Bridge

Sperry VM-FT



Bridge London

Sperry Marine Bridge Master E / VMS - ECDIS



Bridge St. Petersburg

TRANSAS



Bridge Kiel

Raytheon Anschütz



Engine Simulator / Engine Control Room



IT – Training Room





IS Maritime Education & Training



Key benefits:

- High qualified staff
- State of the art technology
- Customer specific courses
- Arbitrary arrangements
- Up to 12 participants simultaneously
- Different bridge equipment of several manufacturers
- Extensive customer care and support
- Europe's largest private operating training center

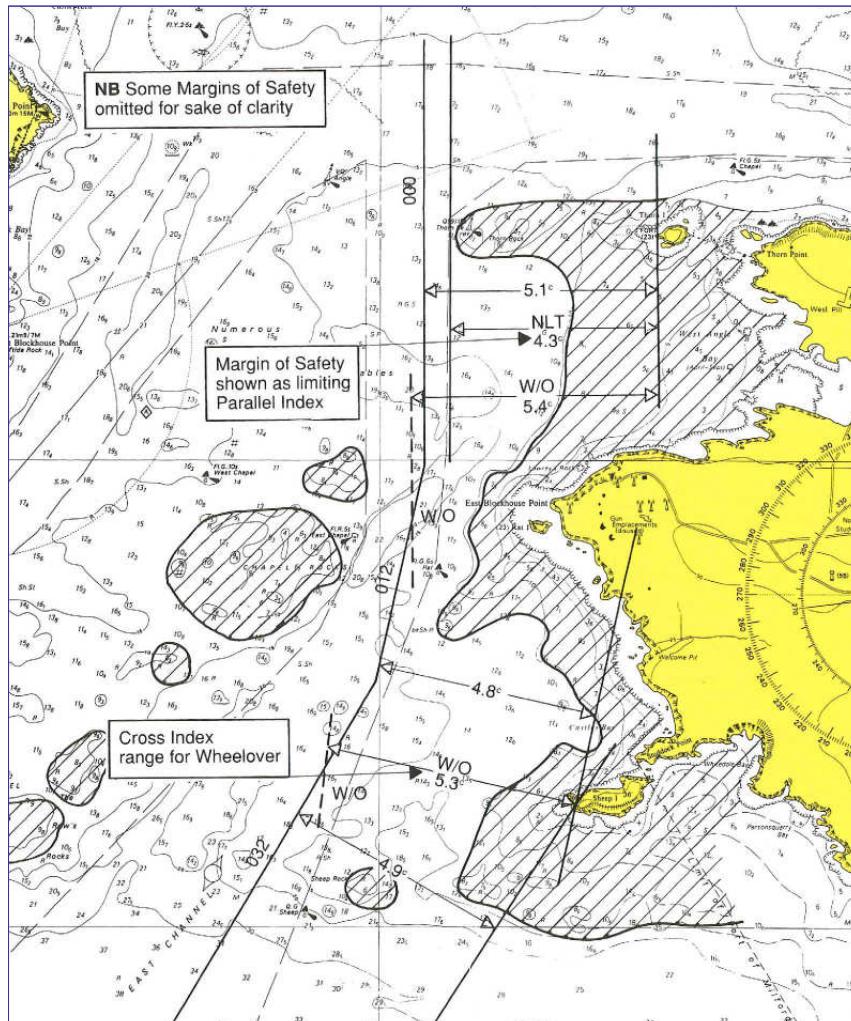
IS Maritime Education & Training



Simulation, Navigation & Shiphandling:

- Basic Navigation
- Shiphandling under various environmental conditions and in different ports
- Advanced shiphandling in extreme situations
- Theoretical aspects of basic ship hydrodynamics
- Analyzing of manoeuvring characteristics
- Integrated bridge systems
- AIS & VDR training
- Consultancy services for new ship & waterway designs

 Maritime Education & Training



Simulation, Navigation & Shiphandling:

- Proper Passage Planning
 - ECDIS training
 - Voyage Monitoring
 - Track control operation theory and practise
 - Routing systems

IS Maritime Education & Training



Bridge Team Management:

- Emergency management
- Human factor
- Situation awareness
- Risk awareness and management
- Error chains
- Communication
- Teamwork
- Assertiveness
- Leadership
- Stress
- Fatigue

IS Maritime Education & Training



Technical Ship Operation:

- Engine Team Management
- Fleet Management Software Systems
- Cargo Management Software Systems
- Stowage Planning Software Systems

Safety & Security:

- Ship Security Officer
- Company Security Officer
- Decision Support Software Systems

Engineering & Services:

- Marine Electronics, Engine Monitoring & Automation
- Navigation / Communication Service

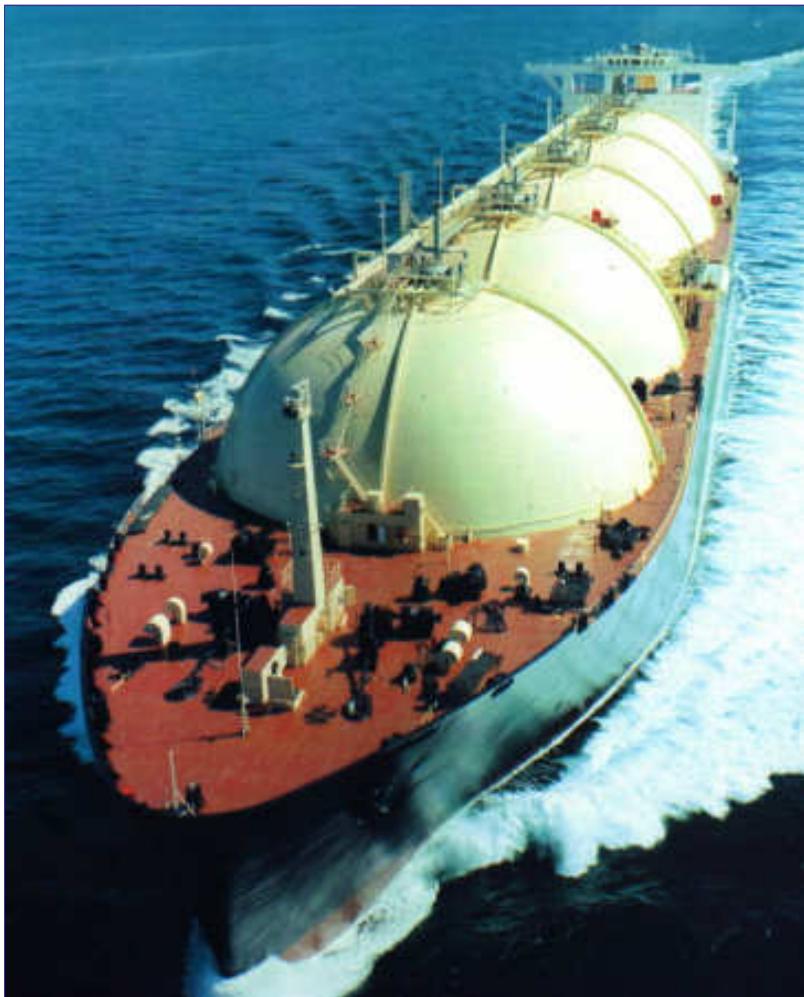
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Ship Operation, Navigation & Manoeuvring



- Development of new ship designs and implementation in a simulator
- Hydrodynamic research and consultancy
- Survey and modelling of navigable waters and areas

IS Maritime Education & Training

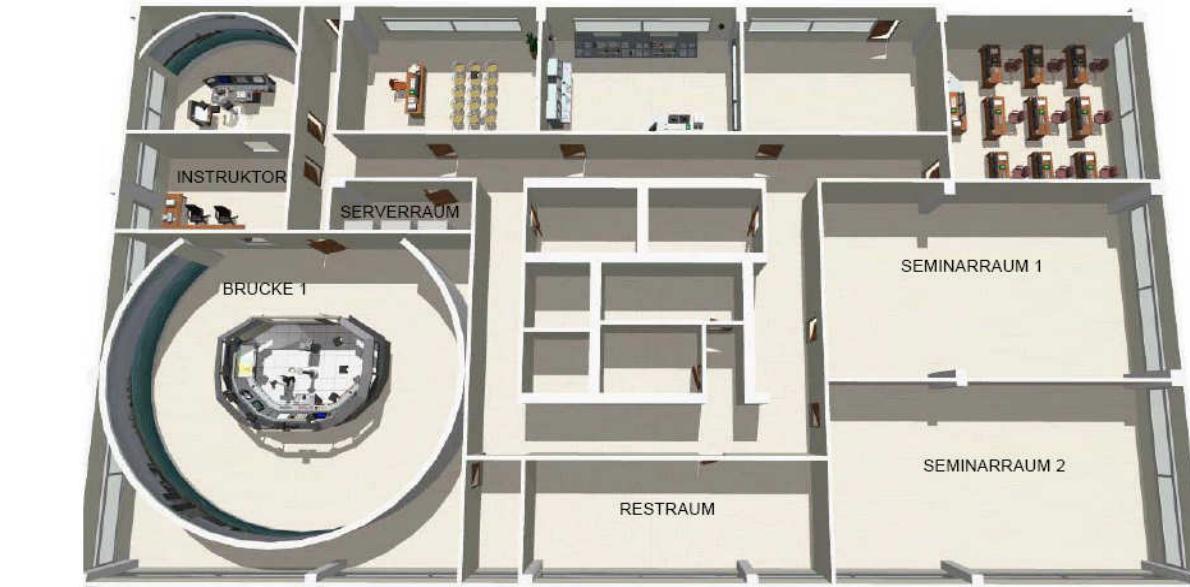


Various Courses:

- Standard Marine Communication Phrases
- Quality Management QM / ISM
- Tanker Familiarization
- Advanced Tanker
- Dangerous Cargo
- Ballast Water Management

Future Perspective:

The International Maritime Education & Training Center
Manila, Philippines



Manila



Currently under construction
To be opened 2009



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References



Shipdata: „Cetus“ and „Perseus“

- Year of construction :2005
- Nederlands Loodswezen
- Abeking & Rasmussen
- Length over all: 25,20 m
- Breadth over all: 13,00 m
- Draft: 2,70 m
- Speed, max.: 18 kn
- Diesel drive: MTU 2 x 12V 2000 M70
- E-drive: 2x 788 kW

SWATH Pilot Tender

Performances:

- System responsibility for the complete E-Package, Engineering, Production, Cabling, Implementation
- Integrated bridge system with 10x19' TFT monitors
Ergonomically designed bridge consoles
- Switchboard for 2 electrical power drives approx. 800 kW onboard network panel
- Navigation with Sperry equipment
- Communication navigation area GMDSS A1
- Lighting System
- Navigation lamps and steering
- Computer network with shore connection via Satcom and GSM/GPRS Net
- Power Management by Co. Böning
- Battery Systems 24V
- 2 electric propulsion engines with 788 kW



Shipdata:

- Yard: Mawei VR China
- Length overall: 127,95 m
- Breadth overall: 20,60 m
- Draft: 7,40 m
- Speed, max.: 17 kn
- Main Engine: MAK 1x7 M 43
- Power: 6300 kW
- Gearing: 600 kW

MAWEI 700 TEU

(Equipment for a total of 34 newbuildings)

Performances:

- Project Management, Engineering
- Delivery of the complete E-Package
- Control Consoles
- Switchboards
- Navigation and external Communication with Raytheon Anschuetz Equipment
- Internal Communication
- Automation, Alarm and Monitoring
- Signal Light Column System
- Master Clock System
- Reefer Container Sockets, Reefer Container Monitoring System
- Loading- and Stability Computers
- Voyage Data Recorder



Shipdata: MS „OOCL Finland“ ex „Anina“

- Year of Construction: 2006
- Yard: J.J. Sietas Neuenfelde
- Owner: Peter Döhle Schiffahrts-KG
- Main Engine: MAK 9M43
- Tonnage: 11.416 dwt
- Container: 868 TEU

SIETAS Type 168

(Equipment for a total of 52 newbuildings)

Performances:

- Bridge Control Console, incl. error messages plant SMA 48 for general bridge alarm, intercommunication system ISCOM 21
- From NB 1251 onwards, a new bridge control console has been implemented in cooperation with the shipping company Peter Döhle
- Wing control consoles
- Alarm panel, incl. engine alarm system, audible and visual pulse emitter unit (AVS) for engines as well as remote control of the operation-relevant pumps
- Main Switchboard, incl. controls and outgoing feeders for: 2 diesel generators, 1 shaft generator, Bow - and stern thruster, 238 reefer containers
- Various power-and light distributions



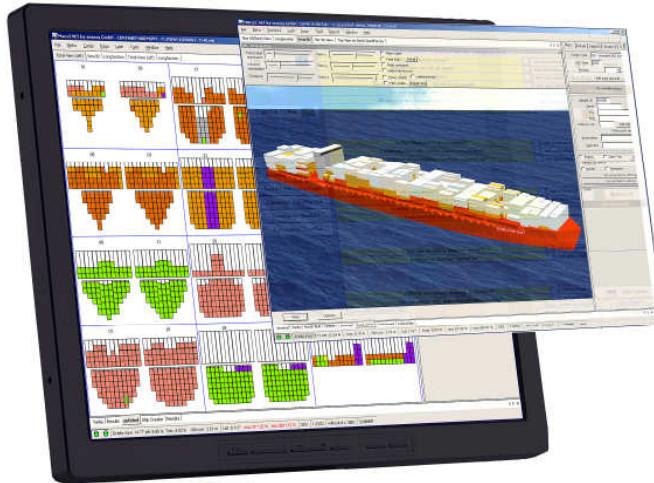
Shipdata:

- Yard: Lürssen – Rendsburg
- Length overall: 68 m
- Breadth overall: 13 m
- Draft: 3,60 m
- Speed, max.: 16 kn
- Main Engine: TwinCaterpillar
- Power: each 1.500 kW

MY „Kismet“ (for this approx. 70m yacht type, 5 vessels have been commissioned until 2011)

Performances:

- Overall responsibility for E- package, engineering, production, cabling, commissioning
- Mainswitchboard incl. 3 Generator Panels each 280 kW, incl. Power Management, 1 Panel Bow Thruster 200 kW and transition to Emergency Switchboard and 4 Consumer Panels
- Emergency Switchboard
- Motorstarters
- Distribution Board
- Integrated Bridge Control Console, Alu – Construction
- Engine Control Console
- Fire Detection System
- Integrated Automation System



MACS3 Loading Computer System

- For Container Vessels
- Tankers
- Multi Purpose Vessels
- Bulk Carriers

Customer
Vessels:
Products:

Customer
Vessels:
Products:

Customer
Vessels:
Products:

CMA CGM
100 Container vessels
MACS3.net, Belco, DAGO, Sealash

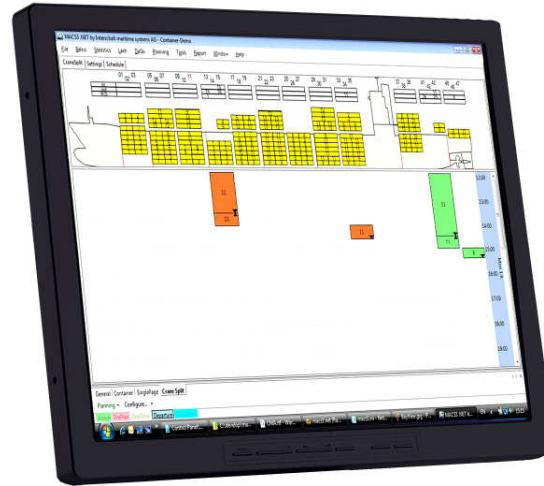
Reederei NSB
110 vessels
Container vessels: MACS3.net, Belco, DAGO, Sealash, Hot Areas

Tankers: MACS3.net, UllageReport, Tank Online, DastyMan

Reederei Claus-Peter Offen
90 vessels
Container vessels: MACS3.net, Belco, DAGO, Sealash, TankOnline

Tankers: MACS3.net, DastyMan, Ullage Report, DAGO, BallastMan, Multi Voyage, Online

Bulker: MACS3.net, LoadMAN, Bulkstrength, Tank Online, DAGO

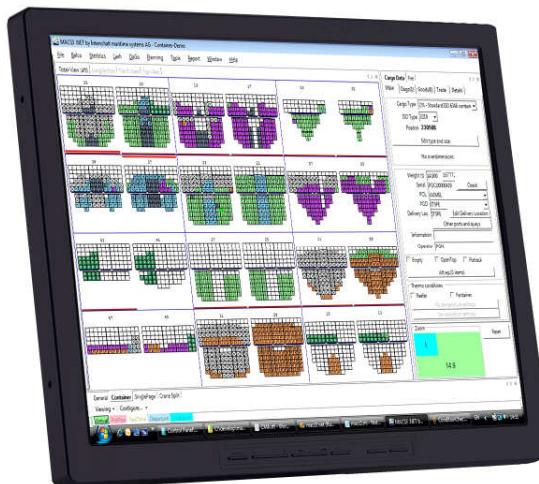


STOWMAN Stowage planning software

For efficient stowage

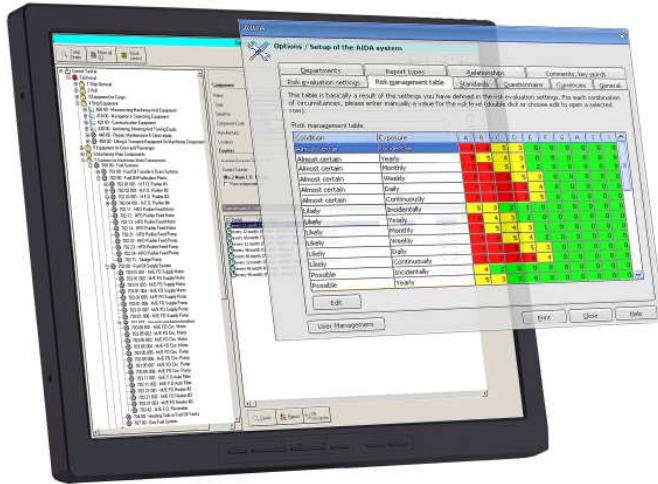
Terminals

Terminal Hamina (Finland)
Terminal Odessa (Ukraine)
Terminal Santos (Brazil)
TPSV (Valparaiso /Chile)
Pakistan International Container
Terminal (Pakistan)



Office

Ultraport (Chile)
Unikai (Hamburg / Germany)
Uniship / Unifeeder (Aarhus /
Dänmark)



IS aveccs Fleet Management

- TITAN Planned maintenance, Purchasing
- NAVECS Ship information system
- QDMS Document management
- AIDA Audit, inspection and reporting
- Crewmaster crew planning
- ISPS Security management

Customer
Vessels:
Products:

Reederei NSB
130 vessels
TITAN, NAVECS, QDMS, AIDA,
ISPS, Purchase

Ahrenkiel Shipmanagement
49 vessels
TITAN, NAVECS, QDMS, AIDA,
Cewmaster, Purchase

Leonhardt & Blumberg
56 vessels
TITAN, NAVECS, QDMS,

Interorient Navigation
73 vessels
TITAN, Purchase

Feederlines
54 vessels
TITAN, QDMS, AIDA,



Maritime Education & Training

- Main bridge with 270° view angle
- Three bridges with 120° view angle
- Engine room simulator
- IT - room
- Seminar rooms

Customer
Participant:
Course:

Peter Döhle
191 participants
ECDIS and Bridge Familiarization
Bridge Familiarization
Cargo Management
Basic Engineering
Performance rating

Customer
Participants:
Course:

Hapag Lloyd
42 participants
Shiphandling and Bridge Team Management

Customer
Participants:
Course:

Beluga Fleetmanagement
34 participants
Shiphandling and Bridge Team Management
Products and Emergency Management
Cargo Management for Heavy Lift



Your safety is our mission!

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