



Welcome...

...to the first 2010 edition of the Kongsberg Norcontrol IT Newsletter.



2009 was a great year for us with our income from orders at one of the highest points in the

company's history, reflecting the continuing and growing need for high level maritime domain awareness for improved safety and efficiency.

We were delighted that our C-Scope Vessel Traffic Service system was selected by the Maritime and Port Authority of Singapore for the world's busiest port. This contract reflected our continuing strength as the leading supplier of maritime domain awareness solutions world wide.

In late June 2009 we reached a significant milestone in the 4 year service programme for the Norwegian Defence Coastal Radar Integration and Display System known as CRIADS, which was started in 2007.

This milestone was the completion of the hardware lifecycle upgrade at the Surveillance Headquarters in Bodø, Norway, which was carried out over an 8 month period.

We were also awarded another exciting contract in 2009, with Kongsberg Norcontrol IT being chosen for the VTS upgrade of Tarifa, a highly important VTS that oversees traffic in the Gibraltar Strait.

Despite the world economic downturn, there were many highlights in 2009 and we look forward to another positive year in 2010 with a host of exciting projects in the pipeline. I hope you enjoy the newsletter and I look forward to seeing you at IALA in South Africa.

Espen Garder

Espen Garder
Vice President, Kongsberg Norcontrol IT



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Singapore VTS Steams Ahead

Kongsberg Norcontrol IT's new contract to provide the Maritime and Port Authority of Singapore (MPA) with a C-Scope Vessel Traffic Service (VTS) system has featured a number of significant developments since the project began in June 2009.



The Project, called 'VTIS21' includes the build of a brand new Port Operation Control Centre, the upgrade of an existing Control Centre and the implementation of several new technologies. The new Port Operation Control Centre will feature the latest Kongsberg Norcontrol IT cutting-edge C-Scope technology. Once the new Port Operation Control Centre is commissioned, an existing centre will also be upgraded to the same level enabling fully integrated VTS operations.

The MPA VTIS21 Project consists of the following -

- Vessel Traffic Service (VTS) System
- Maritime Communications System (MCS)
- Closed Circuit Television System (CCTV)
- Automatic Identification System (AIS)
- Global Maritime Distress and Safety System (GMDSS)
- Wall Mounted Screen System (WMSS)

VTIS21 has seen significant progress following the Preliminary Design Review, which took place 14th – 17th September 2009 in Singapore. Along with Kongsberg Norcontrol IT, the design review involved participation from several major subcontractors including Frequentis (MCS and GMDSS), O'Connor (CCTV), Mitsubishi (WMSS) and Christian Mikkelsen Research. The Preliminary Design Review resulted in the unveiling of a new C-Scope Operator Client version with an 'Integrated Operator Console'.

Fred Fredriksen, Senior Project Manager at Kongsberg Norcontrol IT comments: "The design review that took place in September allowed us and the MPA to revise the plans that had been submitted prior to contract award. The MPA's input was essential for production of the new 'Integrated Operator Console' prototype. This prototype has now been delivered to the MPA for further input and their reaction has been very positive, especially from the VTS operators, which is really pleasing."

The Project's latest stage is particularly important as this will lead to the Factory Acceptance Test (FAT). The arrival of equipment has already begun and will be setup ready for the planned FAT. The FAT is extensive and will include multiple Integrated Operator Consoles and back-end servers for one of the Port Operation Control Centres, as well as the majority of the Wide Area Network.

"The FAT is a vital project milestone and no chances can be taken. After the FAT, we will deliver a total of over 40 Integrated Operator Consoles and more than 60 servers, making this the largest VTS system that Kongsberg Norcontrol IT has ever built in our 30 year history. Being involved in such a huge and important project, along with the innovative developments we have developed has further enhanced our abilities to provide the world's best maritime domain awareness solutions," concludes Fred.

IALA Conference

Kongsberg Norcontrol IT is at the 17th Conference of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), in conjunction with South African affiliate company, Marine Data Solutions (MDSol). The Conference is being held in Cape Town from the 21st – 27th March and is attended by members of IALA and maritime authorities from around the world.

Through MDSol, Kongsberg Norcontrol IT is a key organiser of the conference, with MDSol holding the position of President of the IALA Industrial Members until March 2010. The event gives attendees a platform to discuss ideas, solutions and problems around the conference theme, 'Aids to Navigation – A Global Approach All waters, all risks, all solutions', with the ultimate aim being to further improve worldwide safety at sea and protection of the marine environment.

"We at Kongsberg Norcontrol IT have always taken a holistic view to marine transportation as we consider ourselves to be providers of Maritime Domain Awareness solutions for all waters, rather than just a Vessel Traffic Service (VTS) solution provider. The fact that the Conference theme is in line with this view is particularly pleasing as it shows our beliefs are in line with others in the industry. Further to this is the prominence placed on 'risk' as a theme, and our activities with MarNIS and SafePort directly endorse this," says Steve Nell, Managing Director at MDSol.

Steve continues: "Kongsberg Norcontrol IT and MDSol will be showcasing the new C-Scope Integrated Operator Console, recently selected by the Maritime and Port Authority of Singapore (MPA). Our prime focus will be promoting Kongsberg Norcontrol IT's ability to provide both a clear and complete maritime picture, above and below sea level, via various technologies including sonar and satellite, thus fitting in with the conference theme of 'all solutions'."

Reidar Olsen, Key Account Manager adds: "The Conference is a fantastic opportunity for Kongsberg Norcontrol IT as it brings together a large portion of our target markets. The majority of the IALA members who attend the conference are either Port Authorities or Coastal Authorities, like the Norwegian Coastal Administration."

The IALA Conference not only looks at future VTS, VTM and e-Nav technologies but also at the work which has taken place over the past 4 years, with Industrial members given the chance to showcase their products. The conference also sees a new IALA council elected, who will be responsible for leading the authority until the next conference in 2014. For further information on the 2010 IALA Conference visit www.iala2010.co.za

Port Security

KONGSBERG is now able to offer Port Security service as an integrated part of the C-Scope maritime surveillance systems. The Port Security service addresses the protection of land facilities and valuable assets that are vulnerable to attack from the waterside. The Port Security service will perform detection, classification, and identification of hostile underwater and surface objects posing a threat to target vessels or facilities.

The C-Scope Port Security service is designed for 24/7 operation. In order to reduce operator workload automatic detection, tracking, and classification is performed. Data fusion is performed to analyse primary track input from the various sensors, combine redundant information for compilation of the underwater situational picture. Advanced functionality for false alarm reduction is implemented, and alarms are automatically raised when configurable criteria are violated.

The C-Scope Port Security service integrates active and passive underwater sensors into a layered defence structure. The KONGSBERG suite of underwater sensors includes the low frequency wideband LASAR 10 active sonar and the PASAR passive sonar for 'outer zone' surveillance, and the novel wideband LASAR 40 long range awareness sonar with diver detection capabilities and the DDS 9000 family of dedicated diver detection sonars for 'inner zone' surveillance.



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LASAR 40

The C-Scope Port Security service also includes the capability of examining ships for contraband containers fixed to the hull. KONGSBERG holds a wide range of underwater vehicles, and the C'Inspector is a tethered variant which can be integrated and used for ship hull inspection and close range inspection of underwater objects.

Being part of the C-Scope family means that the C-Scope Port Security service can benefit from proven C-Scope surveillance and interoperability capabilities and data from the widest possible choice of sensors, including radar and AIS information as well as live satellite feeds can be integrated in order to improve the confidence of the underwater situational picture and reduce the false alarm rate.

The C-Scope Port Security service can be offered in the form of dedicated port security systems, or as an integrated part of a C-Scope Vessel Traffic Management Information Systems (VTMIS) system.

All C-Scope systems are based on COTS technology, and the open system architecture facilitates interoperability and data exchange with network services and external systems including various military link systems.

Portable systems for fleet protection or as additions to fixed installations in port are available. The portable systems may have both active and passive sensors.



The first fully integrated C-Scope Port Security System was installed in 2006, and KONGSBERG has recently been awarded contracts in international competition for protection of military and commercial harbours.

C-Scope Pilot Portable Unit Launched

Kongsberg Norcontrol IT's involvement in the EU's 6th Framework MarNIS (Maritime Navigation and Information Services) project has been the catalyst in the development and launch of the new C-Scope Pilot Portable Unit (PPU). The PPU enables pilots and other Allied Services to access exactly the same real-time traffic image and other VTS related data available to VTS operators.

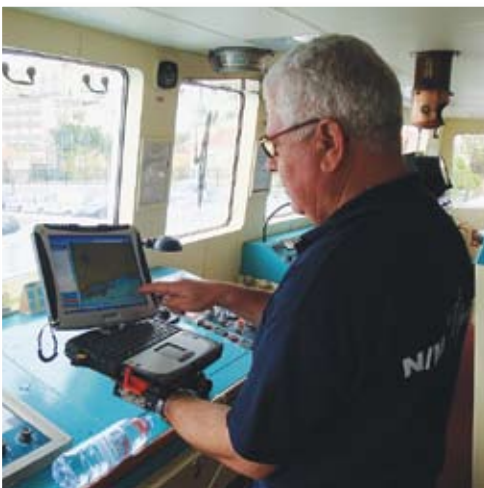
"Ever since Kongsberg Norcontrol IT's involvement in MarNIS, we have recognised the benefit to safety and operations when other players have access to the same real-time Traffic Image and same data as the VTS operators. Partnering with specialists from different technology fields has allowed us

to see first hand that involving more users in the relay of data makes operations far more effective, efficient and safe," says Steve Guest, Managing Director, Kongsberg Norcontrol IT Singapore.

This has led to the further development of the Kongsberg Norcontrol IT C-Scope VTS architecture, which enables the inherent capability to relay its navigation data to all other involved user groups, whether these are based ashore or out at sea. This has developed even further, resulting in the launch of a brand new module dedicated to assisting pilots on their approach and during port manoeuvres, the C-Scope PPU.

Steve explains: "We know that embarking a vessel is a highly hazardous operation and pilots have valid grounds for not carrying bulky or heavy gear during embarkation. With this as a firm requirement, our PPU can be run on either a ruggedised laptop computer or a smart phone. It really just depends on the viewing size required by the pilot."

The MarNIS project included 50 partners selected to help develop maritime navigation and information services across Europe. These partners comprise a wide selection of maritime companies, chosen for their ability to find innovative Global and European solutions to issues in the operations and activities performed and experienced daily in the maritime sector. These issues include areas such as maritime safety, efficiency, security and protection of the environment.



Events and Exhibitions

Kongsberg Norcontrol IT will be exhibiting at the following events in 2010:

- IHMA, Perth, Australia, 19 - 23 April 2010
- ASEAN Ports and Shipping 2010 HCMC, Vietnam, 20 - 21 May 2010
- Southern Asia Ports, Logistics and Shipping 2010, Mumbai India, 16 -17 September 2010
- 8th Intermodal Africa 2010, Cape Town, South Africa, 28 -29 October 2010

If you would like to organise a meeting to discuss specific issues, please contact your local Kongsberg Norcontrol IT office prior to the event.



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Success in Spain!

Kongsberg Norcontrol IT has had a successful 2009 in Spain with highlights including two contracts being signed for VTS upgrades at ports in Algeciras and Tarifa, awarded by the SASEMAR (Sociedad de Salvamento y Seridad Maritima). This continues the company's growth in the Spanish region with other VTS centres in Bilbao, the Canary Islands, Gijon, La Coruna and Santander all featuring extensive Kongsberg Norcontrol IT VTS solutions.



Roberto Gonzalez

Kongsberg Norcontrol IT is prime contractor for the VTS upgrade in Tarifa. The project is particularly vital due to the important geographical position that it holds, with the VTS Centre overlooking the busy Gibraltar Strait and traffic entering the Mediterranean Sea. Both are heavily congested areas outlining the need for the VTS upgrades – for improved safety and traffic control – which comprise 4 new radars and integration of 2 existing radars spread across 3 locations.

The Port of Algeciras (Puerto Bahia Algeciras) is geographically located on the crossroads of the world's main shipping lanes joining North Europe, West Africa, America and Asia by sea. Due to this, the traffic visiting and leaving the port is increasing day by day, making the VTS upgrades ordered by SASEMAR vital in managing vessels within the domain.

The expanding presence of Kongsberg Norcontrol IT VTS systems in the Mediterranean and Spanish regions has led to permanent personnel being appointed in the Spanish region to offer their support and experience to the growing number of important installations there.

"We are delighted to have been awarded contracts in the ports of Algeciras and Tarifa in 2009. The upgrades to both 'Centros de Coordinación de Salvamentos' have further cemented the great relationship that we have enjoyed with SASEMAR for the last 20 years," comments Roberto Gonzalez, Business Development Manager, Kongsberg Norcontrol IT. "We now have more installations and cover more Spanish and Mediterranean waters than ever before. We will continue our effort to offer excellent support to SASEMAR in every way possible, which is made easier by the recent permanent appointments in the region, who can now offer even stronger support."



CONTACT US...

Norway

Kongsberg Norcontrol IT AS
 (Main Office) Bromsveien 17
 PO Box 1024
 N-3194, Horten
 Tel: +47 33 08 48 00

China

Control IT Xiamen
 C1 Unit, 21 Floor
 Yuanyang building Lujiangdao #268
 Xiamen City 361 001
 P.R. China
 Tel: +86 592 5031095

India

Aatash Norcontrol Ltd.
 C14, Vishal Tower
 Ramdevnagar Satellite Road
 Ahmedabad - 380051
 Tel. +91 99099 03749

Korea

Chang San IT
 9th Floor Busan Sangrok B/D
 #828-9 Beomil-dong, Dong-gu
 Busan
 Tel. +82 51 637 8932

Singapore

Kongsberg Norcontrol IT Pte. Ltd.
 PSA Vista, 20 Harbour Drive,
 Singapore 117612
 Tel: +656 545 7375

South Africa

Kongsberg Norcontrol IT Pty., Ltd.
 P.O. Box 1519
 Hillcrest, 3650
 Tel. +27 31 767 8150

South Africa

Marine Data Solutions (Pty) Ltd
 P.O. Box 51680
 Waterfront 8002
 Cape Town
 Tel. +27 21 386 8517

UAE

Kongsberg Middle East
 P.O. Box 5250, Abu Dhabi
 Tel. +971 2 4451-956

UK

Kongsberg Norcontrol IT Ltd.
 12 High Street
 Winterbourne,
 Bristol BS36 1JN
 Tel: +44 1454 774466



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Research & Development Update

Kongsberg Norcontrol IT is taking significant R&D steps on some of the top issues surrounding the maritime transportation industry. As a technology focused company the premier aim is to further cement our leading position in the market by continuing to work with other leading maritime companies on projects that overcome often complex challenges. Two of our key current R&D projects are SafePort and MarSafe North...

SafePort

SafePort, which sees Kongsberg Norcontrol IT in an 8 strong consortium of European companies partially funded by the European community's Galileo FP7 R&D program, has the main aim of helping to further develop the move towards the safe and efficient control of vessel transit when in a port's VTS Area. In total the project consists of nine work packages, with Kongsberg Norcontrol IT taking the lead on two of them. One of these packages will see the development of a new Active Vessel Traffic Management Information System (A-VTMIS), which will be based on the traditional passive VTMIS systems. The difference will be that not only will the A-VTMIS plan provable safe paths for multiple vessels but will also actively manage the transit right until the vessel is at its berth, or likewise has left the port VTS Area.

MarSafe North



Image courtesy Richard Hall

The September 2009 newsletter announced Kongsberg Norcontrol IT's key role in the MarSafe North Project, which is dedicated to improving maritime safety management through the use of advanced communication and surveillance technologies in the High North, i.e. the Arctic area – including the Barents Sea.

Several unique challenges for the maritime industries – fishing, oil & gas, and extensive shipping traffic, as well as the responsible authorities within High North area – were identified, including climate change, use of natural resources, lack of infrastructure and new business monitoring.

The Kongsberg Norcontrol IT Research and Development team has made significant strides towards facing these issues with some key findings in each area.

• Territorial Security Control and Resource Supervision

Norway's large territory and economic zone make radio technology crucial to the endurance of not only the environment but also industry and business. The Barents Sea and the Arctic continental shelves are among the world's most fertile ecosystems, in the utmost northern parts the communications infrastructure is very poor and in some areas non-existent.

The increased maritime traffic in the Arctic will bring forward demands for an efficient and effective maritime communication infrastructure comprising of satellites and terrestrial communication systems. This new development will also bring with it challenges, like oil spill, illegal fisheries, smuggling and possible terror threats. Territorial Security Control and Resource Supervision of the coastal maritime domain will have to be up to the challenge with important legal activities such as maritime transportation and recreational traffic safely secured. Maritime domain awareness will be essential to achieving this.

• Modern IT Solutions

Key to managing the scope is effective Command, Control and Communication (C3), surveillance and information management, due to the wide area being surveyed. This will also include the need for decision support functions and highly intelligent electronic charts, which allow and support the operator with simple to use complete situational awareness.

Timing considerations are also important. Certain information can be provided in real time whilst other data requires substantial pre-processing before use. Data such as that provided via satellite will only be available periodically.

Operating costs as well as the high cost of implementing new IT systems, highlights the need for sharing information and resources between authorities such as the coastguard, navy, police and SAR as well as the port and local authorities.

• Acting with IT Support

When a situation is identified that requires action from the operator or in other instances the organisations involved, the need for efficient and effective IT based tools becomes more apparent. Examples include; planning of missions, controlling resources, communicating instructions and exchanging status information.

• Integrity of Data

Trustworthiness and accuracy of data is highly important, especially in critical operations. Users of data involved in such operations in the High North require increased integrity on received data. Sending information like the 'origin of the data' allows the user to assess to what extent they can trust the data.

The above describes just some of the areas that Kongsberg Norcontrol IT is focusing its development efforts. We will continue our dedication to R&D, to further develop technology in the industry, facing the challenges and problems whilst improving safety, efficiency and security for all.

