

Case Study

Location: Southampton, UK

Product: Acom

A Safer Port in Southampton

Acom Keeps Port Communications Afloat

The Port of Southampton is one of Britain's busiest deep-water ports. It is the hub for many types of military and commercial maritime vessel traffic, including huge oil tankers and container ships, and serves as the UK's principal port for cruise ships.

It was to improve the reliability, ease of use, and efficiency of its communication system that Associated British Ports (ABP) and Southampton's Vessel Traffic Services (VTS) joined with Zetron UK and Radiocom Systems Limited to replace Southampton's old communication system.

The challenges for VTS

The Port of Southampton VTS is responsible for ensuring the safe passage of vessel traffic through Southampton's waterways. This poses a number of significant challenges. With substantial numbers of large vessels navigating in restricted channels day and night and in all kinds of weather, safety is a major concern.

Furthermore, the area VTS manages is extensive: "The VTS district is about 26 miles long," explains Vernon Nock, Vessel Traffic Manager. "We are responsible for the VTS from Nab Tower at the southeastern end of the entrance to the Solent, up into Southampton, and as far west as the Needles."

For its communications, the Port of Southampton VTS relies on open architecture systems that incorporate VHF radio; video cameras; and sophisticated, automatic tracking radar equipment. VHF radio provides the backbone for VTS communications, and is used exclusively for all port-to-vessel and in-harbour communications

The equipment is staffed day and night, every day by highly trained operators. "Each operator can be talking to the same vessel for hours on end," says John Sessions, a radio engineer at the Port of Southampton. "Some may be giving out weather reports, while



others are talking to the vessel pilots or berthing officers. During special events, we might have over a thousand yachts sailing in various races. At the same time, we have commercial shipping coming through. The vessel traffic during those times can be a nightmare."

An Acom solution for VTS

Previously, the Port of Southampton VTS relied on a communications solution that employed several digitally switched analogue channels. Because this wasn't a mainstream manufacturer's solution, it lacked the factory support that usually accompanies more mainstream systems. In addition, the system was not easy for operators to use, did not include screens that could be configured to suit various operators' preferences, and lacked the flexibility to expand over time.

To update its system, VTS and ABP enlisted the help of Radiocom Systems Limited, based in Heathrow, England. Radiocom Systems specialises in large communications systems for airports and marine ports, as well as wide-area MPT 1327 and other trunking systems.

Radiocom Systems replaced VTS's old system with Zetron's Acom Advanced Communications System because Acom integrates well with existing equipment, provides a high degree of interoperability, and can be expanded over time.

"We installed a six-position Acom system," explains Radiocom Systems Engineering Manager, Philip Hassmann, project engineer for the Southampton VTS application. "We put five positions in the control room and a backup position at a remote location," he says. "We linked the system to five, hot stand-by Tait T800 base stations on standard marine channels. This included five duplicated and four non-duplicated transmitters and several Tait marine-band receivers that allow VTS operators to listen to different channels."

Acom can handle from a few to hundreds of operators that are based either centrally or at distributed communications centres. It also features screen presentations that can be customised to suit customer applications. This feature was put to good use for VTS: "Zetron UK gave us a default screen," explains Phillip Hassmann. "We then worked with ABP to set up the screens the way that suited them best."

The new, improved control-room

"The Zetron radio console has improved our system," says Sessions. "The operators have taken to it quickly because it's more flexible so that each position has its own setup. And with all the radio information now on one screen, the operator doesn't have to look anywhere else."

Because the new system has worked well for VTS, they already have plans to expand it to support a standby control room at a different location in the port. ■



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