



Warsash Maritime Academy Monitors Simulator Stress Tests with IQinVision Megapixel Cameras

Warsash Maritime Academy provides first class education, training, consultancy, and research to the international

shipping and off-shore oil industries. The Academy is part of Southampton Solent University in the UK. Southampton Solent University received university status in 2005. Formerly Southampton Institute, the Academy traces its roots back to the early 20th century. Solent University with approximately 14,000 students and 1,100 staff has its main campus in the center of Southampton and two other locations including Warsash. Warsash pioneered the use of bridge and engine room simulators for advanced level training.



The Challenge

The Academy's ship engine room simulator previously was monitored by an old analog system that in low-light levels produced video images of unacceptable quality for simulation training purposes. Each camera had its own monitor and could be manually switched to a VHS tape recorder, which meant that only one camera output could be recorded at any given moment. Editing facilities were quite primitive and the VHS output was not good enough quality to project to large audiences, when sharing test results with international stress research colleagues.

The Solution

Six IQeye 701 megapixel cameras, managed by Milestone XProtect Professional IP video management software, were installed to provide superior video monitoring of all activity in the engine room simulator. The system is networked using a Netgear Prosafe FSM7326TP – a 24-port, L3 fully-managed switch with Power over Ethernet (PoE) and Gigabit connectivity. The video is archived in the Milestone database onto a Buffalo TeraStation with one additional terabyte of storage capability. Design and installation expertise was provided by InCam Digital Surveillance and Smart CCTV Ltd.

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The Highlights

- IQeye megapixel technology produces very clear images, even in low lighting, and all camera views are now simultaneously monitored and recorded, which provides much better output for improved editing. By recording to a dedicated server, video is widely available and viewable on any PC on the university network.
- In the engine room simulator, all manner of incidents can be simulated and recorded and students undergo observation and subsequent training. The IQeyes record at 25 frames per second (PAL), at very high resolution, to enable a thorough debriefing of students. The IQeye's reliable, high-quality video images are essential to the effectiveness of the training process.
- For the simulator experience to be as realistic as possible, it is important that only students are in the simulator. Teaching staff must be in a separate control room, unfortunately where they cannot see



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case study

into the simulator. IQeye video feeds enable professors to clearly see (and hear) what the students are doing, how the instruments read, where the controls are set, and other important information.



- The video cameras need to be as small as possible because space in the simulator is restricted. They also need to be unobtrusive so they do not spoil the simulator atmosphere.

The IQeye 700 Series met size and installation requirements, creating an optimal simulator atmosphere.

- The output from the IQeye cameras now can be simultaneously monitored and recorded to enable a much better editing capability. The system is very flexible, handling video in various formats: analog, SDI, HD, JPEG, AVI, etc. so video output can be used in different ways.

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- InCam selected SmartCCTV because of their specialization in IQeye megapixel cameras. IQeye 701 cameras were specified for their small physical size and their spatial resolution which successfully delivers the required image quality. The system captures 25 frames per second on all cameras at HD (1280 x 720) quality. It records and shows a live view on all cameras, and all cameras are PoE from the switch.

For more information on IQinVision, please go to:

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