Thermal Cameras
More than meets the eye for the Maritime market

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G4S Technology

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Overview
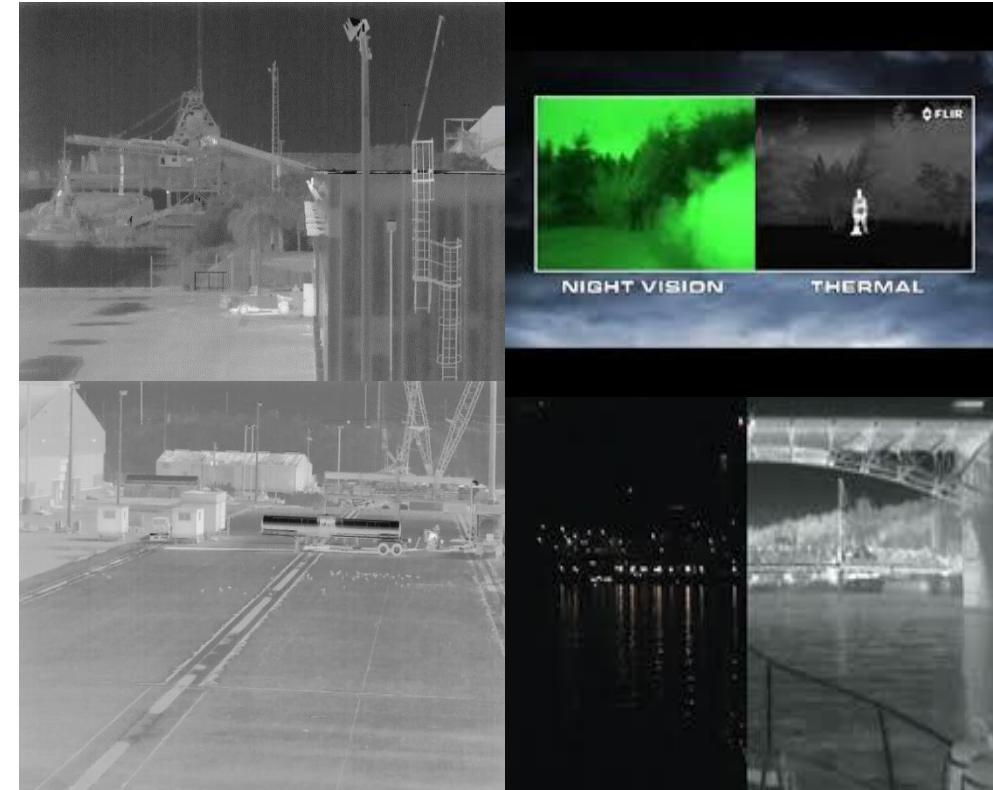
- The evolution of thermal imaging
  - Video, Night Vision, Thermal
- Search & Rescue
- Harbor Safety
- Port Security

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Prior to the inception of thermal imaging, typical surveillance devices utilized light as their sole source of producing images.

Thermal Imaging is Here

- Low Light Conditions:
  - From Cameras to Night Vision Technology
- No Light, obscured visibility, and bright light conditions: Thermal sensors are able to display images based on a radiant heat source delta between environment and object.
  - Low/no light
  - Obscured Visibility
  - Bright Light

Sarix TI lowlight intruder.mov

Sarix TI smoke demo.mov

Sarix TI traffic monitor.mov

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Maritime Search and Rescue

- Poor visibility conditions while at sea
  - Ships and small vessels are identified
  - people in the water, on deck, and life rafts.
- Vital for successful overboard missions and rescues.
  - Even in the darkest conditions, thermal imaging can pick up overboard victims through heat detection.
  - You can see the tops of the victims 10-20 minutes before water temperature and body temperature become very close.
- Result: increased response time.
- Ultimate benefit: increased recovery and survival rates.

Port Harbor Safety

- Thermal imaging detects obstacles from greater distances. Can even detect some floating objects.

- Coupled with Radar detection and/or other technology, objects are better identified in terms of vessel size and type - more quickly and accurately.

- Vessels approaching port perimeters can be more accurately identified and monitored.
  - Decrease collision risk through more accurate vessel identification and distance measures
  - Can see a ship in pitch black, light fog, rain, etc. Heavy weather conditions can slightly affect vision.

- Security and Law enforcement can assess a situation without being detected by possible perpetrators.

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Port Security

- Understanding the threat mitigation model - DDR
  - Design Based Threat as the core to build from
  - Areas of magnitude and critical assets
  - Detection, Delay, Response & where thermal sensors fit

- Detection vs. Identification – Thermal technology limitations & usage
  - Restricted areas, Perimeter
  - Inside Perimeter, Common Areas

- Optimizing thermal technology through integration
  - Analytics
  - Geo tracking
  - VMS/PSIM with comprehensive alarm management/situational awareness

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Optimizing Through Integration

- Integrated solution for long range day/night PTZ night vision
- 60x IR-corrected motor zoom lens with focal length of 12.5-750 mm extending to 25-1500 mm with doubler function
- High performance Dinion 2X CCD imaging core
- Dual ZX700 IR illuminators provide night vision performance to 1200 m (3900ft) for classification-level performance
- SLED 10-8BD IR Illuminators for medium range night vision
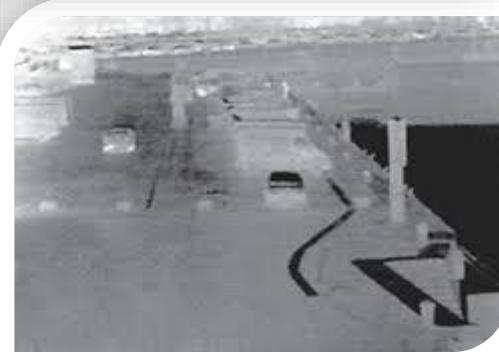
Thermal_boats-SM.wmv

Enterprise_System.wmv

Understanding the limitations and proper use of technology is in the DNA of the Systems Integrator. Understanding the safety, vulnerabilities and threats to a facility is in the DNA of their Security Director. Consultative collaboration between the two is the best approach to effectively implement technology in a Safety and Security Program.

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Thank You!

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