



LOOK. LISTEN.
COMMUNICATE.

SCOTTY and Anti-Piracy



WELCOME TO A NEW DIMENSION OF COMMUNICATION

SCOTTY supplies original hardware for

- › live video communication and data collaboration,
 - › live and store & forward (HD) video surveillance,
 - › and other data applications-
- › beyond line-of-sight,
 - › land, sea, and air
 - › from remote and difficult environments (over SATCOM) and headquarters
 - › with special emphasis on military encryption compatibility.



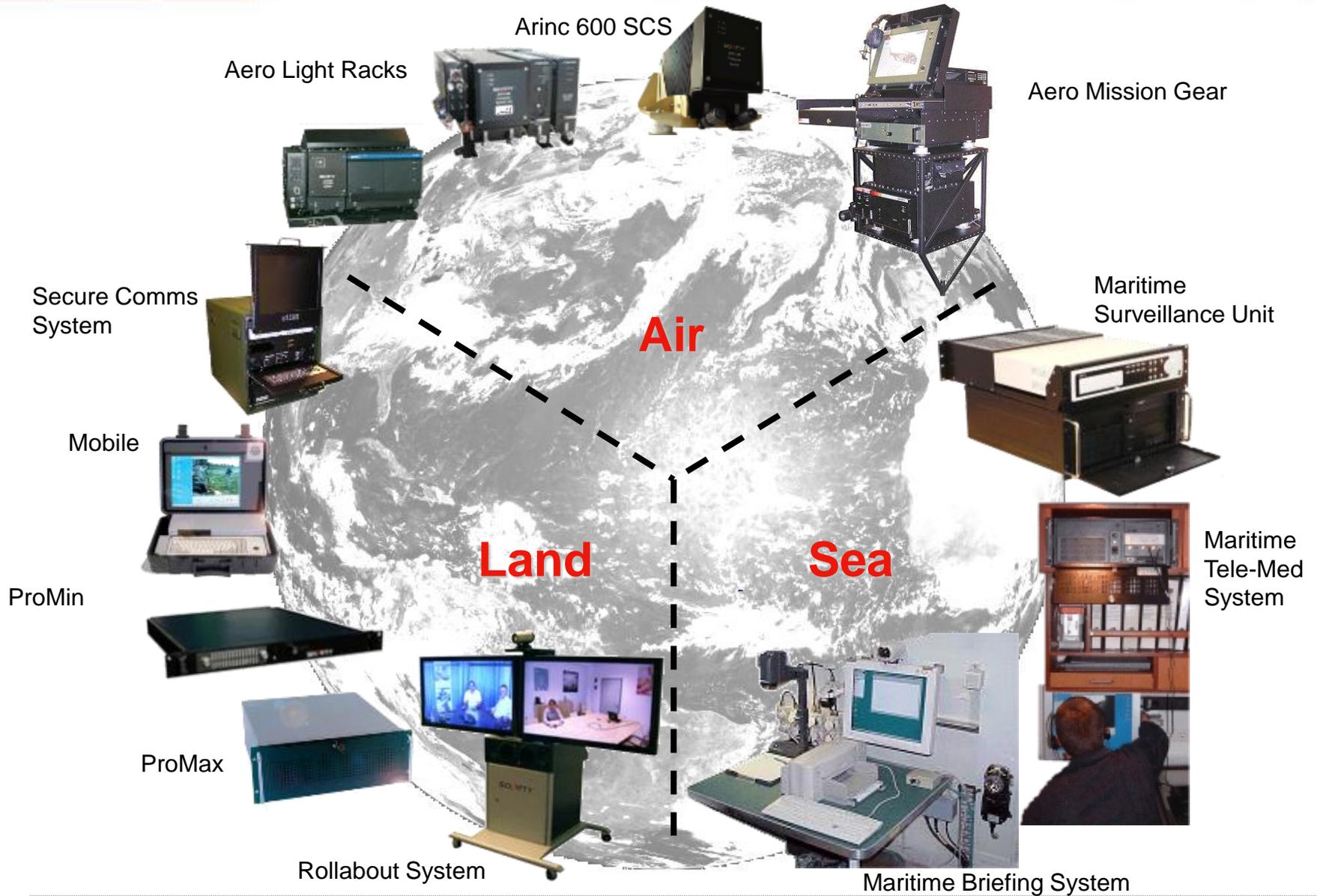
WELCOME TO SCOTTY

- > 38 Employees: 13 academics, 10 R&D, 6 Sales



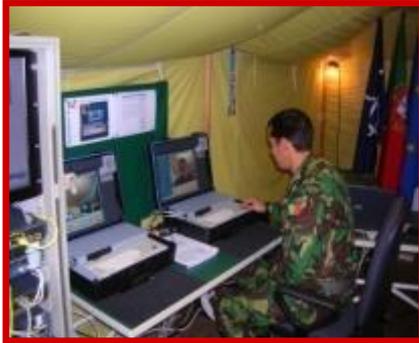
- > “Project Driven, not Product Driven”







GOVERNMENT SOLUTIONS - OVERVIEW



Around the world- via sat



Vehicle Solutions



Encryption Solutions



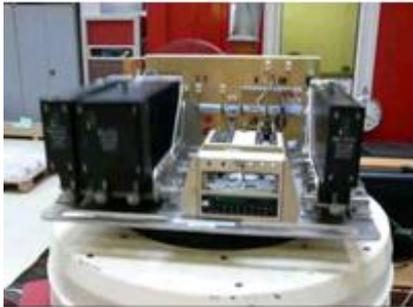
Fixed wing



Maritime



Rotary



TESTED & CERTIFIED

- › SCOTTY is EN-9100:2009 and ISO 9001:2008 certified.
- › All equipment undergoes extensive testing.
- › Aero LRU products DO-160 E certified.
- › Rollabout System NATO COMSEC Zone 1.





SCOTTY and Anti-Piracy

The need to act!

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- › Increasing piracy problem in West Africa (Gulf of Guinea)
- › Opportunities created by adoption of Best Management Practice 4 (BMP4)
- › Key role CCTV can play in creating Situational Awareness and Common Operating Picture

SCOTTY has proven equipment already deployed at sea.

The SCOTTY offering is based on transmitting live video from remote locations.

Merchant Shipping

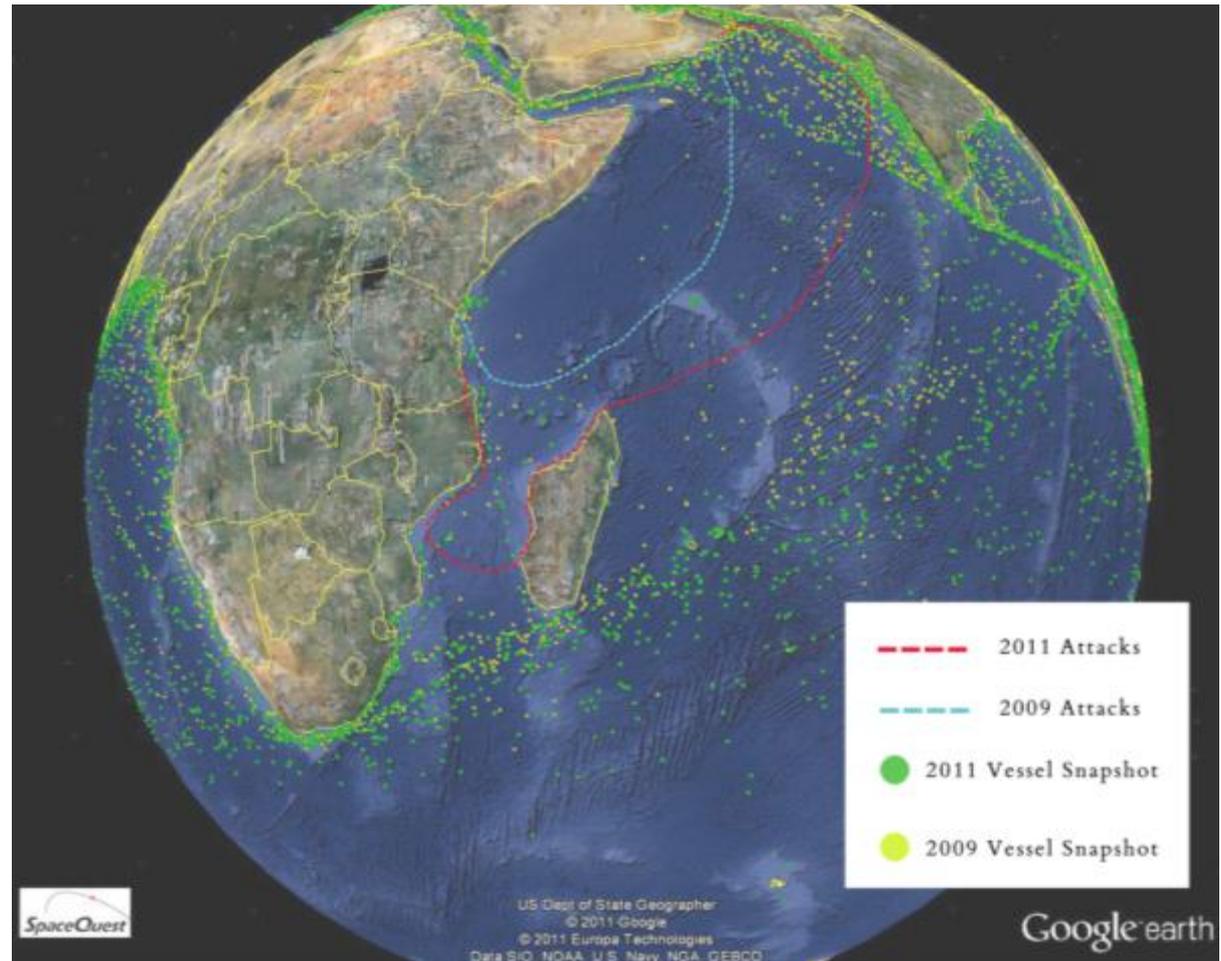
- › 80% of World's trade travels by water
- › 50% World's trade value and 90% of general cargo is transported in containers
- › 75% of World's trade pass through a handful of international straits and canals
- › 1/3 of the World's trade and half its oil traverse the Straights of Malacca, Singapore, Somalia and the Red Sea.



SCOTTY equipment, combined with Satcom, works from anywhere in the world.

Merchant Shipping

- > Total of 1.04 million vessels
- > Tankers
- > Containers
- > Bulk carriers



The Pirates

- › 5-6 years ago, they carried knives
- › Today, they still use knives but carry AK-47's and RPG's
- › High risk areas: Somalia, West Africa (particularly Gulf of Guinea), Straits of Malacca, Indonesia, Peru

Most of SCOTTY's products are deployed in harsh and dangerous environments.



Current Situation

- › **Welcome reduction in hijacking and attack to ships in 2012 but no room for complacency**
- › **Crews 'must remain vigilant, particularly in the highly dangerous waters of East and West Africa'.**
- › **Nigeria experienced a three fold increase in attacks in 2012 compared to 2011**
- › **International Maritime Board (IMB) says Navies are deterring pirates of Africa's East Coast, with pre-emptive strikes and robust action against mother ships.**
- › **So too, are private armed security teams and crews' applications of 'Best Management Practice'.**
- › **Continued presence of Navies is 'vital to ensuring Somali piracy remains low'**
- › **Progress could easily be reversed if naval vessels are removed.**

Response

- › **Monitoring and Reporting**
- › **Naval activity**
- › **Armed Guards**
- › **Adherence to BMP4**



Naval Response

- › **Operation Atalanta, EUNAFOR (EU Naval Force)**
- › **10 vessels and 3 maritime recon aircraft**
- › **Linked to Maritime Security Centre - Horn of Africa (MSCHOA), providing 24 hours manned monitoring of vessels transiting through Gulf of Aden.**
- › **NATO - Operation Ocean Shield**
- › **Three ships with overall command of NATO Maritime Command HQ, Northwood, UK**
- › **Providing maritime expertise and support as well as command and control of dedicated forces**

SCOTTY is already well known within the EU – SCOTTY equipment is onboard over 30 German frigates and 15 British mine sweepers.

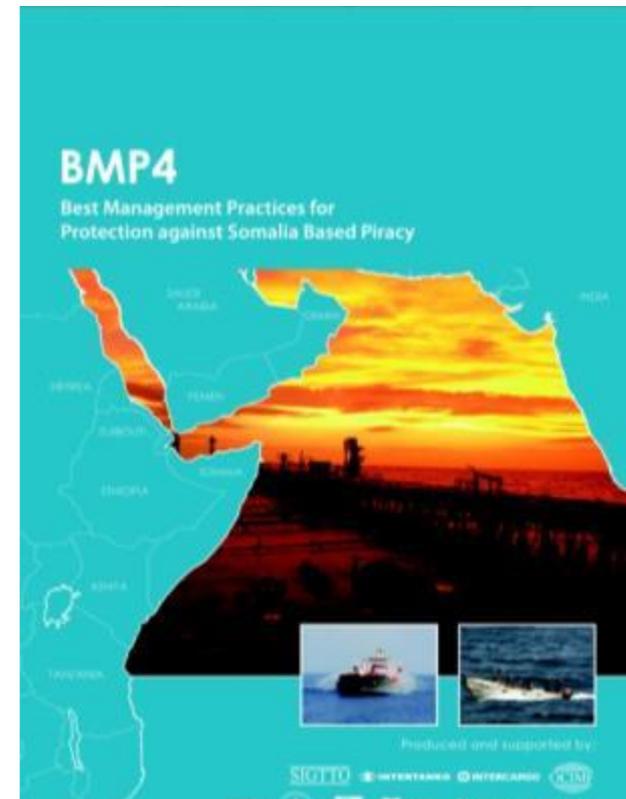
NATO Security Centre advice to mariners:

- › **Be Aware** - of pirate equipment, activity and tactics
- › **Be Safe** - against attack by following BMP4
- › **Be Known** - by international forces by following BMP4 reporting procedures



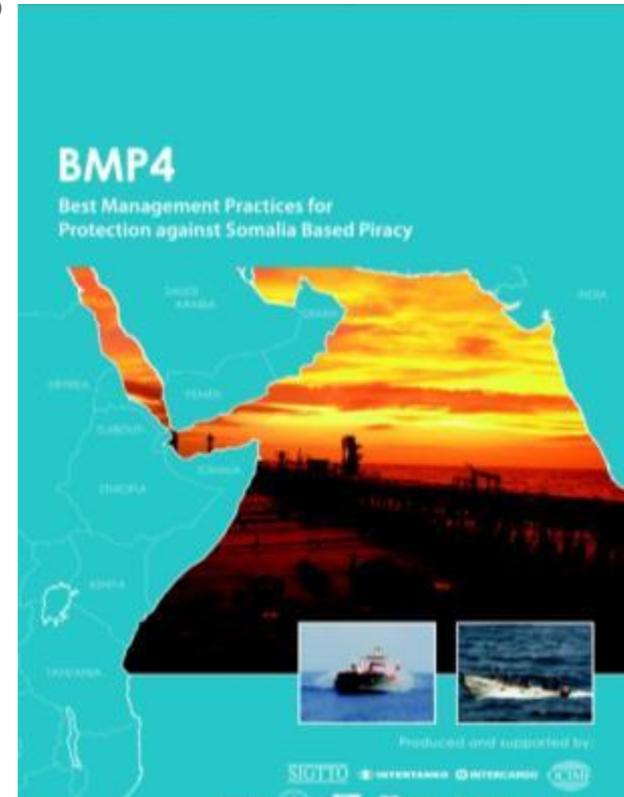
MBP4's Three Fundamental Requirements:

- > Register at Maritime Security Centre Horn of Africa (MSCHOA)
- > Report to UK Maritime Trade Operation (UKMTO)
- > Implement Ship Protection Measures



Ship Protection Measures

- > These are the most basic measures most likely to be effective at reducing the risk of piracy attack
- > They include watch keeping and enhanced vigilance, enhancing bridge protection, physical barriers, alarms, AND CCTV !



CCTV



- › **8.9 Closed Circuit Television**
- › **Once an attack is underway and pirates are firing at the vessel, it is difficult and dangerous to determine if they boarded vessel.**
- › **The use of CCTV coverage allows a degree of monitoring of the progress of the attack from a less exposed position:**

Consider the use of CCTV cameras to ensure coverage of vulnerable areas, particularly the poop deck.

Consider positioning CCTV monitors at the rear of the bridge in a protected position.

Further CCTV monitors could be located at the Safe Muster Point/Citadel (see section 8.13)

Recorded CCTV footage may provide useful evidence after an attack

Citadels

- › A strong room to which the crew can escape to if attacked by pirates
- › Minimum requirements to be in place, including two-way communication (some fitted with cctv capability)



SCOTTY's Offering

- **SCOTTY can provide all, or part of the complete video-antipiracy system onboard the ship:**
 - CCTV cameras
 - Citadel (and other) comms equipment
 - SCOTTY audio/video/data transmission units
 - L or Ku band SatCom system

- **SCOTTY also offers systems for Navy ships, Ribs, aircraft, and shore.**



SCOTTY's Offering

- > **SCOTTY equipment can be used for duplex comms, clandestine surveillance, and for making a record of events.**
- > **The SCOTTY system offers**
 - live duplex or streaming video,
 - duplex audio,
 - far-end camera selection and pan/tilt/zoom control,
 - snap shot grabbing,
 - video recording,
 - data streaming and sharing.
- > **Comms can be ship-shore, ship-ship, ship-aircraft**
- > **Comms are live, can be encrypted.**



SCOTTY's Offering

- > Comms can be ship-shore, ship-ship, ship-aircraft – all over satellite and compatible to terrestrial IP network.
- > Comms are live and can be encrypted.
- > GPS info and any other data can be exchanged



SCOTTY's Offering

- > **SCOTTY hardware is tough and proven among commercial, military, and law-enforcement authorities around the world.**



SCOTTY's Offering

- > SCOTTY already has a product designed specifically for anti-piracy applications:

The ProMax Surveillance Add-on

- > Live or store & forward video
Satcom connection with up to 7 onboard cameras.
- > All cameras can be controllable by headquarters.
- > Discreet dial-in for clandestine surveillance.



How Important is CCTV and the SCOTTY System?

- › **It allows both the Captain and crew to obtain situational awareness of pirate activity, before it happens, during an attack and after, allowing informed decision making**
- › **It would allow Naval forces and monitoring agencies to have a common operating picture and to allow them to remotely access the cctv to ensure the most effective military response**
- › **It would allow Company Security Officers (CSO) to have the fullest picture of the unfolding events, real time !**

Significance of BMP4

- › **Indian Shipping Ministry has directed all ships operating outside of a Indian waters, to be fitted with CCTV, by June 2013 or next security review**
- › **UK Home Office has issued guidelines for use of armed guards to only be authorized following demonstration of full compliance with BMP4**
- › **CCTV integral part of BMP4, providing both situational awareness and common operating**

Final Thoughts on BMP4

- › ***'There is a 1 in 500 chance of being pirated in the high-risk area that covers an area of 2.8 million square miles. To effectively cover this entire area and provide a response within 1 hour there would need to be 83 warships with helicopter capability deployed at any one time'. (Colonel Richard Spencer, Former Chief of Staff, EU NAVFOR)***
- › ***'The failure to comply fully with BMP4 places the ship owners/operators, Master & crew at unnecessary financial and personal risk'. (Captain Pottengal Mukundan, Director IMB)***
- › ***'Self-protection measures have been proven the most successful means of preventing a pirate attack and 80% of attacks outside the GOA (Gulf of Aden) have disrupted a pirate attack with correct implementation of BMP4. The vast majority of successful pirate attacks are where vessels have not been applying BMP4 to the fullest possible extent'. (Colonel Richard Spencer, former Chief of Staff, EU NAVFOR)***