THALES

S-CUBE ENABLES PERMANENT SAFETY OF THE PLATFORM WHILE PROVIDING CUTTING-EDGE PASSIVE AND ACTIVE PERFORMANCE IN DEEP OR LITTORAL WATERS TO DETECT, CLASSIFY, LOCATE AND TRACK A FULL PANORAMA OF WIDELY THREATS.

> **Permanent safety**
"Safety bubble" around the submarine owing to a set of arrays ensuring 360° coverage over a wide range of frequencies.
Optional HF active sonar (Navigation and 3D Mine & Obstacle Avoidance Sonar) to further enhanced safety.

> **Acoustic advantage to detect before being detected**
High performance sonar based on multi-sensors views and processing from a consistent combination of acoustic arrays (Planar Flank and Bow Arrays, etc).
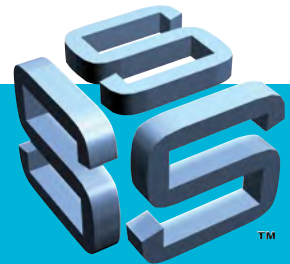Digital arrays, with elevation capability and extended frequency range.
Advanced algorithms including high resolution Adaptive Beamforming and ASW processing tools.

> **Flexible solution/Easy upgrades**
Based on the Open System Architecture for scalability, upgradability ; easy and incremental insertion of additional sensors and new capabilities and allows third party algorithms insertion.
Full integration in the combat system.
Seamless integrate to any combat system.

> **Reduced operator workload**
New generation HCI designed with and for submariners.
Increased effectiveness: significant reduction in operating manpower and training – integrated aids and alerts for operators.

SUBMARINE WARFARE

S-CUBE
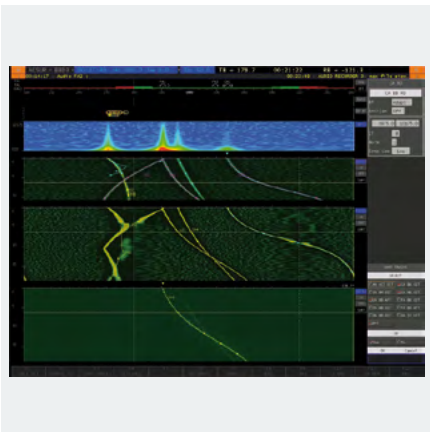## Integrated and Modular Submarine Sonar Suite

PEDIGREE

On board French, Autralian, UK and foreign class submarines

Brazilian Navy: Scorpene/4 systems
Indian Navy: P75 program/6 systems
A South American Navy:
209 submarine modernization/2 systems

SUBMARINE WARFARE

S-CUBE
Integrated and Modular Submarine Sonar Suite

OPERATIONAL HIGHLIGHTS

The wide S-Cube catalogue comprises bow, aft, flank, distributed, towed, intercept and active arrays, self noise monitoring, 3D MOAS, as well as associated functions.

As an integrated system, it offers instantaneous access to all sensors data. These data can also be post-processed on a long history period at any moment on request of the sonar operator, providing an invaluable tool for contact analysis and classification, localisation and tracking.

The S-CUBE can be integrated in any CMS, and operated from Multi-Function Consoles.

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MAIN CHARACTERISTICS

System features:
- Scalable for all size of submarine (from costal SSK to oceanic SSK)
- Low impact of sonar passive antennas integration
- New-build programs and refit projects
  - for experienced Navies as well as for navies operating subs for the first time
  - Fulfilling the customer and shipyard requirements through possible sonar sensors options available for submarines
  - Modular architecture based on COTS
  - Qualified to Military Environmental standards
- Planar Flank Array, ultra thin & light unique Flank Array
- Bow Array: cylindrical and conformal
- Stern array for full panoramic coverage
- Towed Array (clip-on or fully reelable)
- Intercept Array with extended frequencies access
- Distributed Array for passive ranging capabilities
- Active Array with wide band active ranging
- 3D Mine & Obstacle Avoidance Array
- Self Noise Monitoring System
- On board and ashore Acoustic Signature Analysis & Classification System (Mosaic)