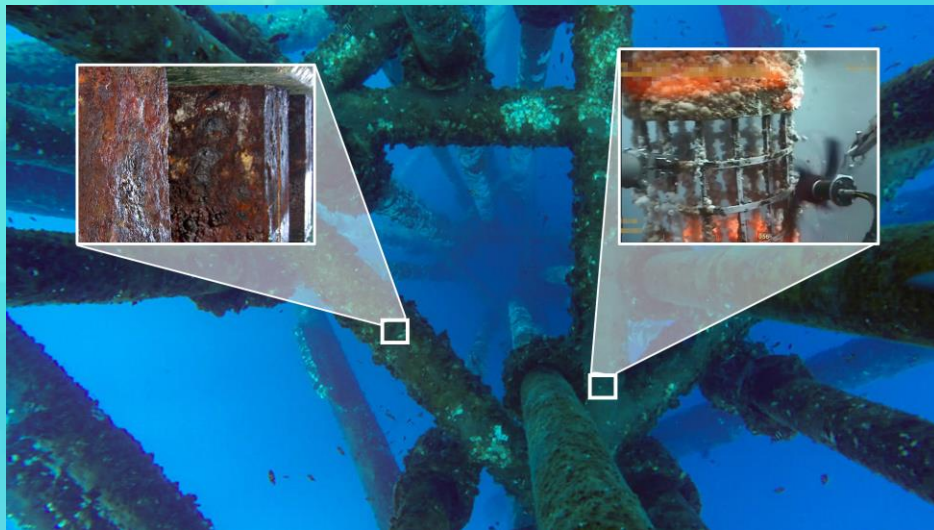


ANTIPARA

EXPLORATION

Intelligent underwater 3D Analytics using Machine Vision

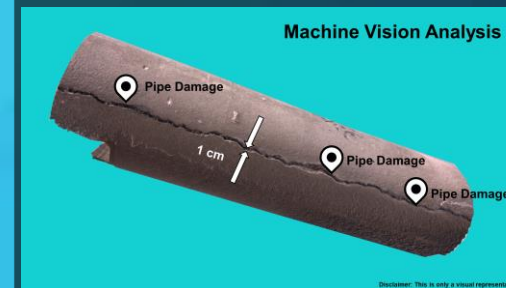
UNDERWATER 3D GEOSPATIAL MAPPING AND ANALYTICS FOR MARITIME INDUSTRIES



Shark Scan is a machine vision algorithm that automatically analyze any ROV video with defect measurement and 3D model for accurate assessment of corrosion, cracks and marine growth. Our algorithm can also be used in change detection, seabed and GIS mapping.

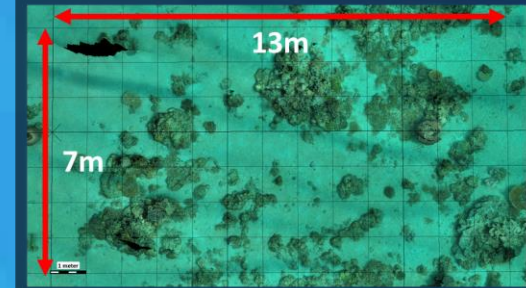


Fusion of Camera and Sonar 3D Tech



High Resolution Scan

- ✓ < 1 cm resolution can be achieved
- ✓ Smallest details rendered



Measurable Maps

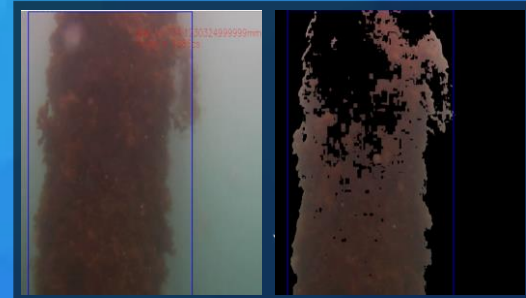
- ✓ Cover up to 1,000 sqm
- ✓ GIS mapping compatible

Tracking and Analysis with Machine Vision



Change Detection

- ✓ Presence/Absence
- ✓ Area/Volume Change



Machine Vision

- ✓ Biofouling, Corrosion Analysis
- ✓ Marine Growth Assessment

Analytics Services

3D Visual Scanning

- As-Constructed Documentation
- Geospatial Surveying

Image & Video Analytics

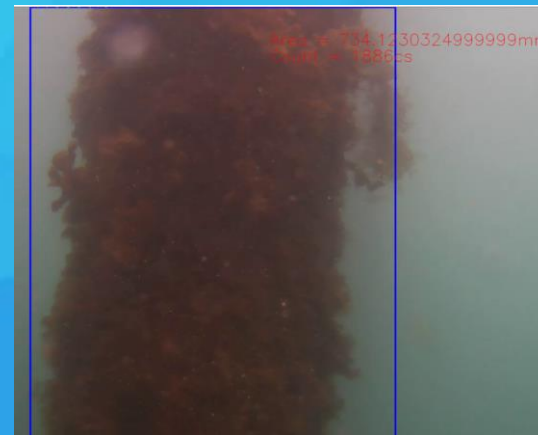
- Defect Detection
- Condition Assessment

**Analytics Service starts

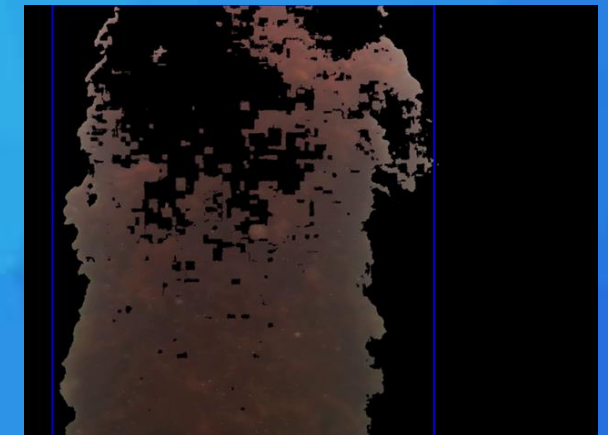
- US\$2,000 for 2 hours video processing



Anode ID: 0047
Measured Size: **734.123mm**
Anode Condition: **Deteriorated**



Scanned Area



Processed Area

Shark Scan Analytics



Better Analytics using smaller consumer grade ROVs

Better logistics

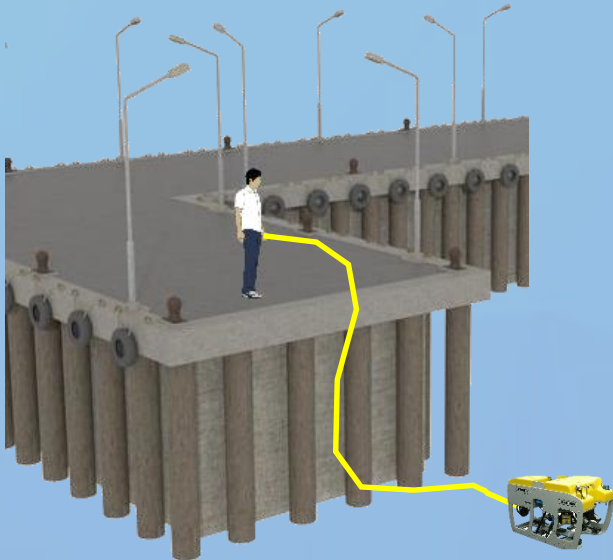


Surface Support Ship



ROV Container

Better Safety



Better Capabilities



Access tight spaces





Automated Defect Detection



Bigger Area Coverage

Testing Results:

	Traditional Methods	Antipara Exploration	Result
Team	2 Crew 4 ROV Operators 10 Review Engineers	2 ROV operators 1 Review Engineer	80% less Manpower
Logistics	 +50kg Class ROV	 >10kg Class ROV	50% Faster Scanning
Output	100 video hrs Report & Pictures	Automated Video Analysis/ 3D imaging	Easier to review
Overall Cost	High	Cost effective	70% Savings



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