



MetOcean Data Systems

Data Collection & Communication Experts

Beacons & Flasher Products – Nov 2011

Data collection and communication experts

www.metocean.com



PROFILE

- **Founded in 1983 -- Dartmouth, Nova Scotia, CANADA**
- **50+ employees / 24,000 sq. ft. facility / ISO9001 Quality System**
- **Remote data collection and communication products + services**
- **Extensive international design, development & manufacturing expertise**





FOCUS

PROFILE

- Meteorological and Oceanographic data collection
- **Asset Management** and Vessel Tracking
- Characterization of underwater acoustic signals
- Coastal environment and current monitoring
- Search and Rescue (SAR) operations
- Profiling oceanographic conditions
- Ice flow and iceberg tracking
- Oil detection and tracking





**MARKETS
&
CUSTOMER
BASE**

PROFILE

- Global Ocean Science
- Military and Coast Guards (Search & Rescue)
- Survey, Oil and Gas companies
- Meteorologists and Oceanographers
- Government Institutions and Commercial Fisheries





PRODUCT GROUPS



Buoys & Profilers

- Ocean Drifters, Polar Products, Profiling Floats, Environmental Solutions, Search and Rescue



Beacons & Flashers

- Beacons and Flashers – Radio & Satellite, Surface and Subsurface



Naval Systems

- MASS, SILC, Underwater acoustic applications, engineering services and prototype product development



Tracking & Locating

- Tracking Instrumentation and Systems, Vessel Monitoring Systems (VMS)

NOVATECH™ Overview

NOVATECH was acquired by MetOcean in May 2010 from Cobham Tracking & Locating.

→ Products

- Radio Beacons
 - Shallow and Deep Water
 - 600m & 7300m
 - Remote Head Option
- Xenon Flashers
 - Shallow and Deep Water
 - 600m & 7300m
 - Remote Head Option
- Argos Satellite Beacon
 - 7300m Rated
- Combo Units
 - Radio Beacon and Xenon Flasher
 - 600m only





NOVATECH™ ST-400A Xenon Flasher. VISUAL LOCATING SYSTEM



- Self-contained submersible xenon strobe
- Submersible to 7,300m
 - Adjustable flash rate and intensity
 - Visible up to four nautical miles
 - Pressure-activated on/off switch with manual override
 - Automatic daylight-off feature



NOVATECH™ RF-700A1 RF Beacon VHF RADIO LOCATING SYSTEM

NOVATECH

- Self-contained, submersible radio beacon
- Submersible to 7,300m
- Detectable from four to eight nautical miles
- FCC approved
- Pressure-activated on/off switch with manual override

NOVATECH™ Shallow and Combo Beacons
NOVATECH™ DF-500N Direction Finder

NOVATECH





PRODUCTS

IRIDIUM BEACONS



General Specifications:

- Fully submersible: 2,000m (6561ft).
- Hull Material: Anodized Aluminium
- Mass in air: 6.20lbs
- Operating life: 24 months standby with 2000 messages
- Storage Life: 24 months

Satellite Telemetry:

- IRIDIUM SBD (9602)

Sensors:

- GPS Position (+ Battery Life)

Power Supply:

- Alkaline (standard)
- Lithium Thionyl Chloride (optional)



RELIABLE • CRITICAL • LIFELINES



MetOcean



PRODUCTS

IRIDIUM BEACONS



 **iridium**[®]
Everywhere

RELIABLE-CRITICAL-LIFELINES

General Specifications:

- Fully submersible: 6,000m (19,685ft)
- Hull Material: Titanium
- Mass in air: 8.10lbs
- Operating life: 24 months standby with 2000 messages
- Storage Life: 24 months

Satellite Telemetry:

- IRIDIUM SBD (9602)

Sensors:

- GPS Position (+ Battery Life)

Power Supply:

- Alkaline (standard)
- Lithium Thionyl Chloride (optional)



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BACK OFFICE

Online Back Office Website

General Specifications:

- Secure site (https://...)
- Manage multiple assets
- Asset History
- Latitude / Longitude
- GPS date + time stamp
- Remaining battery voltage
- SBD Time & TTFF
- Bidirectional Communication

Surface Reporting:

- 5, 15, 30 minute
- 1, 2, 6, 12 hour

Subsea CSQ:

- 5 minute
- 3 hour

Geo Fence:

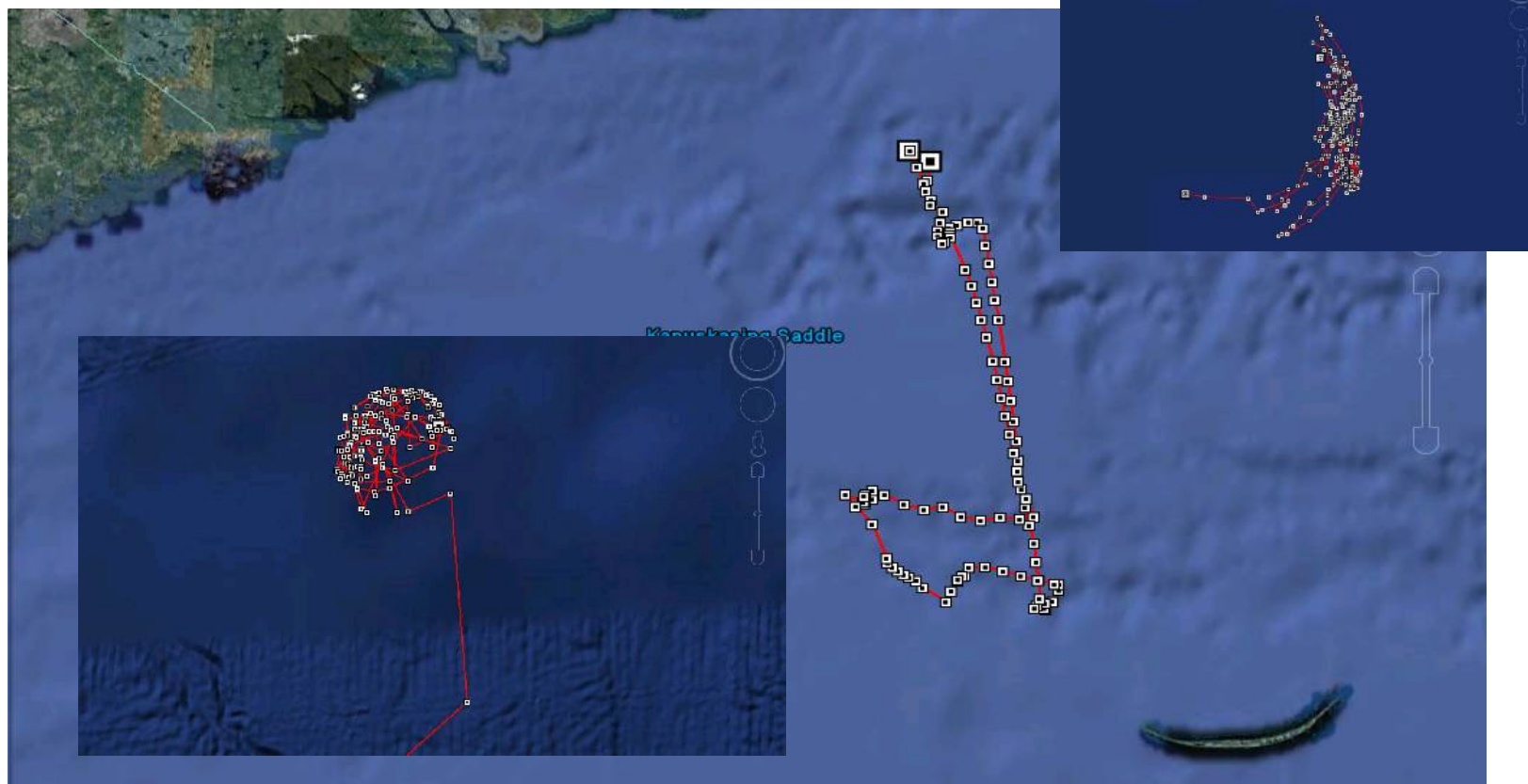
- Radius from known point
- Polygon / Poly line
- Inbound or outbound alerts

The screenshots display the JouBeh Asset Management System interface. The top screenshot shows the 'Asset History' table with columns for DATE (GMT), LATITUDE, LONGITUDE, YEAR, DAY, HOUR, MIN, SPS YEAR, SPS DAY, SPS HOUR, SPS MIN, VBAT, FOM, GPS SN, TTFF, SBD TIME, and HEX DATA. The bottom screenshot shows the 'Asset History Mapped' view with a map of the UK and a red cluster of data points.



BACK
OFFICE

CABO Beacon – Position reports exported to Google Earth (.xml) - Moorings



New NOVATECH™ Products

**NEW
PRODUCT
RELEASE**

→ MICRO BEACONS

- Smaller Form-factor
- Same depth-rating (7300 – 7500m)
- LED Strobe
- Digital Frequency Control (RF)
- Titanium Housing
- Lithium Batteries



NOVATECH™ Micro LED Flasher

NEW
PRODUCT
RELEASE



- Titanium housing
 - Outside Diameter = 1.125"
 - Length = 14.9"
 - Mass (in air) = 0.646 Kg
 - Power = (7x) CR-123A Lithium cells
-
- Pure White LED 2.3 - 3.6W
 - Intensity = 170 – 235lm
 - Flash rate = 1 to 3 bursts every 1, 2, 3, 4, 5, 10, 20, 30 seconds
 - Activation = Reed Switch
 - Surface sense = Conductivity



NOVATECH™ Micro RF Beacon

NEW
PRODUCT
RELEASE



- RF Output = Tunable 20 -100mW
- Frequency range = 151-160MHz
- Detectable range = 5-9 N miles
- Activation = Reed Switch
- Surface sense = Conductivity

- Titanium housing
- Outside Diameter = 1.125"
- Length = 20.9" including antenna
- Mass (in air) = 0.673 Kg
- Power = (7x) CR-123A Lithium cells



NOVATECH™ Iridium Beacon

**NEW
PRODUCT
RELEASE**

→ Iridium Satellite BEACONS

- 9602 with new MetOcean controller pcb
- Titanium housing (7300 – 7500m)
- Designed to retrofit onto any existing deep rated NOVATECH tube (RF,ST,AS)
- Designed to operate with NOVATECH PS-200 Pressure Switch
- Fully compatible with Joubeh online back-office.
- Existing beacon upgrades will gain 2x alkaline 'C' cell batteries

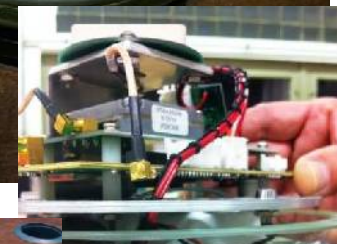
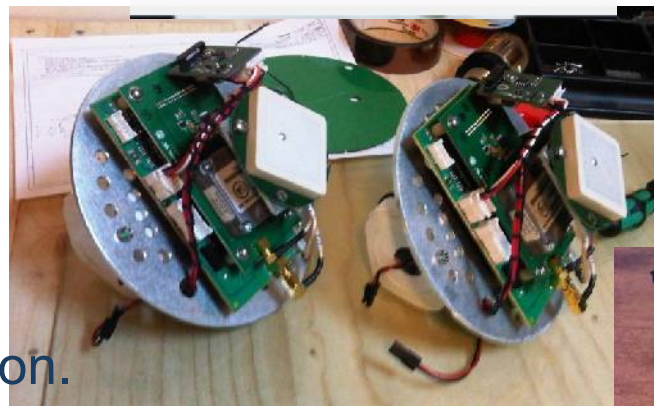




**NEW
PRODUCT
RELEASE**

MetOcean Iridium Sphere

- CABO OEM Electronics/Antenna
- Glass sphere housing, 16mm thickness
- 7.5" sphere diameter
- Ocean depth rating of 11,000m
- Mk II design includes NOVATECH ST Flash tube + pcb integration.



MetOcean



THANK YOU

Questions?

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