





China's BeiDou World's Compass

Background

- Situation of Vessel Monitoring at Home and Abroad
- Advantages of BeiDou in Vessel Monitoring

BeiDou and Vessel Monitoring

- Application Mode of BeiDou in Vessel Monitoring
- Services Frame Provided by BeiDou VMS
- Services Provided by BeiDou VMS

Conclusion

BeiDou is Notably Applicable to Vessel Monitoring

Background



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Situation of Vessel Monitoring at Home and Abroad



- Limited Coverage Area
- **♦** All-day Service Impossible
- Separation between

Positioning and Communication

Satellite Monitoring

Absolute Software,
AMS, Argos CLS, AST
Ltd,
Free Port-Eye from a sky

21A

Positioning and Communication

Separation between

♦ Expensive



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Advantages of BeiDou in Vessel Monitoring

Applicability

- Positioning and Communication Integrated
- Broad Coverage Area

Extensibility

- Compatible with other GNSS
- Integratability with AIS, RFID

Reliability

- Developed by China
- Ocean-Land-Sky Integration

Suitability

- Economic
- Availability in Harsh Environments

Application Mode of BeiDou in Vessel Monitoring







Application Mode of BeiDou in Vessel Monitoring





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BeiDou Terminal

Command Centre



Handset

Vessel Monitoring Devices

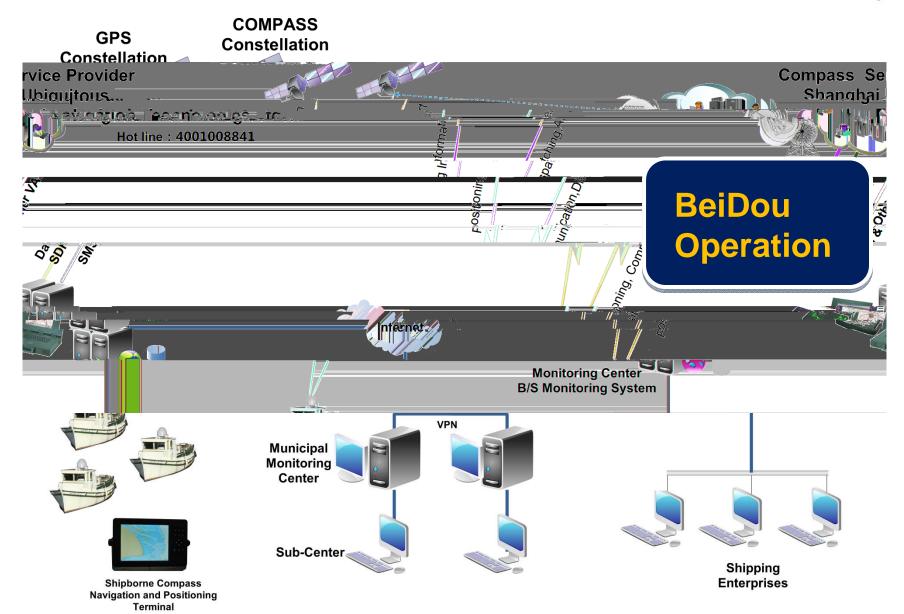
BeiDou

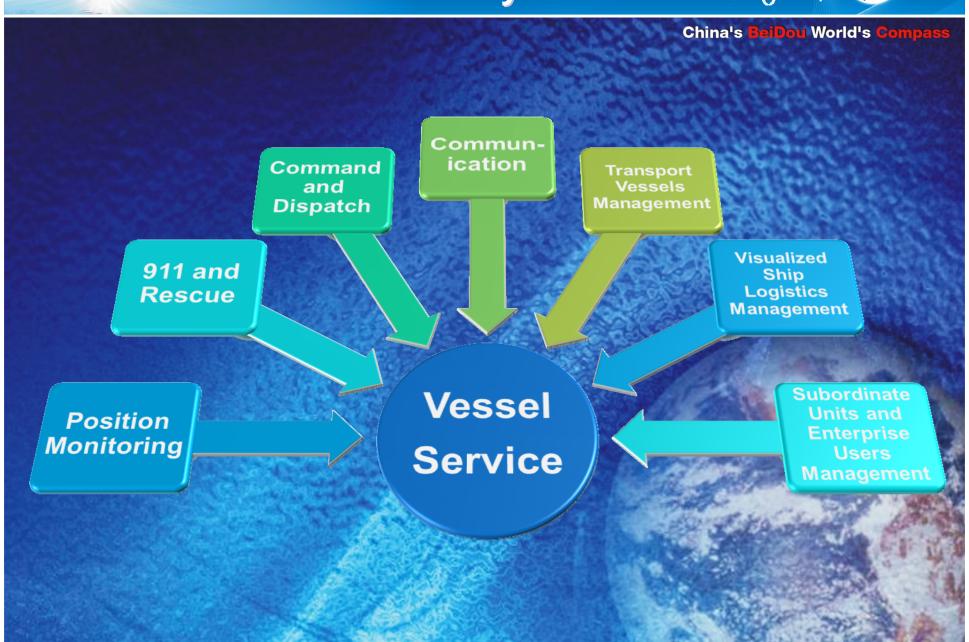
Control Terminal



Application Mode of BeiDou in Vessel Monitoring



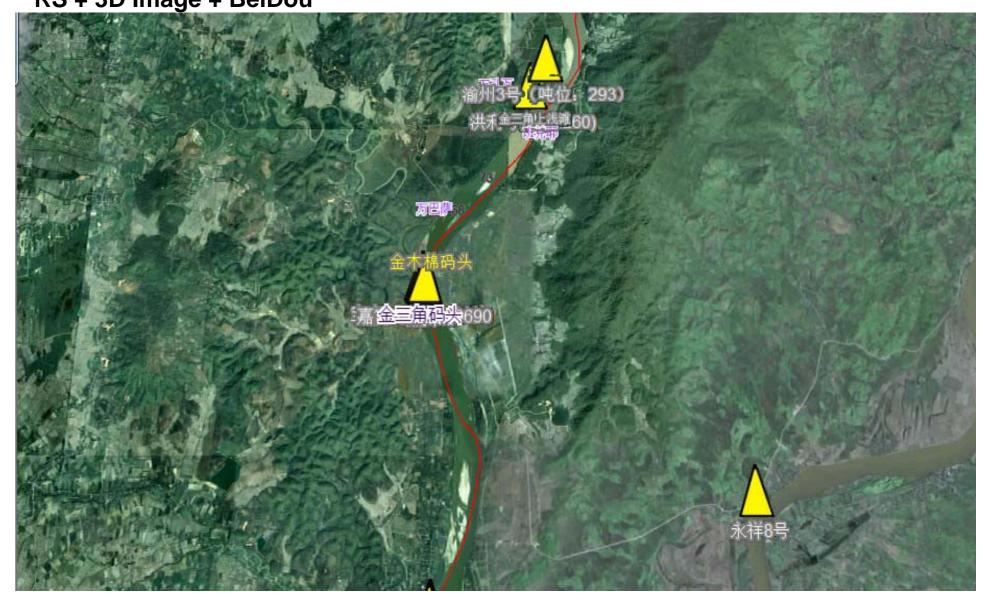




Inland shipping (Lancang Jiang (Mekong River)): RS + 3D Image + BeiDou



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BeiDou Advantage: Positioning and Communication Integrated in the Remote Inland River Area

Project Effect Integration Characteristics: BeiDou+RS+3D very suitable for the Environmental monitoring

Notable Benefits: BeiDou protects ship crew's life and property safety

International Corporation: BeiDou promotes the international Exchanges and Cooperation

Intelligent Ship Logistics:

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BeiDou Position Service + Short Messages + Sensors Integration



Intelligent Ship Logistics:

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BeiDou Position Service + Short Messages + Sensors Integration

BeiDou achieves the dynamic management of cargo and makes the logistics system more efficient.

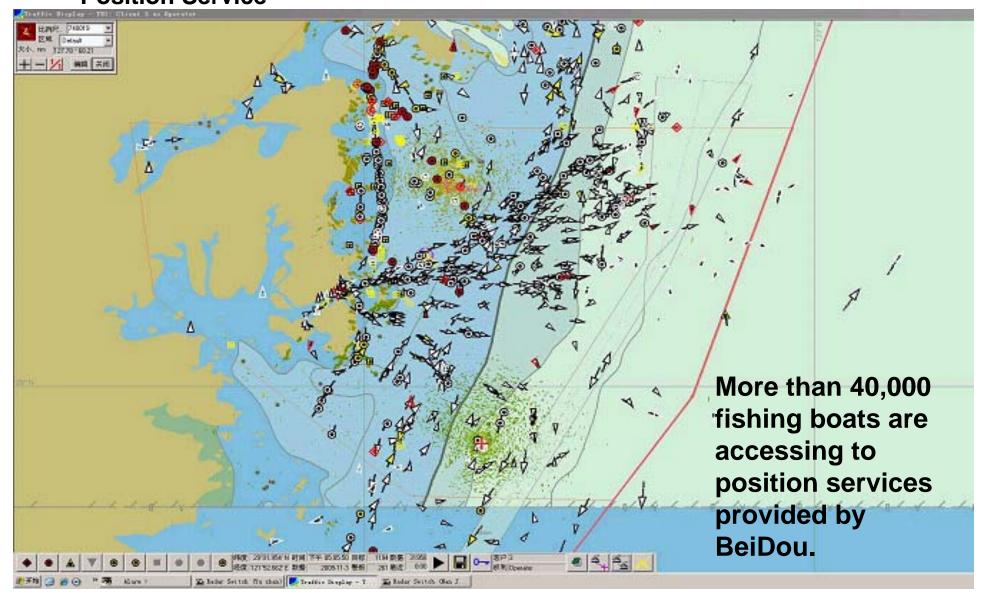
Distinguish -ing Features

BeiDou Early Warning improves the safety of the ocean cargo transportation.

BeiDou LBS Service offers cargo real-time monitoring (temperature, humidity, etc.) for special logistics.

BeiDou Logistics can be integrated into Internet of Things.

The Application of BeiDou in the Marine Fisheries ——Position Service



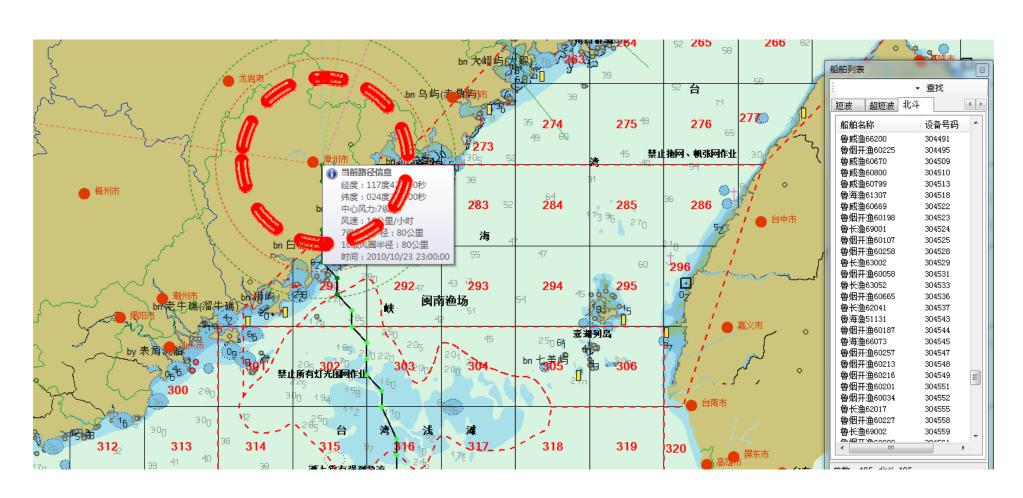
The Application of BeiDou in the Marine Fisheries ——Communicate Service





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The Application of BeiDou in the Marine Fisheries ——Typhoon Warning Service



The Application of BeiDou in the Marine Fisheries ——Search and Rescue Services



Applications on the other Vessels

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MV Xue Long

- Scientific Ship Monitoring
- Scientific Data Acquisition



Sailboat

- Competition Sailing Monitoring Service
- Personal Navigation Service



Yacht

- Vocation Navigation Service
- Emergency 911 Communication Service

w Conclusion



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China's



BeiDou is Notably Applicable t

- Autonoma Mayigation
- residening and
- Various Water Offshore, Ocea
- Various Boats
- ◆ Movitoring Management
- ♦ Intelligent Logistics
- ◆ Emerge cy Rescue
- ◆ Scientific Nvestigation

Application Suitability

System Extensibility

BeiDou **Vessel Monitoring**

> **Services Variability**

