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GMDSS
SOLAS IV/Regulation 4
Functional requirements

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IHO, Monaco 30th August – 3rd September 2021

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The 9 GMDSS functional requirements (SOLAS IV / R4)

Distress

1. Transmitting ship-to-shore distress alerts
2. Receiving shore-to-ship distress alert relays
3. Transmitting & receiving ship-to-ship distress alerts

SAR

4. Transmitting & receiving SAR coordinating communications
5. Transmitting & receiving on-scene communication
6. Transmitting & receiving signals for locating

MSI

7. Receiving Maritime Safety Information
8. Transmitting & receiving general radiocommunications
9. Transmitting & receiving bridge-to-bridge radiocommunications

Distress

In sea area A3

1. Transmitting ship-to-shore distress alerts

COSPAS-SARSAT EPIRB distress alert

RMSS SES distress alert

HF DSC distress alert

2. Receiving shore-to-ship distress alert relays

RMSS **EGC** MAYDAY RELAY

This EGC MAYDAY RELAY should be broadcast **to all ships** in the vicinity of the distress vessel...

i.e. **whatever the SES** on board !

And in short notice…

i.e. a **simultaneous EGC broadcast on all RMSS**!

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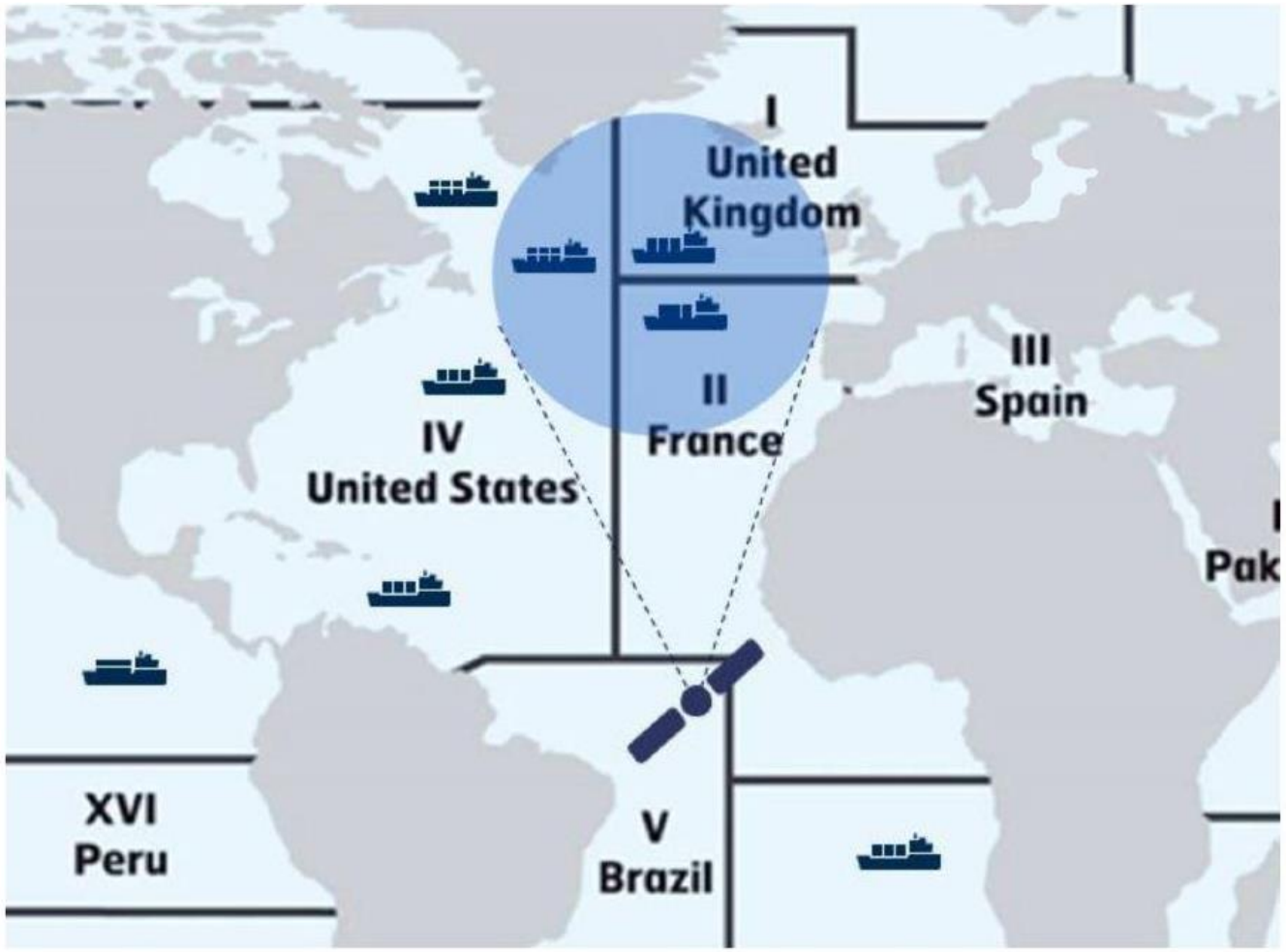
EGC on SafetyNet for ship with Inmarsat SES
+
EGC on SafetyCast for ship with Iridium SES



Note there is still no SAR operation…

The purpose of the EGC MAYDAY RELAY is to identify potential SAR units close to the distress vessel.

And any ship at sea can be a SAR unit.

This basic EGC message is not a MSI,
nor a SAR related information,
but a MAYDAY RELAY to all ships!

SAR

4. Transmitting & receiving SAR coordinating communications

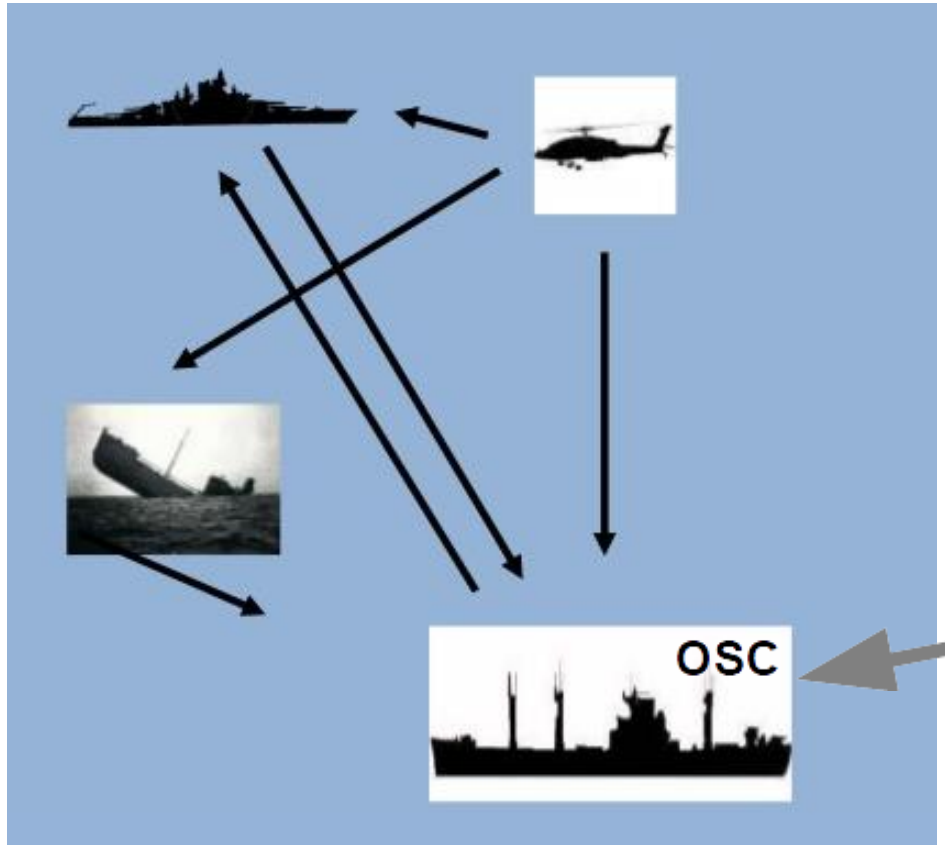
5. Transmitting & receiving on-scene communications

6. Transmitting & receiving signals for locating

Only ships involved in the SAR operation will receive SAR Coordination communications.

In addition:
SAR-related information could be broadcast to all ships for information… about the SAR operation or in case of overdue.

Transmitting & receiving on-scene communications



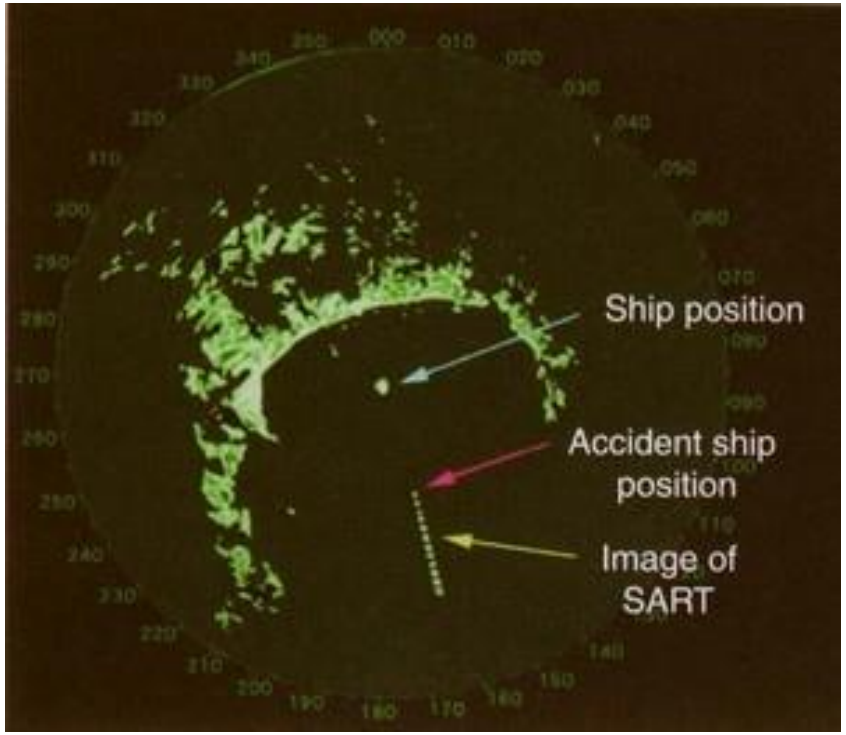
Transmitting & receiving SAR coordinating communications

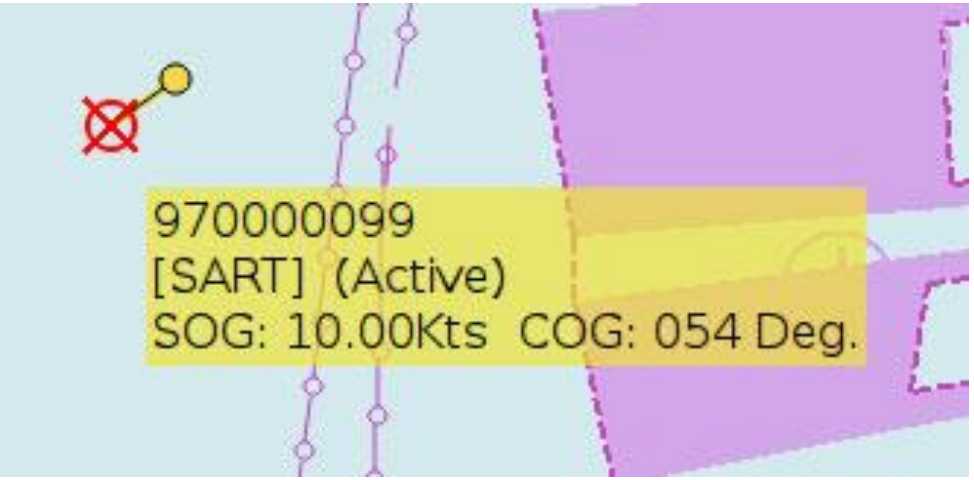
MRCC

Transmitting & receiving signals for locating

Radar Search and Rescue Transponder
(Radar SART)

AIS Search and Rescue Transceiver
(AIS SART)





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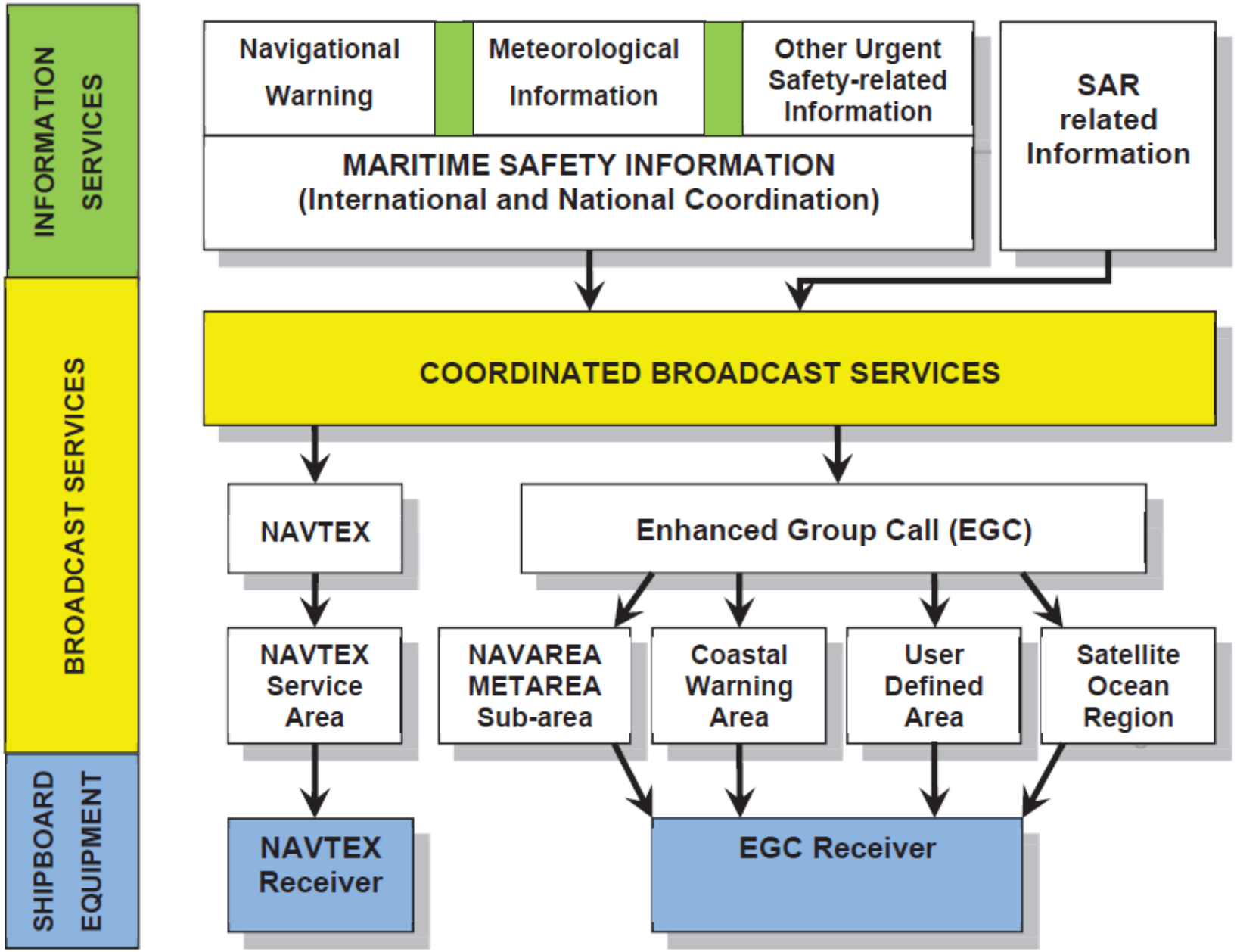
MSI Maritime Safety Information



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SOLAS IV/4 functional requirements (present text)

1 Every ship, while at sea, shall be capable

.1 except as provided in regulation 8.1.1 and 10.1.4.3, of transmitting ship-to-shore distress alerts by at least two separate and independent means, each using a different radiocommunication service ;

.2 of receiving shore-to-ship distress alerts ;

.3 of transmitting and receiving ship-to-ship distress alerts ;

.4 of transmitting and receiving search and rescue coordinating communications ;

.5 of transmitting and receiving on-scene communications ;

.6 of transmitting and, as required by regulation V/19.2.3.2, receiving signals for locating ;

.7 of transmitting and receiving maritime safety information ;

.8 of transmitting and receiving general radiocommunications to and from shore-based radio systems or network subject to regulation 15.8 ; and

.9 of transmitting and receiving bridge-to-bridge communications

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SOLAS IV/4 functional requirements (Draft amendment - Ref. NCSR 8)

1 Every ship, while at sea, shall be capable

.1 performing the GMDSS function as follows:

.1 transmitting ship-to-shore distress alerts by at least two separate and independent means, each using a different radiocommunication service ;

.2 receiving shore-to-ship distress alert relays ;

.3 transmitting and receiving ship-to-ship distress alerts ;

.4 transmitting and receiving search and rescue coordinating communications ;

.5 transmitting and receiving on-scene communications ;

.6 transmitting and, as required by regulation V/19.2.3.2, receiving signals for locating ;

.7 receiving MSI ;

.8 transmitting and receiving urgency and safety radiocommunications; and

.9 of transmitting and receiving bridge-to-bridge communications

.2 transmitting and receiving general radiocommunications subject to regulation 15.8 .

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