
GMDSS

Global Maritime Distress and Safety System

GMDSS

communication at any time

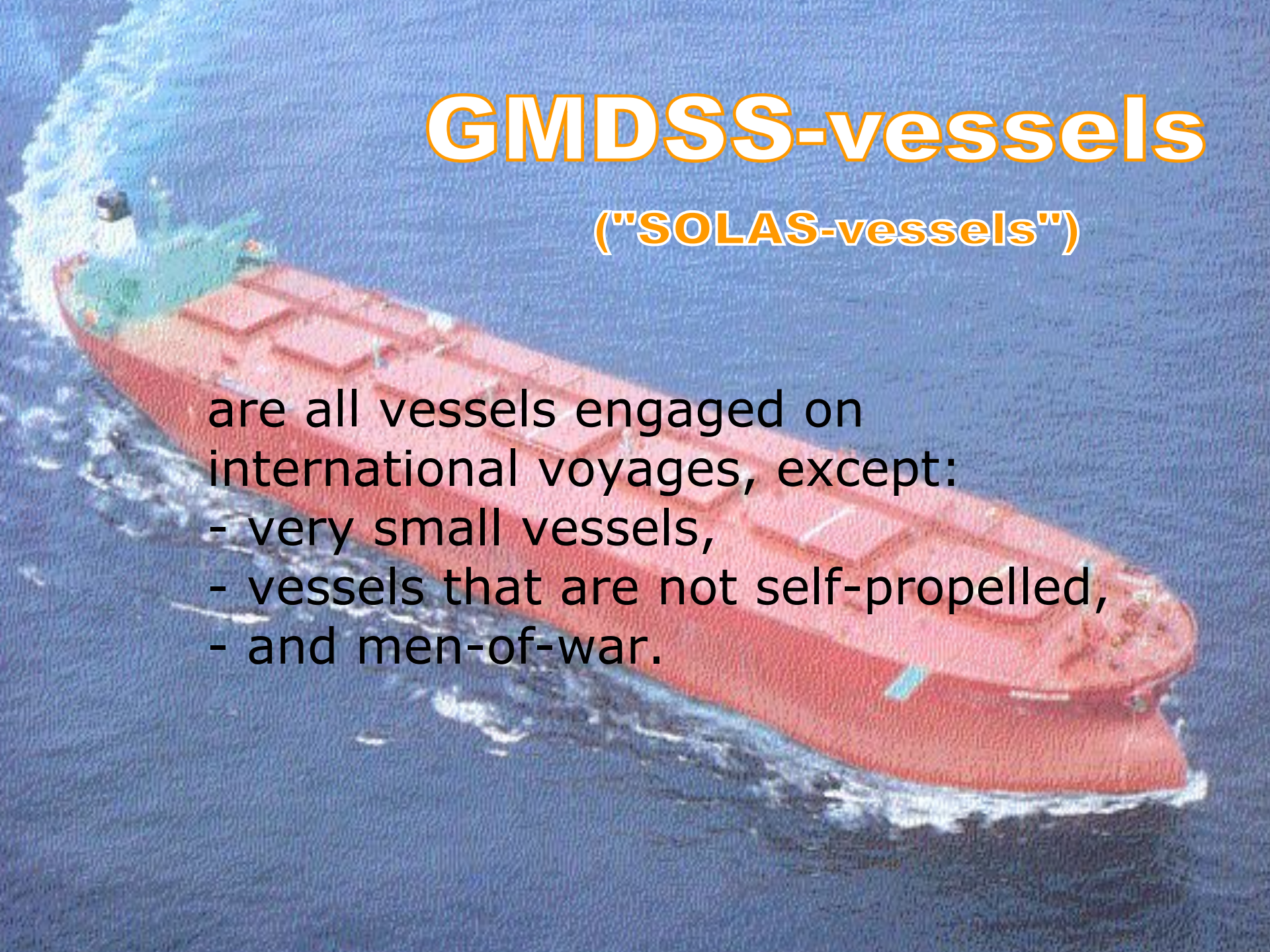
and under any circumstances

(by means of Radio Telephony, Satellite, Digital Selective Calling or Telex)


Priorities:
1: Distress message
2: Urgency message
3: Safety message
4: Routine message

Sea Areas:

- A1: area extending to 30 miles off-shore
- A2: area extending to 200 miles off-shore
- A3: area extending beyond 200 miles off-shore
- A4: beyond 70 degr. Lat. North/South



GMDSS-vessels

("SOLAS-vessels")

are all vessels engaged on international voyages, except:
- very small vessels,
- vessels that are not self-propelled,
- and men-of-war.

GMDSS-terrestrial systems

Radiotelephony

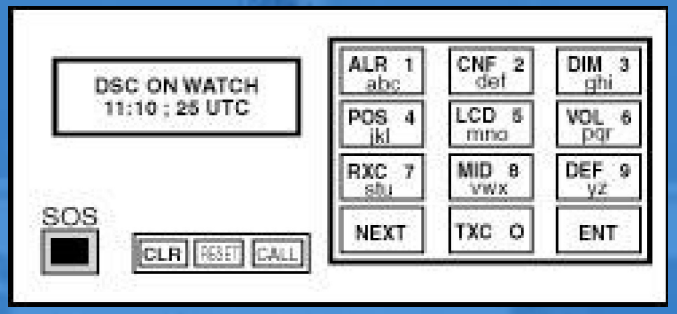
for short distances in territorial waters and inland waterways.

"simplex" radio:
speaking and listening cannot be done simultaneously.

"duplex" radiotelephone:
speaking and listening can be done simultaneously.

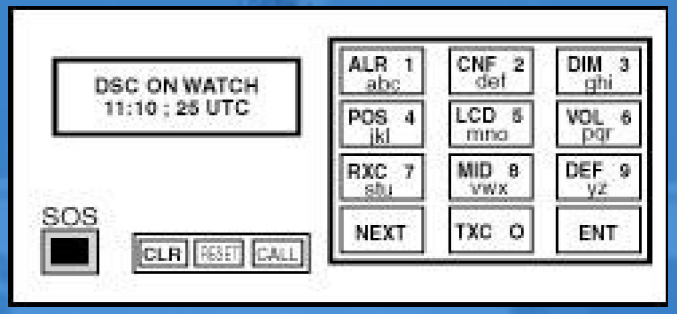
"semi-duplex" installations:
simultaneous speaking and listening, but receiving-end has simplex-installation.

Digital Selective Calling



DSC digitally announces and initiates ship/ship, ship/shore, and shore/ship radiotelephone- and radiotelex calls. After the announcement has been digitally acknowledged by the receiving station or ship, communication is usually continued by RTF.

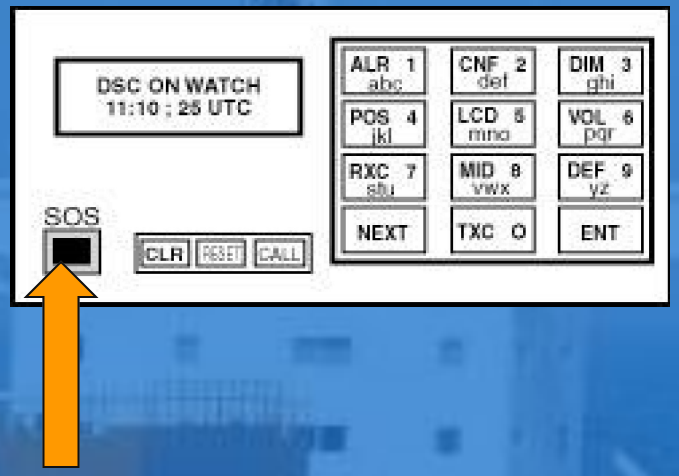
Digital Selective Calling



A DSC distress-alert consists of a preformatted distress message.

Natures of distress that can be entered are: *"fire/explosion", "flooding", "collision", "grounding", "listing", "sinking", "disabled and adrift", "piracy" and "undesignated distress".*

Digital Selective Calling

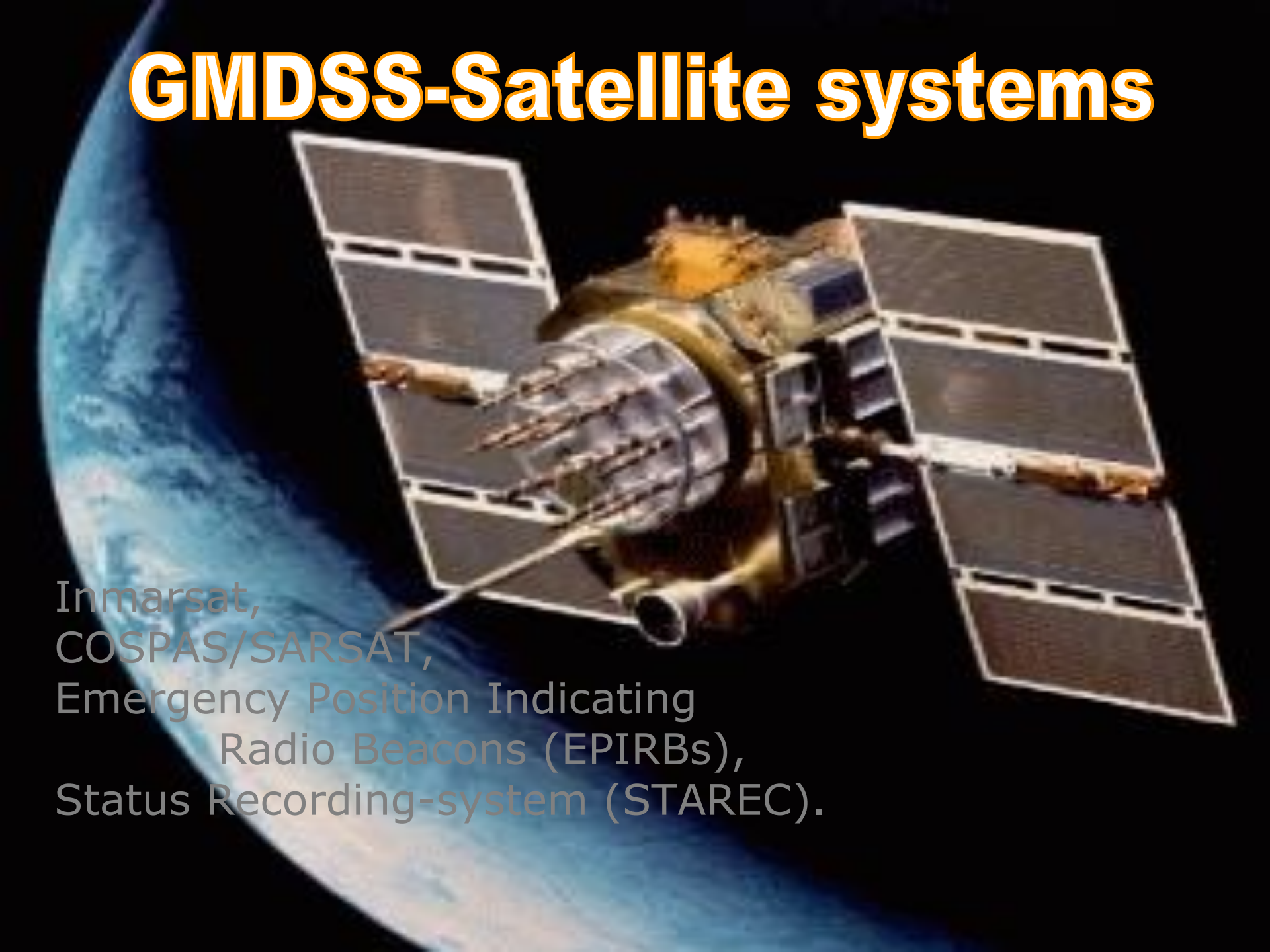


Distress alerts are automatically addressed to all stations with the distress-button (indicated by SOS, ALARM, EMER or DISTRESS).
Urgency, safety and routine calls can be addressed to all stations or ships, an individual station or ship, or a group of stations or ships.

Maritime Mobile Service Identity

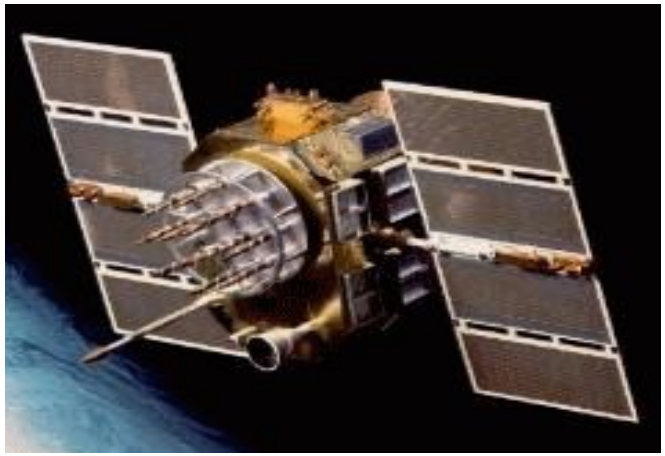
A DSC-installation on board a vessel or at a coast station has a unique nine-digit identification number (MMSI), pronounced on VHF in groups of 3.
It is sent automatically with each DSC-transmission.
The first three digits of the MMSI are the Maritime Identification Digits (MID), representing the country of registration.

GMDSS-Satellite systems



Inmarsat,
COSPAS/SARSAT,
Emergency Position Indicating
Radio Beacons (EPIRBs),
Status Recording-system (STAREC).

INMARSAT



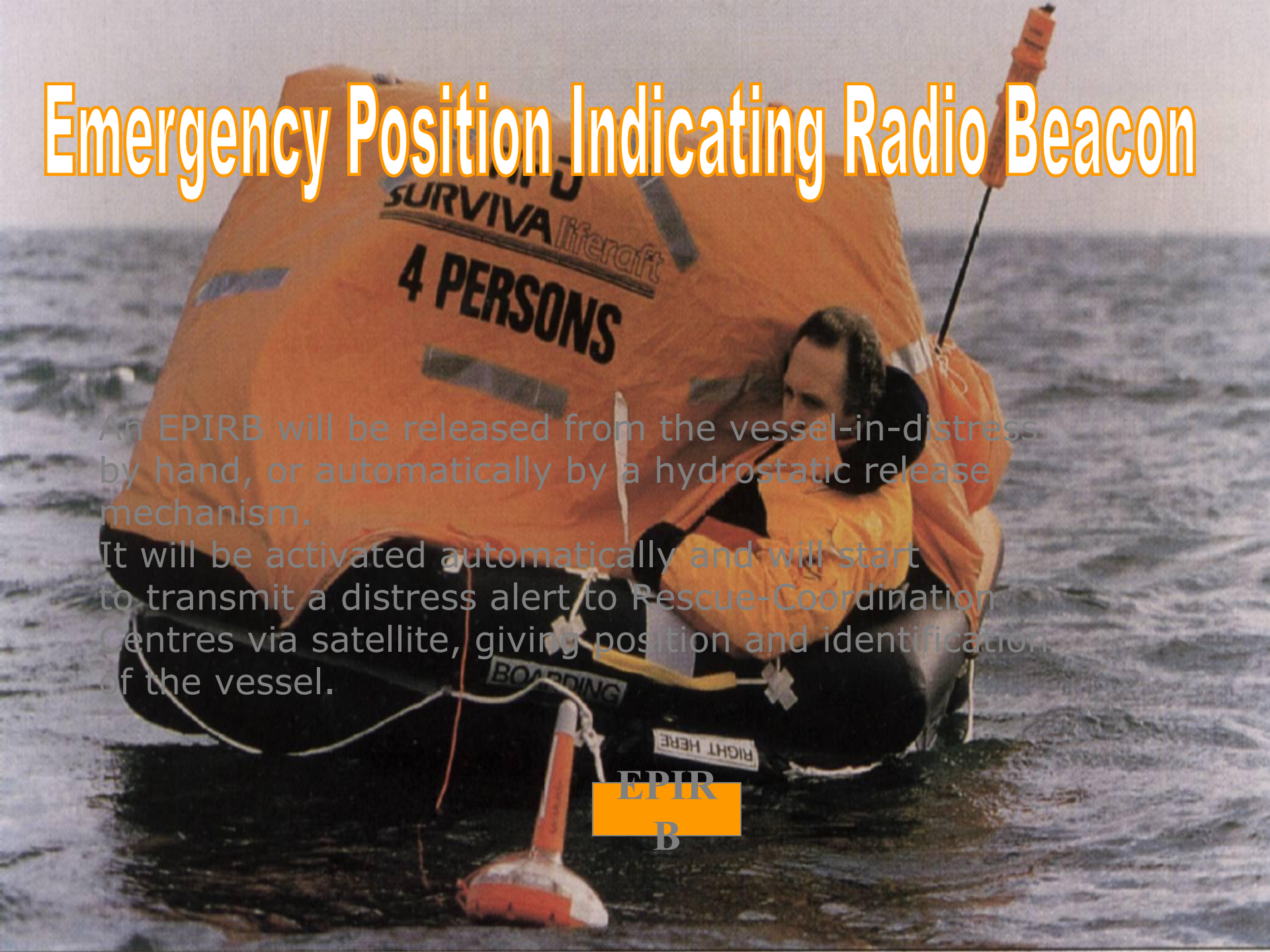
Communication by means of the geostationary Inmarsat-satellites extends in an area between 70 degrees latitude North and 70 degrees latitude South.

The 4 Inmarsat-regions:

- Atlantic Ocean Region West (AOR-W);
- Atlantic Ocean Region East (AOR-E);
- Indian Ocean Region (IOR);
- Pacific Ocean Region (POR).

NAVTEX is a telex-receiver/printer installed on GMDSS-vessels to receive *Maritime Safety Information-messages* (MSI). These navigational messages are addressed “to all vessels” and contain information concerning meteorological warnings, SAR-operations and other important and urgent data.

Emergency Position Indicating Radio Beacon



An EPIRB will be released from the vessel-in-distress by hand, or automatically by a hydrostatic release mechanism.

It will be activated automatically and will start to transmit a distress alert to Rescue-Coordination Centres via satellite, giving position and identification of the vessel.


SART
A SART will transmit an alert that will create a series of dots on the radar display of a Search & Rescue-Unit that will then have the means to locate the distressed raft or vessel.
4 PERSONS
BOARDING
RIGHT HERE
Search and Rescue Radar Transponder

COSPAS-SARSAT

Unlike the Inmarsat-satellites,
COSPAS/SARSAT satellites are not
geostationary, but orbit the earth
on a North/South- and South/North path.


Maritime Communication
short
precise
unambiguous
simple
Click here to open the IMO Standard Marine Communication Phrases - SMCP

The
International Maritime Language Programme – IMLP

STC-GROUP

INTERNATIONAL MARITIME ORGANIZATION

The IMLP is an IMO-standard.