VHF-COMMUNICATION

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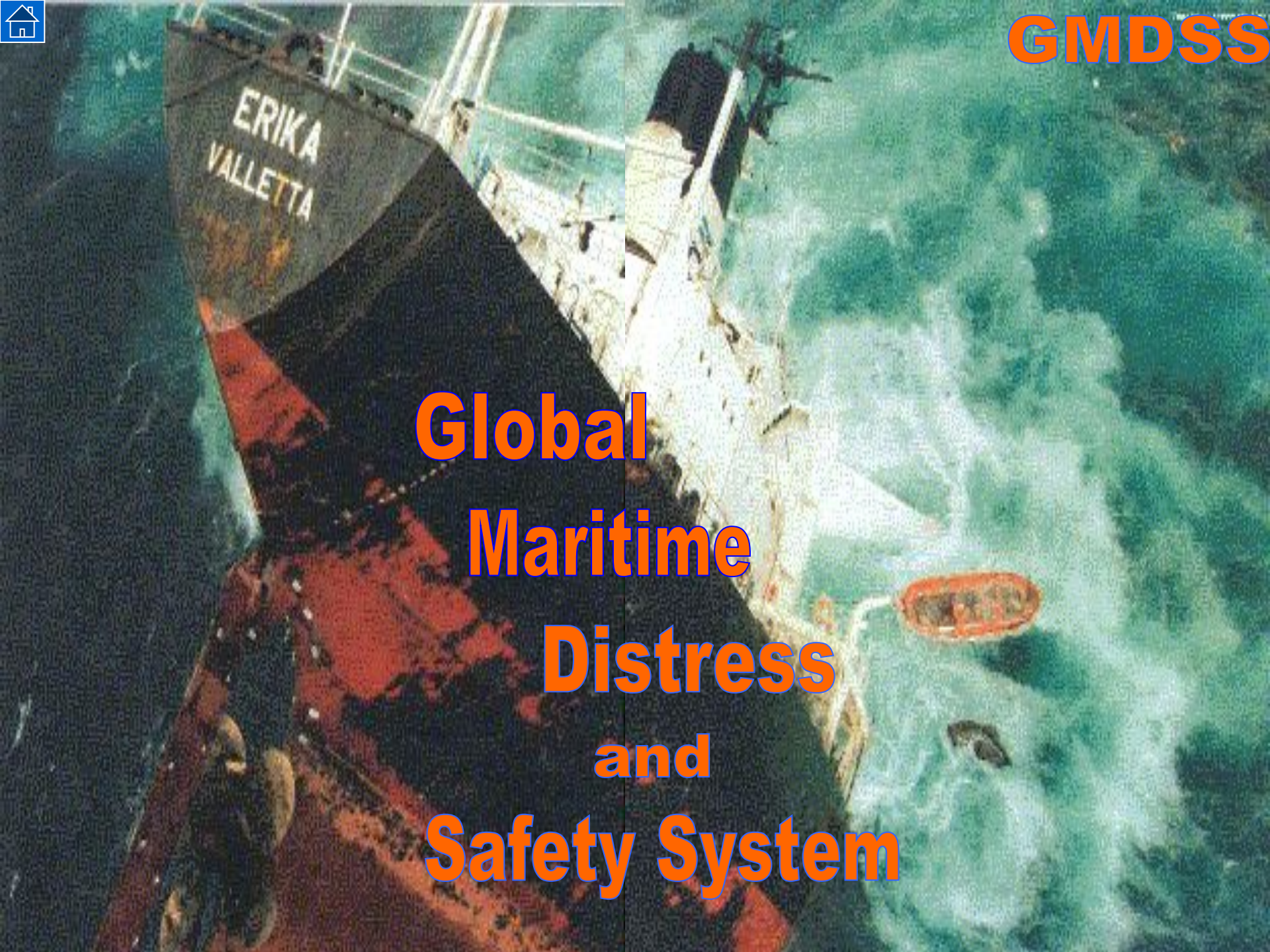


GMDSS

Global Maritime Distress and Safety System

G.M.D.S.S.
VHF/MF/HF Ch.16 simplex DSC
INMARSAT COSPAS/SARSAT
IMO SOLAS navtex EGC NAVWNG
EPIRB TELEX A1-A2-A3-A4 areas
SAR SART SMCP (SMV) IMLP
VTS mmsi MID MSI etc. etc.

VHF / DSC - COMMUNICATION

Non-GMDSS vessels
(e.g. small vessels)

GMDSS vessels

Announcement & acknowledgement on VHF

Announcement & acknowledgement by Digital Selective Calling (DSC)

Message by conversation on VHF

Priorities
Distress "MAYDAY"
Urgency "PAN PAN"
Safety "SECURITE"
Routine

. DISTRESS ALERT:
"Urgent!
There is serious
and immediate danger".

Ship's radio-room.

. URGENCY MESSAGE:
"Urgent!
There is serious danger!"

. SAFETY MESSAGE:
"Imminent risk for navigation".

RCC

. ROUTINE MESSAGE:
"… to ensure safe navigation".

Distress
Urgency
Safety

Distress message announcement by non-GMDSS vessel:

"MAYDAY - 3 X
This is Vincente - PWCA
Vincente - PWCA
Vincente - PWCA:"

Urgency message announcement by non-GMDSS vessel:

"PAN PAN - 3 X
All stations - 3 X
This is Alcona - BUCE
Alcona - BUCE
Alcona - BUCE:".

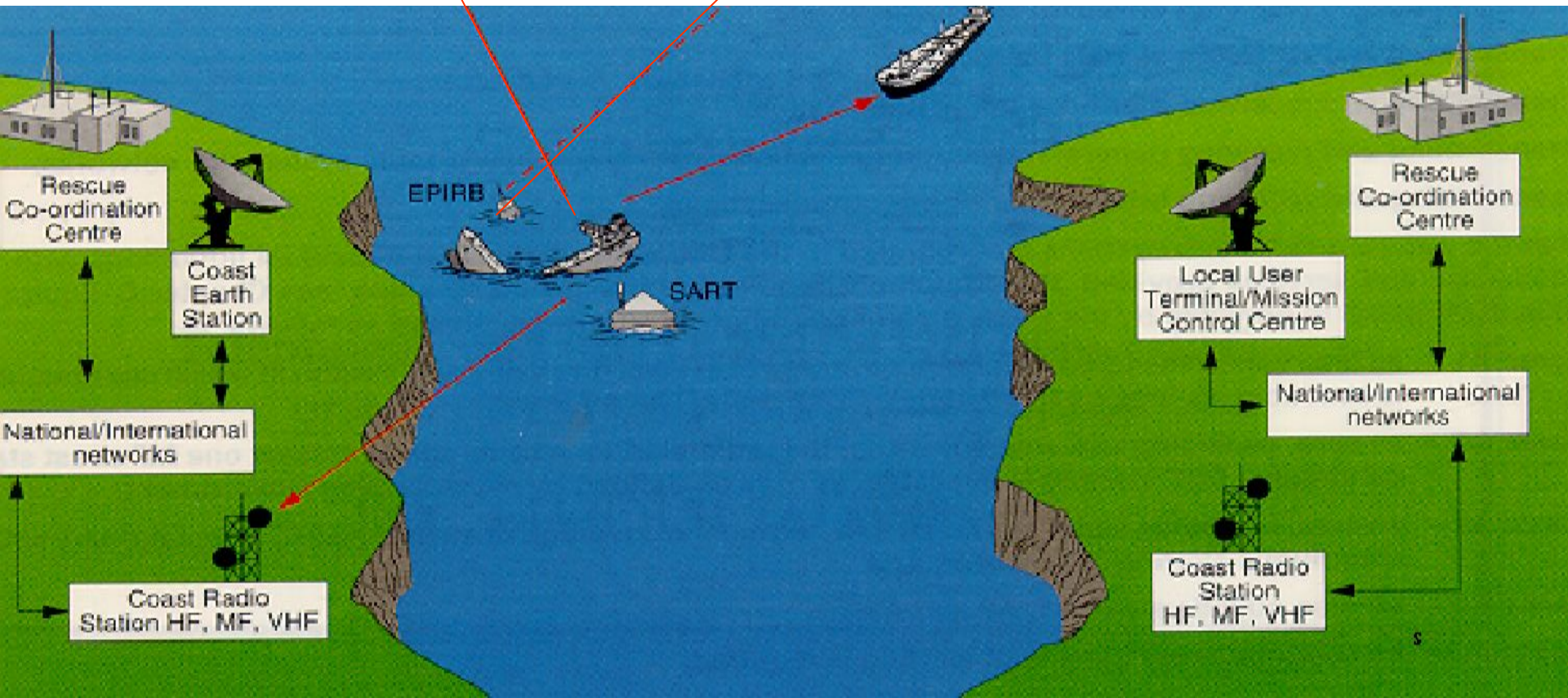
Safety message announcement by non-GMDSS vessel:

"SECURITE - 3 X
All stations - 3 X
This is Anticosti - V8SH
Anticosti - V8SH
Anticosti - V8SH:".

GMDSS

INMARSAT

COSPAS-SARSAT



DSC-announcement (*GMDSS - vessels*).

A Distress Alert, Urgency Message or Safety Message
is *announced* to *Rescue Coordination Centre* and all vessels in the *vicinity* through *"Digital Selective Calling"* .

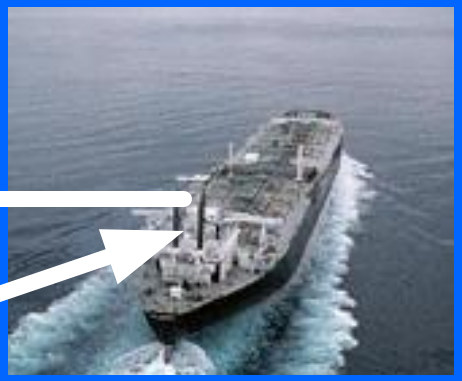
R.C.C.

When the *DSC-acknowledgement* has been received from R.C.C.,
a *distress-, urgency-* or *safety message* is transmitted by VHF to all stations.

Received mayday

If the master of a vessel that has received an *acknowledgement* decides that he is able to assist, he must transmit a *RECEIVED MAYDAY* to the vessel in distress.

Pearl Head - VRSE

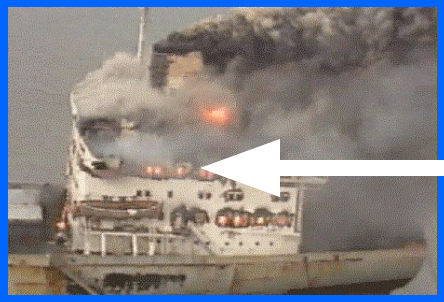


Ocean Queen - IRSL

R.C.C.

"MAYDAY
Pearl Head (3X) - VRSE
This is Ocean Queen (3X) - IRSL
RECEIVED MAYDAY".

Supplementary received-mayday



Pearl Head - VRSE

Ocean Queen - IRSL

Any vessel that is "*able to assist* "
(within "*short range*" of the distressed vessel)
must transmit a "*supplementary received-mayday*"
to the vessel in distress.

Any ship, knowing that a vessel in distress is not able to transmit a distress alert, must transmit a *distress alert relay*.

Pearl Head - VRSE

X

X

Ocean Queen -IRSL

R.C.C. Aveiro Radio

Distress relay on VHF ("mayday relay")

Message on VHF

After announcement by DSC or VHF,
communication by conversation begins on VHF.

Distress/Urgency/Safety

Distress -, urgency - and safety -messages on VHF must contain:

. The vessel's identification:
9-digit Maritime Mobile Service Identity-Code (MMSI-Code), vessel's name and Call Sign;
. position of the vessel;
. the nature of distress or danger;
. number of persons on board;
. the assistance that is required;
. any other important information.

when things go wrong.....

MAYDAY on VHF...

(CLICK)

"Coastal response..."

(CLICK)

MAYDAY MAYDAY MAYDAY
This is Pearl Head - Pearl Head - Pearl Head
Victor Romeo Sierra Echo
two three five - seven eight six - zero zero zero

MAYDAY

Pearl Head
Victor Romeo -- Sierra Echo - two three five - seven eight six - zero zero zero

My position: three eight degrees one zero minutes North /
zero one eight degrees one zero minutes East.

I am on fire: fire is in engine room and number-two hold. Vessel is sinking.
Crew must abandon vessel.
I require assistance.
Number of crew on board: one eight;
number of injured persons: eight;
number of casualties: two.

Over".

distress message

Urgency message

“Securite, securite, securite; all stations, all stations, all stations.
This is 426 477 000 - tanker Vermont - CAPK
in posn. bearing 259 degr. from Falls Light, distance 1.5 miles;
time: August 6 - 1645 UTC.
Information: Buoy FL-1 in position 259 degrees from Falls Light, distance 2 miles, missing. OUT”

Safety message

SEARCH & RESCUE

"Silence mayday"

Radio silence is imposed to all vessels when a SAR-operation is in progress.

Search and Rescue (SAR)

A Situation Report (short form- or full form SITREP) is transmitted to all vessels by RCC to indicate that a SAR-operation must be carried out.

Situation Report (SITREP) - short form.

- Priority;	*DISTRESS*
- Date and Time;	*September twelve* *time: 13.40 UTC;*
- From RCC: - To:	*San Juan Rescue Co-ordination Centre;* *All ships in vicinity of position* *37 degr. 15 min. N / 016 degr. 10 min. E;*
- SAR SITREP number	*Search and Rescue Situation Report number one;*
- Identity of casualty (Name, call sign, Flagstate)	*211 687 000 Pearl Head-VRSE* *Bulgarian registration*
- Position (Latitude / longitude)	*In position* *37 degr. 15 min. N / 016 degr. 10 min. E;*
- Situation: Message: Date and time; Nature of Distress;	*Distress;* *September twelve* *13.43 hrs. UTC* *Pearl Head on fire;*
- Number of Persons at risk;	*16*
- Assistance that is required;	*Fire fighting assistance and SAR.*
- Co-ordinating Centre:	*San Juan Rescue Co-ordination Centre.*

Search and Rescue (SAR)

M.V. Pearl Head in distress.

M.V. Vendor acting as On-Scene Co-ordinator

A Situation Report (SITREP) is transmitted by the *OSC* to inform the SAR-Mission Co-ordinator (*SMC*) at *RCC* .

Search and Rescue (SAR)

A SITREP is transmitted by assisting vessels and helicopters to inform the *OSC*.

"Silence fini"

The termination of radio-silence is indicated with *"Silence Fini"*.

Routine communication

ship to coastal station

intership

intraship

Announcement (*by non-GMDSS vessels*).

Intership communication and communication between ship and coastal station is announced on VHF.

M.V. Anticosti - V8SH

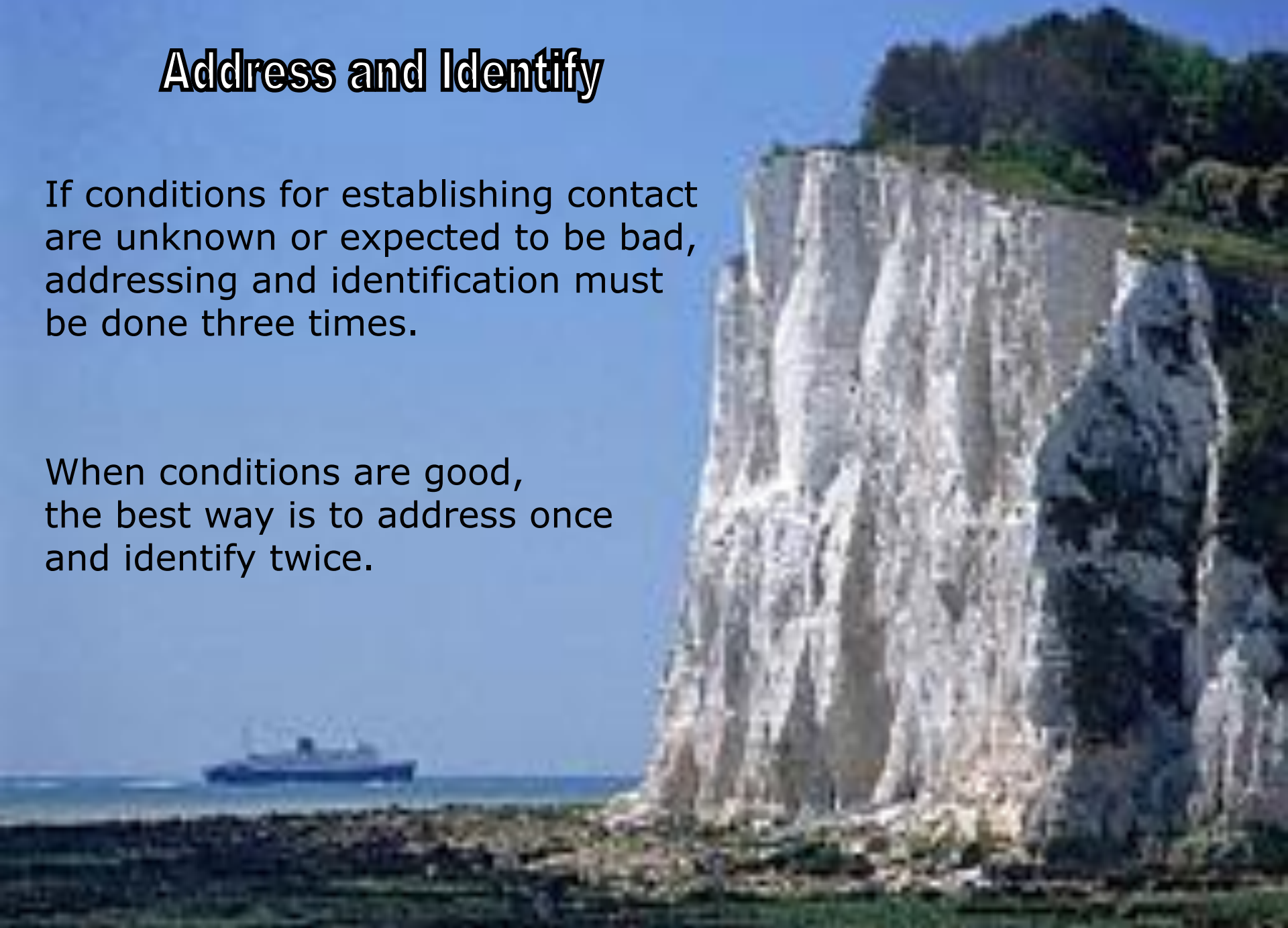
VTS Halifax Radio

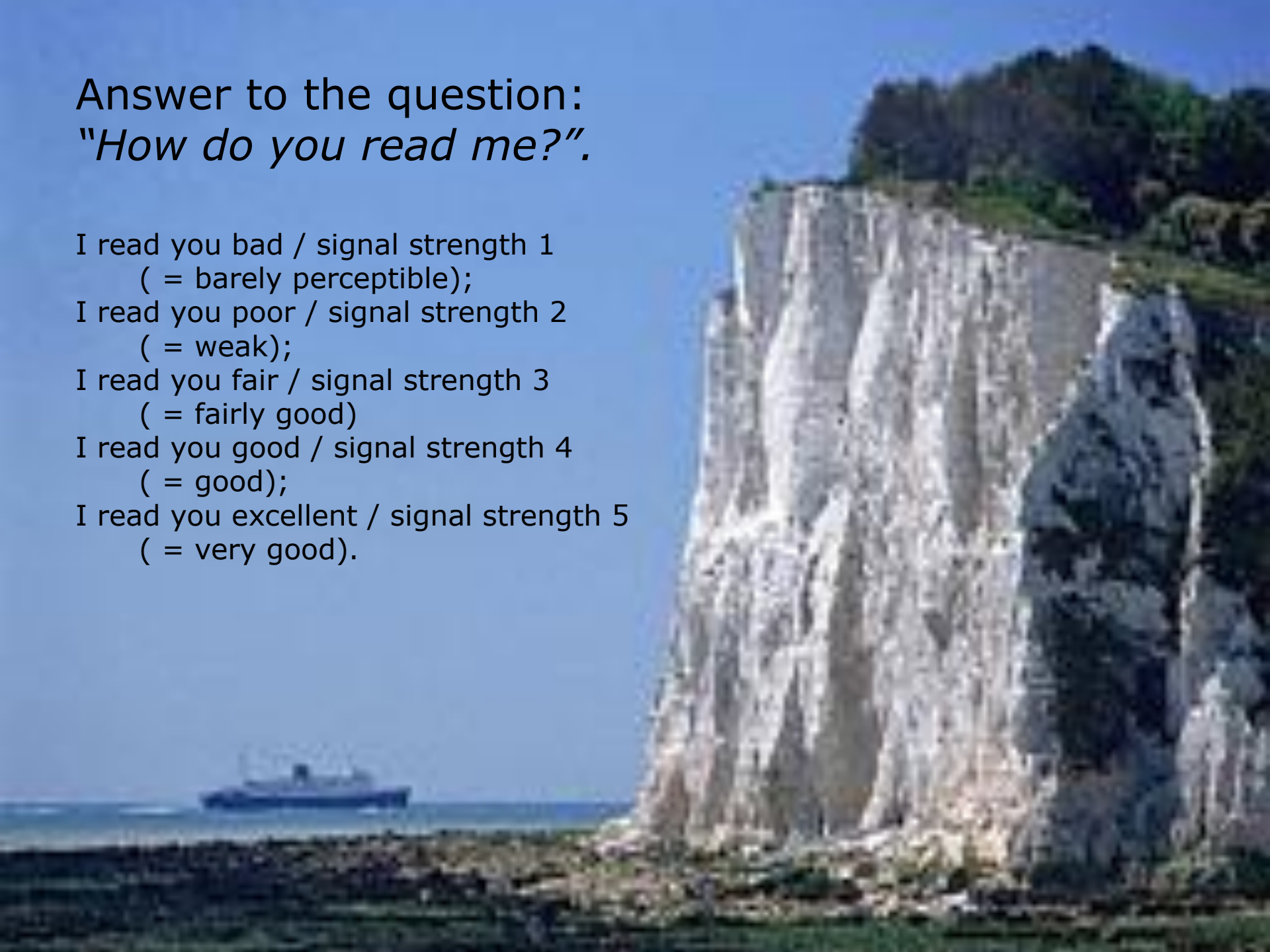
"Address" and "Identify"

Address and Identify

If conditions for establishing contact are unknown or expected to be bad, addressing and identification must be done three times.

When conditions are good, the best way is to address once and identify twice.





Answer to the question: *"How do you read me?".*

I read you bad / signal strength 1
(= barely perceptible);
I read you poor / signal strength 2
(= weak);
I read you fair / signal strength 3
(= fairly good)
I read you good / signal strength 4
(= good);
I read you excellent / signal strength 5
(= very good).

"Urgent" message

In case of an urgent message
(note: not an URGENCY message!)
"how do you read me"
is left out.

Example:

DSC-announcement (*GMDSS - vessels*).

Intership communication and communication between ship and coastal station is *announced* through Digital Selective Calling.

VTS

When the *DSC-acknowledgement* has been received, communication by VHF will begin.

communication:

REMEMBER:

Always
ADDRESS AND IDENTIFY
after you have heard the word
"OVER".

"You must..... I will....."
Always answer
"You must ....."
with
"I will....."
MV Stella Maris
Vessel Traffic Service (VTS).

General

"Mistake .....correction"

"Mistake ..... correction"
is used when incorrect information has been given.

"Repeat"

"Repeat" (or "I say again")
is used when an *important* message
or part of a messages is repeated.

example

"Say again"

"Say again" is used when a message or part of a message has not been clearly understood.

example

SMCP

In VHF-communication the
IMO Standard Marine Communication Phrases
must always be used to keep the conversation short.

SMCP
click here

IMO Ship Reporting System

Coastal stations often ask for a MARITIME and POSITION REPORT of your ship. For this *MAREP / POSREP* the *Standard Marine Alphabet* is used.

MAREP / POSREP

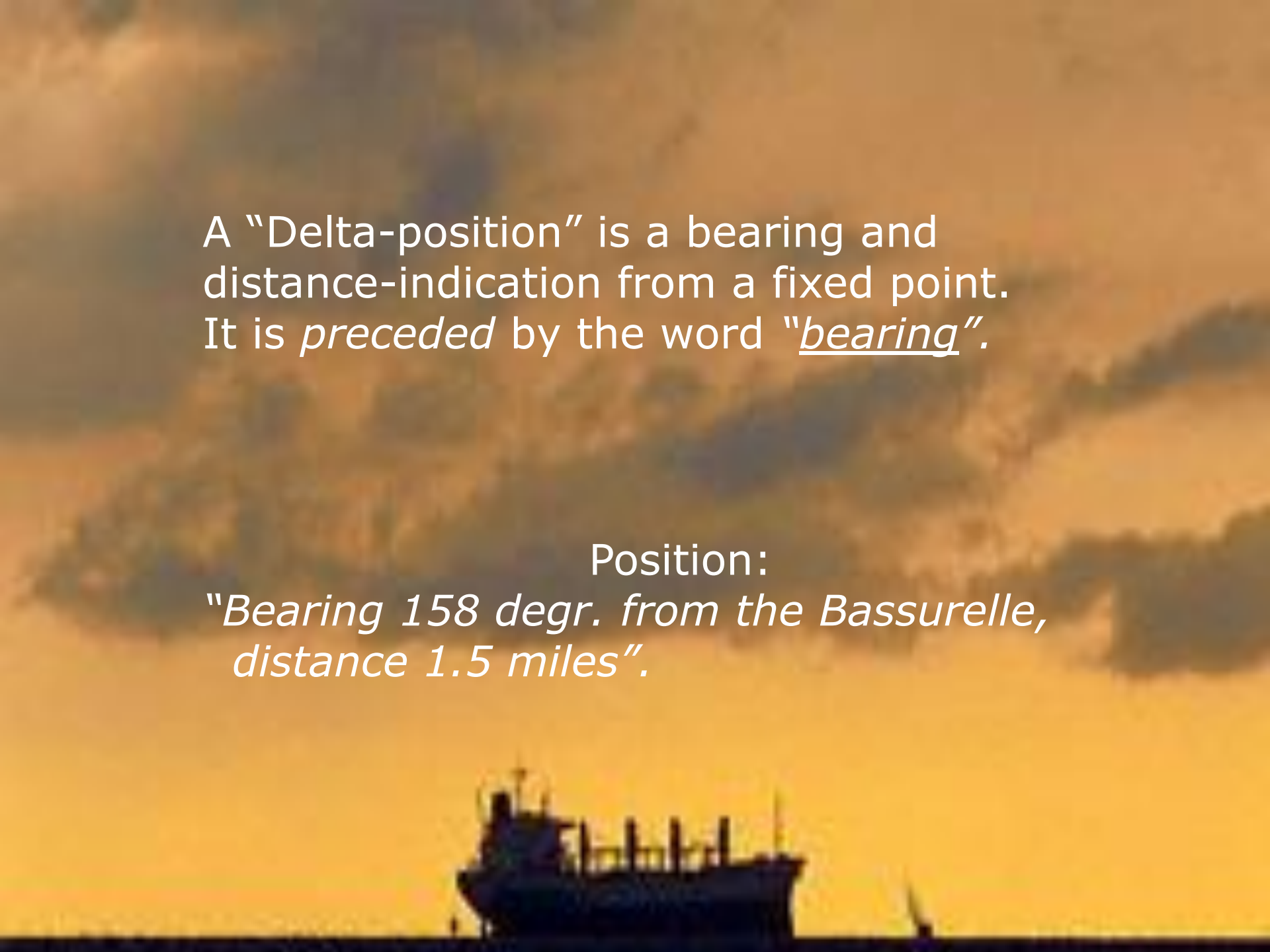
ALFA - VESSEL'S NAME + CALL SIGN;
BRAVO - DAY OF MONTH AND TIME (UTC / Z / ZONE / LOCAL TIME);
CHARLIE - POSITION (LONGITUDE / LATITUDE);
DELTA - POSITION (AS BEARING AND DISTANCE FROM FIXED POINT.);
ECHO - TRUE COURSE;
FOXTROT - SPEED (IN KNOTS);
GOLF - LAST PORT OF DEPARTURE;
HOTEL - TIME AND POINT OF ENTRY INTO THE SYSTEM;
INDIA - DESTINATION (+ ETA);
JULIET - DEEP SEA OR LOCAL PILOT ON BOARD;
KILO - TIME OF EXIT FROM THE SYSTEM;
LIMA - INTENDED TRACK;
MIKE - VHF-CHANNELS GUARDED;
NOVEMBER - TIME OF NEXT REPORT;
OSCAR - DRAFT;
PAPA - CARGO (TYPE AND QUANTITY);
QUEBEC - ANY DEFECTS OR LIMITATION;
ROMEO - ANY POLLUTANTS OR DANGEROUS GOODS;
SIERRA - WEATHER CONDITIONS;
TANGO - SHIP'S REPRESENTATIVE OR OWNER;
UNIFORM - SIZE AND TYPE OF THE VESSEL;
VICTOR - MEDICAL PERSONEL;
WHISKEY - NUMBER OF PERSONS ON BOARD;
X-RAY - ANY OTHER USEFUL INFORMATION.
YANKEE - REQUEST TO RELAY REPORT TO OTHER SYSTEM (E.G. AMVER);
ZULU - END OF REPORT.

A “Charlie-position” is given in “*Latitude* and *Longitude*”.
Position:
“*39 degr. 16 min. N / 027 degr. 15 min.W*”.

A “Delta-position” is a bearing and distance-indication from a fixed point. It is *preceded* by the word *“<u>bearing</u>”.*

Position:

“Bearing 158 degr. from the Bassurelle, distance 1.5 miles”.



POSREP-practice

- 29 DEGR. 58 MIN. N / 013 DEGR. 12 MIN. E ON MARCH 31 2100 UTC.
- 134 DEGR. FROM BUOY NHR-SE, DISTANCE 6.5 MILES ON JANUARY 13 10.25 LOCAL TIME.
- 159 DEGR. FROM FALLS LIGHT, DISTANCE 2.7 MILES ON MAY 26 1925 ZONE TIME.
- 58 DEGR. 57 MIN. N / 013 DEGR. 5 MIN. W ON JANUARY 31 05.25 UTC.
- 178 DEGR. FROM ROYAL SOVEREIGN LIGHTHOUSE, DISTANCE 2.1 MILES ON AUGUST 5 12.00 UTC.
- 250 DEGR. FROM BUOY CA 4, DISTANCE 12.6 MILES ON DECEMBER 31 0000 UTC.

Role Plays

Distress, Urgency and Safety.

communication:

211 687 000 Pearl Head - VRSE is on fire.

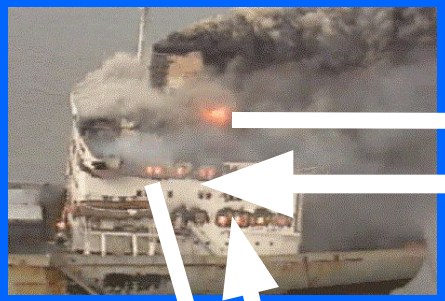
R.C.C.

DSC-announcement

and acknowledgement.

“Received Mayday” on VHF after *announcement* and *acknowledgement.*

Pearl Head-VRSE

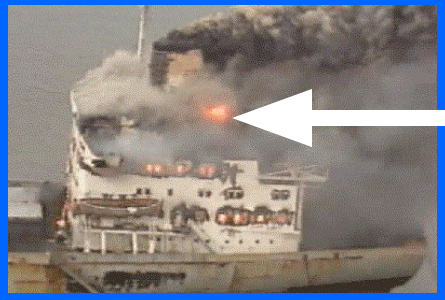


Ocean Queen-IRSL

R.C.C.

“Supplementary Received-Mayday” on VHF

(after “Received-Mayday” messages).



Pearl Head - VRSE

Ocean Queen - IRSL

Ocean Queen informs Pearl Head:
position 045 degrees from distressed vessel, distance 3 miles –
her course: 035 degrees at 12 knots.
ETA distress position within 15 minutes.

Pearl Head transmits mayday on VHF.

235 786 000 - Pearl Head VRSE
in position
38 degrees 10 min. N / 018 degrees 10 min. E;
transmits a distress message on VHF.
Her engine room and no. 2 hold are on fire.
The vessel is sinking.
Crew are abandoning ship.
Assistance is required.
There are 18 crew members on board.
Eight of them have been injured -
two members were killed.

M.V. Christina (MMSI-Code 211 868 000)
reports that her manoevrability is reduced due to malfunction of main engine;
she requests for assistance and asks all ships in her vicinity to stay at safe distance.
Her posn.: 56 degr. 29 min. N / 000 degr. 53 min. E.
urgency message

MMSI code 426 477 000 - Tanker Vermont CAPK
in posn. 259 degr. from Falls Light, distance 1.5 miles,
time: August 6 - 1645 UTC,
has detected that buoy FL-1 in position 259 degrees from Falls Light, distance 2 miles, is missing.

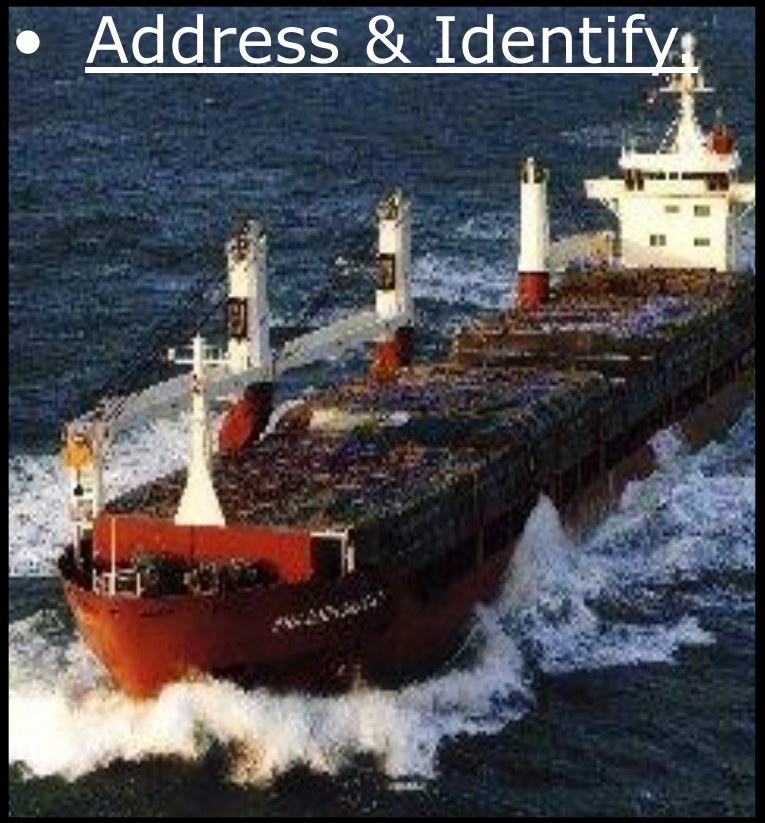
Role Plays
VHF-Communication
VTS-Station to vessel.

Role-play 1

- Address & Identify.

PORTISHEAD RADIO

- Address & Identify.



M.V. STELLA MARIS - UB6379

Role-play 1

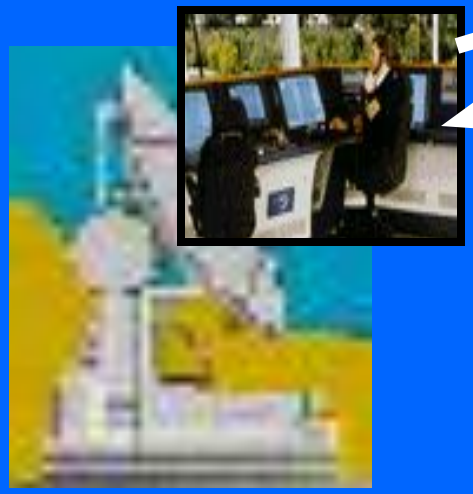
PORTISHEAD RADIO

M.V. STELLA MARIS - UB6379

Role-play 2

Address & Identify

Diamond Star
VYNG



Maas Approach

Role-play 2

Maas Approach wants to know
- Diamond Star's present position, course and speed;
- her ETA in position of no. 1 Euro Buoy;
- her draft fore and aft;
- her freeboard and airdraft.

Diamond Star VYNG

Maas Approach

Her position is bearing 045 degrees from no. 1 Euro Buoy at a distance of 12 miles, course 052 degrees true at 7 knots;
ETA no. 1 Euro Buoy is 1145 hrs. UTC;
draft fore: 5.5 m - draft aft: 6 m.
freeboard of 6.8 metres;
airdraft of 18.5 metres.

Role-play 2

Maas Approach now indicates that
Diamond Star may enter traffic lane at
1245 hrs. UTC;
Maas Approach warns for a heavy swell in the fairway;
Diamond Star must maintain present course and reduce her speed to 4 knots.
Vessel astern is going to
overtake her to the West.

Diamond Star VYNG

Diamond Star
confirms.

Maas Approach

Role-play 2

Maas Approach reports that Diamond Star's berth is ready and that she will berth at 1300 hrs. UTC. Request to remain stand by on channel 13.

Diamond Star VYNG

Maas Approach

Diamond Star confirms.

Intership VHF-Communication: role-plays

communication

Calling unknown vessel

Non-GMDSS vessels
(e.g. small vessels)

GMDSS vessels

Announcement &
acknowledgement
on VHF channel 13 or 16

Announcement &
acknowledgement
by DSC.

Message by conversation on VHF-working channel

Calling unknown vessel

Announcement on channel 13 or 16:

"All vessels (3X)
Calling unknown vessel in position ……..
This is …… (name of the vessel 3X + callsign)
HOW DO YOU READ ME? - OVER"
or in case of an urgent message
"(MESSAGE) …… "

Acknowledgement (ch. 13 or 16);
message on working channel.

Calling unknown vessel

Announcement on DSC

With the *Automatic Identification System* (AIS) the MMSI-code of an unknown vessel can be read from the radar display.

Message on working channel.

Role-play 3

Address & Identify on VHF:

Unknown vessel
(Great Yarmouth Princess - GBCH)
posn. 052 degr. from Bondpier -
distance 0.5 miles

acknowledges.
(message on ch.6.)

Seaborne - IRSL

Role-play 3

Seaborne is going to overtake Great Yarmouth Princess on her port side - course: 250 degr.; speed: 8 knots.

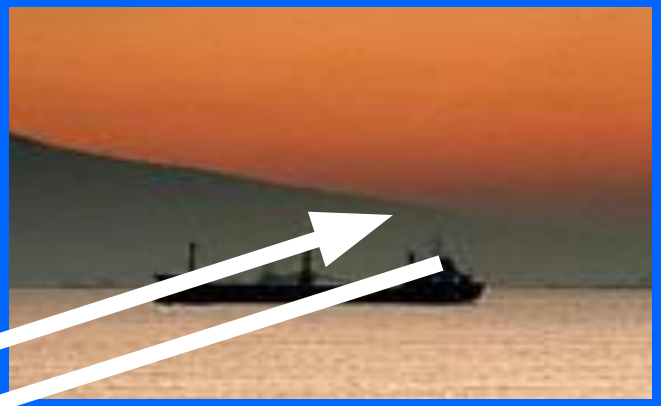
Great Yarmouth Princess - GBCH

Seaborne - IRSL

Great Yarmouth Princess confirms and closes.

Role-play 4

Amsteldijk is at anchor 2.5 miles W of Bondpier; Amsteldijk asks unknown ship about her intentions.



Unknown vessel
2 miles N of the breakwater
(Ice Flower OVRR)

Amsteldijk - PHSA

urgent message

…….answers
that she will *stand on*.

Role-play 4

Amsteldijk indicates that Ice Flower is on a collision course. She must alter course to port-side.

Ice Flower - OVRR

Amsteldijk - PHSA

..... confirms and closes.

Pilotage

Amsteldijk requests pilotage.

Role-play 5

Address & Identify

Role-play 5

Amsteldijk requests pilot service.
Her position is
225 degr. from Bassurelle,
distance 3 miles.

Answers that pilotage has
been suspended and will
be resumed at 1200 UTC.
Pilot boat will reach
her at 1345 UTC.
She must anchor in her
present position.

Role-play 5

Amsteldijk confirms and closes.

Role-play 6

Pilot-tender

Address & Identify

Role-play 6

Pilot-tender

Amsteldijk
confirms
and closes.

Pilot reports that he is
underway (ETA-Amsteldijk: 1400 UTC).
Amsteldijk must heave anchor and proceed on
course 064 degr. true at 6 kn.;
make lee on starboard and
rig pilot ladder .

The
International Maritime Language Programme – IMLP

FINISHED

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The IMLP is an IMO-standard.