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Case Study 3: Vessel Grounding Caused by Communication Breakdown

The case studies in these videos are inspired by real-world events, accidents or incidents, involving communication between VTS operators and one or more vessels. The communication may have been retained in its authentic form to support learning, even when it includes mistakes or deviates from maritime communication standards.

However, for instructional purposes, content has been modified, adjusted, and simulated. The names of ships and ports are anonymized. You will find suggestions for improving communication at the end of each video. Also, the key issues in maritime communication identified in the accident investigation report will be explained.

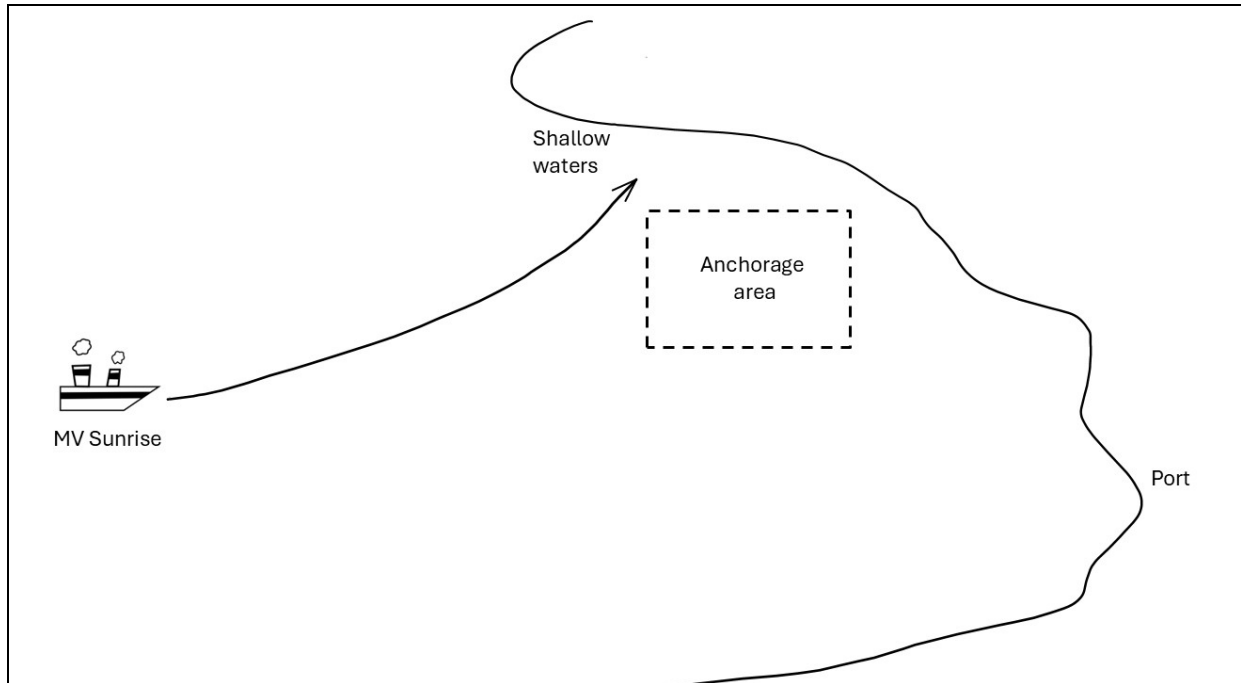
In this case study, a bulk carrier carrying 67,000 tons of coal, runs aground in dense fog after disregarding multiple warnings issued by the VTS operator.

First, reflect on the following questions:

- How can the bridge team's limited knowledge of the English language hinder communication between the VTS operator and the vessel?
- What communication strategies can the VTS operator use if the vessel's bridge team fails to understand the communication?

Let us now have a look at the initial situation.

Visibility is severely restricted due to dense fog. The incoming Motor Vessel Sunrise is informed to anchor in the designated anchorage area.



This is the initial exchange between the VTS operator and Motor Vessel Sunrise.

Digimar VTS: Motor Vessel Sunrise, this is Digimar VTS. Over.

Motor Vessel Sunrise: Good morning.

Digimar VTS: Good morning, Sunrise. Information. Visibility restricted due to fog. Anchor in anchorage area Charlie 1. Read back. Over.

Motor Vessel Sunrise: Sir, four miles from fairway. Ladder portside.

Digimar VTS: Sunrise, this is Digimar VTS. I repeat. Information. Visibility restricted due to fog. Anchor in anchorage area Charlie 1. Read back. Over.

Motor Vessel Sunrise: Okay.

Is it clear whether Motor Vessel Sunrise has understood that they need to drop anchor in anchorage area Charlie 1 because the visibility is severely restricted?

Five minutes later, the VTS operator notices on their AIS that Motor Vessel Sunrise is proceeding toward land near the designated anchorage area without reducing its speed (at 6.8 knots), and seemingly with no intention of stopping.



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Digimar VTS calls Motor Vessel Sunrise a second time.

Digimar VTS: Motor Vessel Sunrise, this is Digimar VTS. Over.

Motor Vessel Sunrise: Yes, Sir.

Digimar VTS: Good morning, Sunrise. Information. Shallow waters ahead. Anchor in less than five cables. Over.

Motor Vessel Sunrise: Sir, anchor soon.

Three minutes later Digimar VTS calls Motor Vessel Sunrise a third time.

Digimar VTS: Motor Vessel Sunrise, this is Digimar VTS. Warning. Reduce your speed. Shallow waters ahead. Drop anchor before two cables. Read back. Over.

Motor Vessel Sunrise: Engine half ahead.

One minute later Digimar VTS calls Motor Vessel Sunrise a fourth time.

Digimar VTS: Motor Vessel Sunrise, this is Digimar VTS. Warning. You are running into danger. Shallow waters ahead. Alter your course hard to starboard. Over.

And again immediately after.

Digimar VTS: Motor Vessel Sunrise, this is Digimar VTS. Warning. You are running into danger. Shallow waters ahead. Alter your course hard to starboard. Over.

Motor Vessel Sunrise does not reply to these calls. The vessel runs aground in a shoal where the sea bottom is muddy. After the tide rises, the vessel refloats, and is helped into port using tugs. There is no damage below the waterline, and no damage to the environment.



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Suggestions for improvement

Now, let us consider what could have been done differently in terms of maritime communication.

First of all, the accident investigation showed that the accident resulted from the severely limited English language competence of the vessel's bridge team. Therefore, the question is what a VTS operator can do in such cases.

To facilitate understanding and therefore increase the probability of the message being understood, the VTS operator needs to adhere even more strictly to the communication guidelines in such cases when the bridge team's English language competence is severely limited.

This means that they should use strategies that will make their communication clear, direct, concise, and easier to understand. These include:

- standard messaging structure,
- standard phraseology,
- simple statements and questions,
- action verbs that clearly ask ships to do activities, such as “reduce speed”, “alter course”, and “drop anchor”,
- message markers in increasing order of priority, such as “information”, “advice”, and “warning”,
- repeating the information provided, and
- closed loop communication through read back requests.

Please take a moment to reflect on the key takeaways. Thank you for watching.