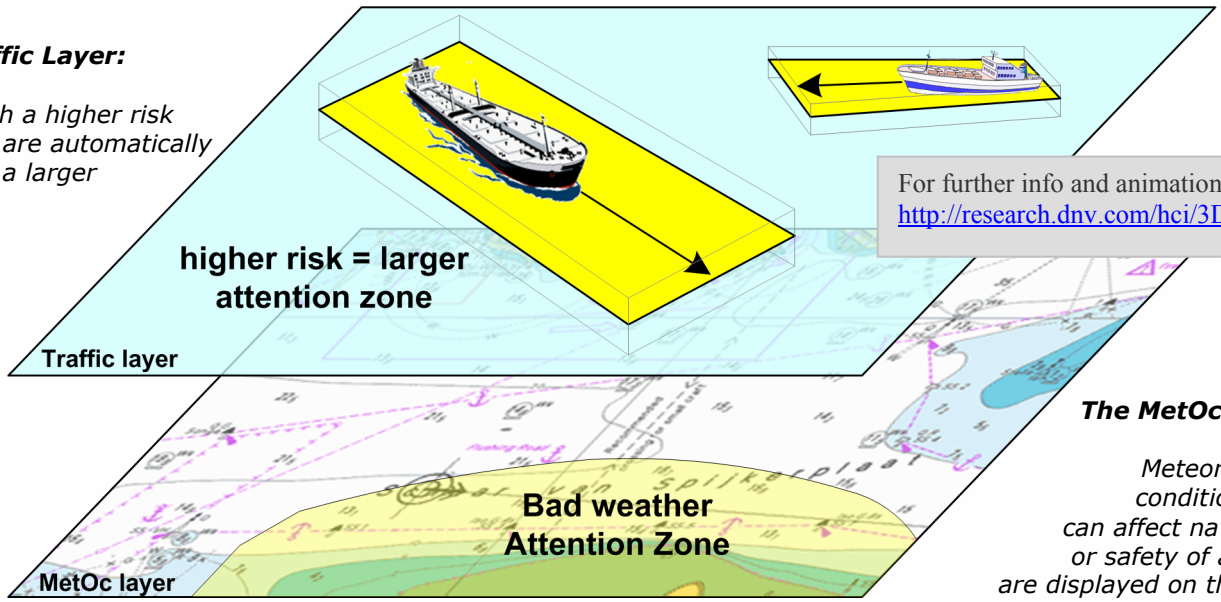
3D-Attention Zone Concept

Reducing the number of collisions and groundings by automated visualising risks in ECS/ECDIS charts.

The Traffic Layer:

Ships with a higher risk potential are automatically assigned a larger Attention Zone



For further info and animation:
http://research.dnv.com/hci/3DAZ.html

The MetOc Layer:

Meteorological conditions that can affect navigation or safety of a vessel are displayed on the map.

Even with modern navigation technology, ship collisions and powered groundings are not uncommon and still represent more than 28% of all larger maritime accidents.

The reason for these accidents are almost always human errors that can be traced back to multi-factor situations such as long working hours, multiple alarms and challenging traffic situations.

The consequences of collisions and groundings range from injuries or death, to high repair cost, costly idle times and sometimes to disastrous environmental pollutions.

The number of these accidents could be reduced with help of the 3-dimensional Attention Zone concept (3dAZ). A zone around a maritime object in ECS/ECDIS charts is displayed with the size reflecting the object's associated risk. Objects with a higher risk potential automatically get larger attention zones. Touching or overlapping zones, or zones of severe weather call for the attention of the navigator or VTS controller.
Land-based authorities, e.g. VTS's, may often have additional information about risks, such as those posed by a congested traffic situation, other vessels, cargo types, sandbanks, or of near coastal activities such as a regatta or a floating object which could easily be incorporated by adjusting the zone sizes.

Benefits:

- Intuitive visualization of multiple risks
- Risks updated in real-time based on static and dynamic parameters
- Automated incorporation of additional risk information from VTS
- Increased traffic throughput

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