



Hydrographic Services and Standards Committee

Proposal by Germany

Visualisation of uncertainty of bathymetric data in

S-101 products

Principal activities and achievements

- ✦ Project was awarded by GE
- ✦ Research and consideration of existing proposals
- ✦ Development of portrayal solutions which are flexible to be adjusted if new DQ indicators emerge
- ✦ Development of ideas beyond the 2D world



Principal activities and achievements

- ✦ Contracting partner
 - Fraunhofer Institute for Graphic Solutions
- ✦ Research and consideration of existing proposals
 - NCWG proposals
 - NIPWG proposals
 - Current S-52 solutions
 - Various scientific papers



Principal activities and achievements

- ✦ Portrayal solutions development
 - Define requirements
 - Investigate current proposals in detail
- ✦ Requirements
 - Definition of the intended DQ parameters (what, where and how?)



Principal activities and achievements

- ✦ Consideration of
 - Precession of positioning systems
 - Tide
 - Wind and resulting wave heights
 - Time of survey
 - Seabed dynamics



Principal activities and achievements

✦ Proposal

- Visualisation only along the route by defined wide (depending of ship's speed)
- Texture overlay with different levels of transparency

more transparency

more safe

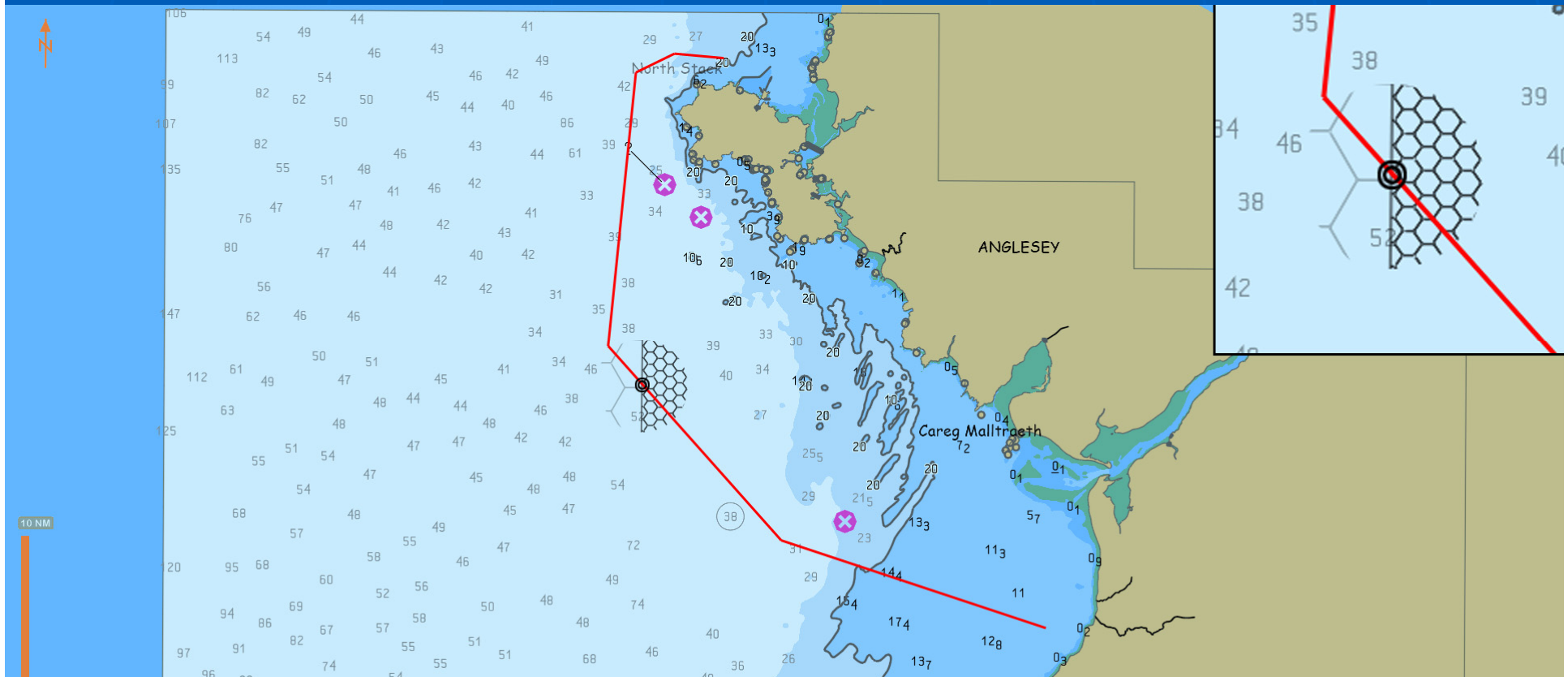
less transparency

less safe



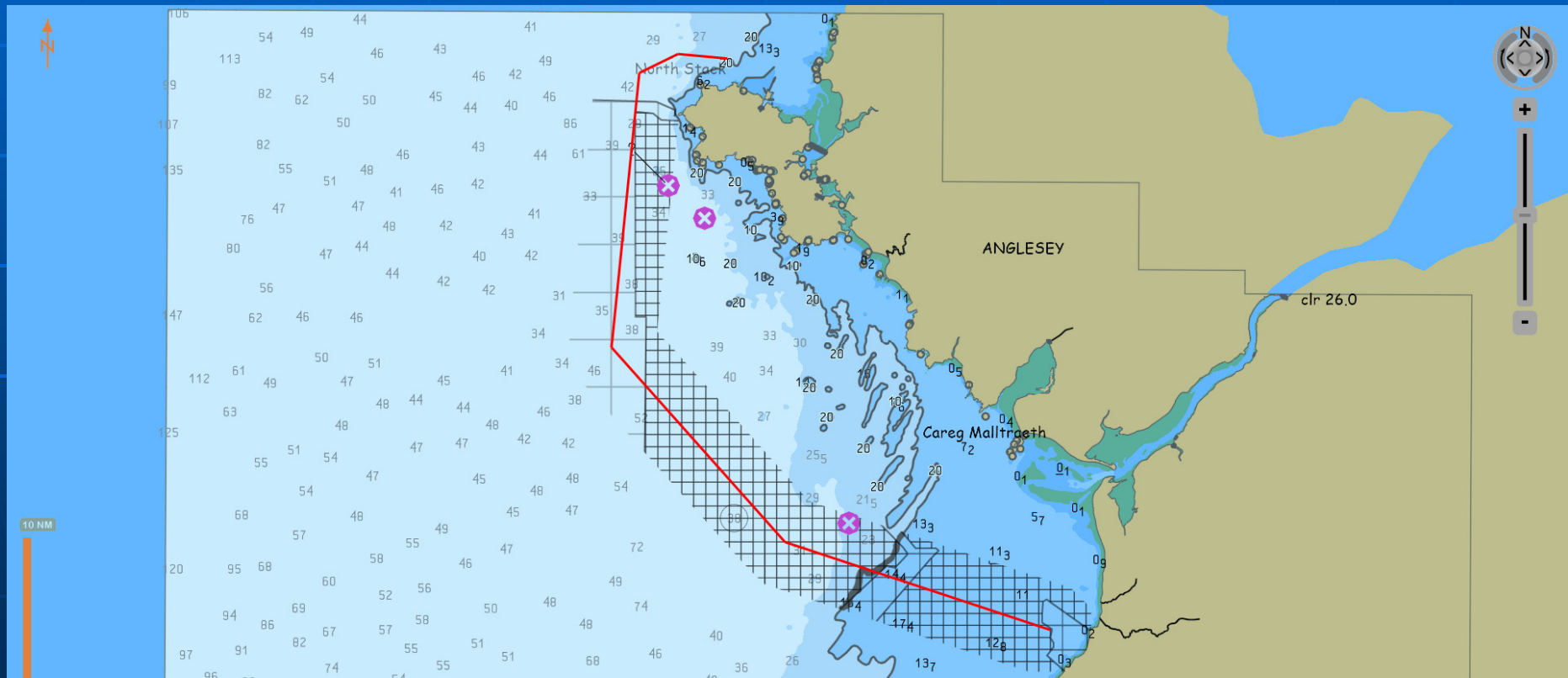
Principal activities and achievements

✦ Proposal



Principal activities and achievements

✦ Proposal (grid texture)

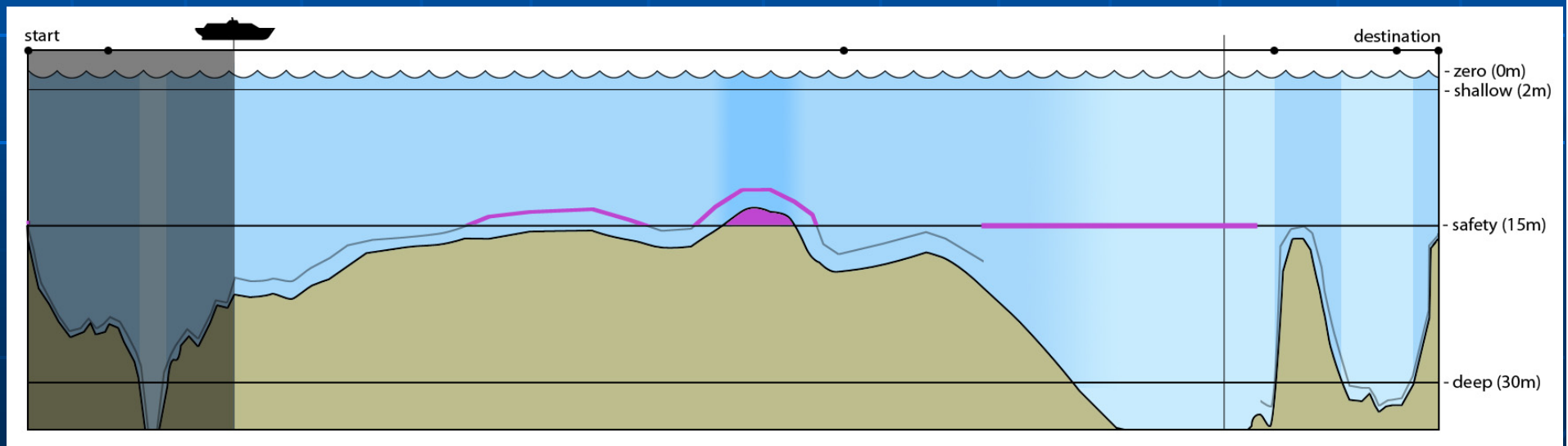


Problems or outstanding issues



Proposal for 3D features

- ✦ Provision of undersea profile
 - Highlighting of potential dangers along the route
 - Considering all bathymetric data uncertainties



Action requested of HSSC

- ✦ Take note of the paper
- ✦ Consider the usefulness of the proposal for S-100 based ECDIS systems
- ✦ Assign the development of appropriate textures to the NCWG

