

Bathymetrische monitoring van ondiepwatergebied:

 Een uitdaging voor de moderne **MULTIBEAM**
en **LIDAR** technieken

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EUROSENSE

✦ Gebruikte technieken :

- MBES : **M**ulti **B**eam **E**cho **S**ounder
- LIDAR : **L**ight **D**etection **A**nd **R**anging

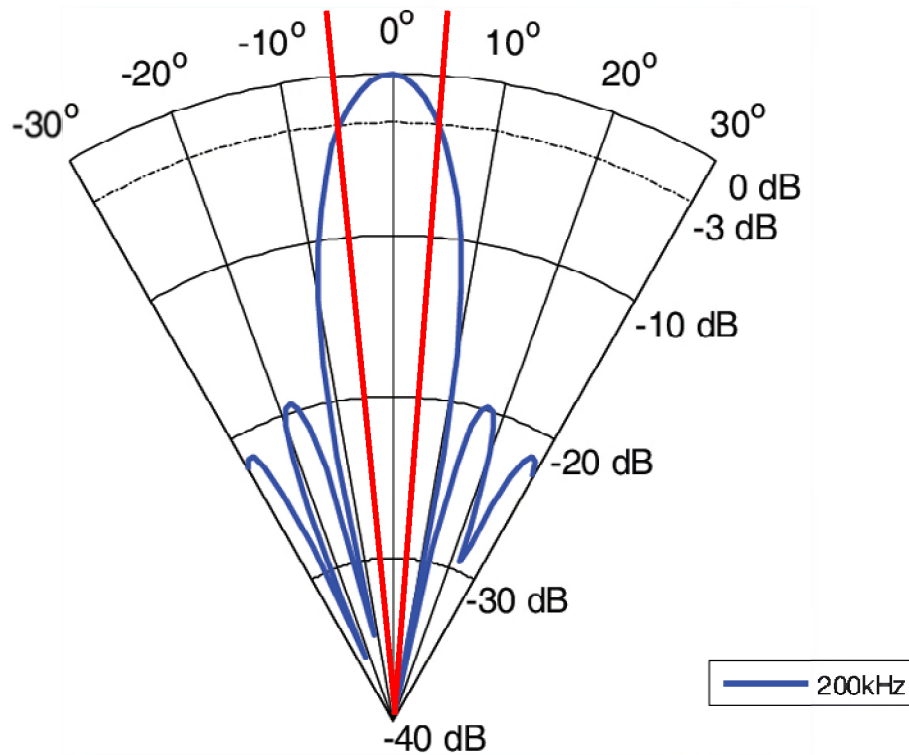
✦ Multibeam echosounding

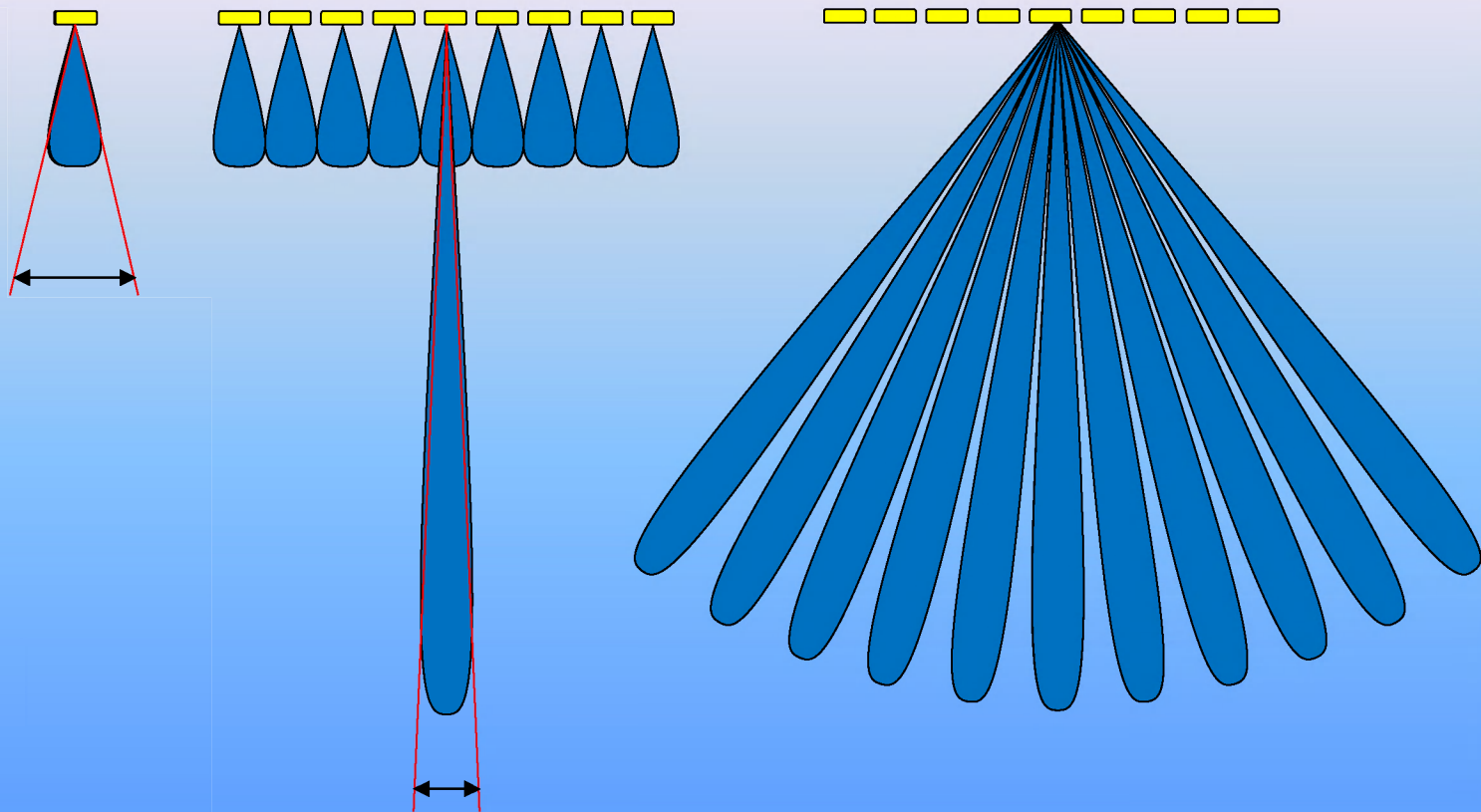
- Principes van MBES
- Resultaten

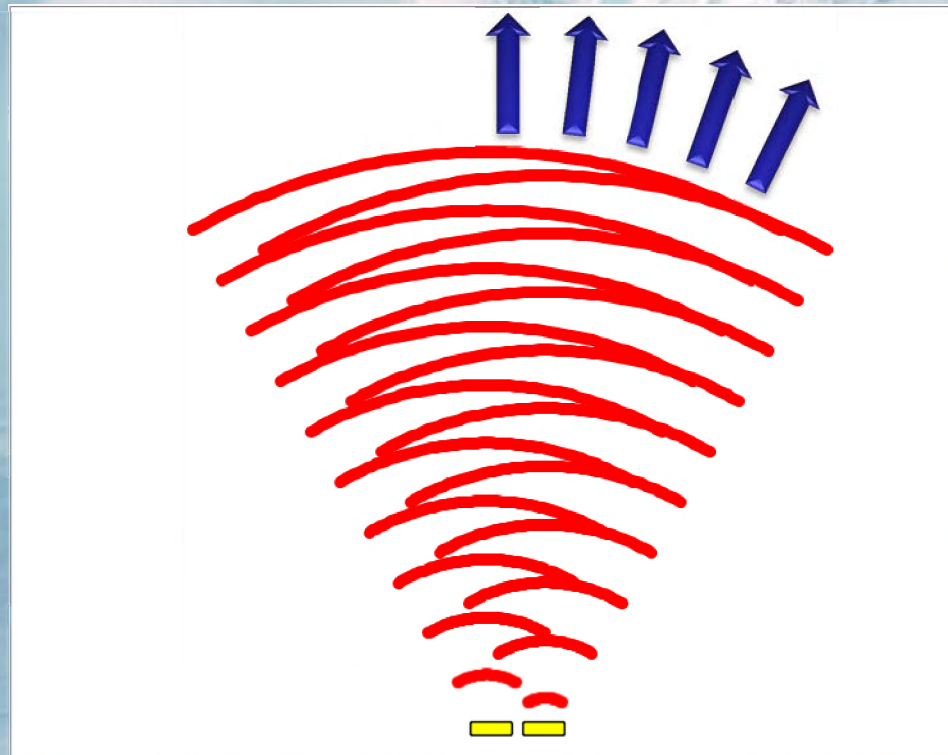
✦ Topografische lidar (laserscanning)

- Principes van LIDAR
- Resultaten

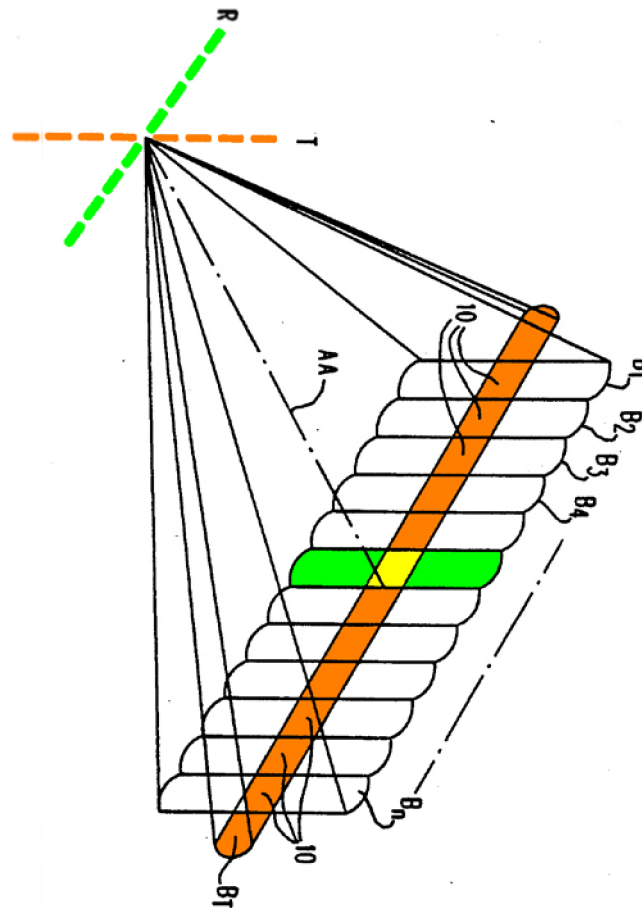
✈ Stralingsdiagramma van een transducer







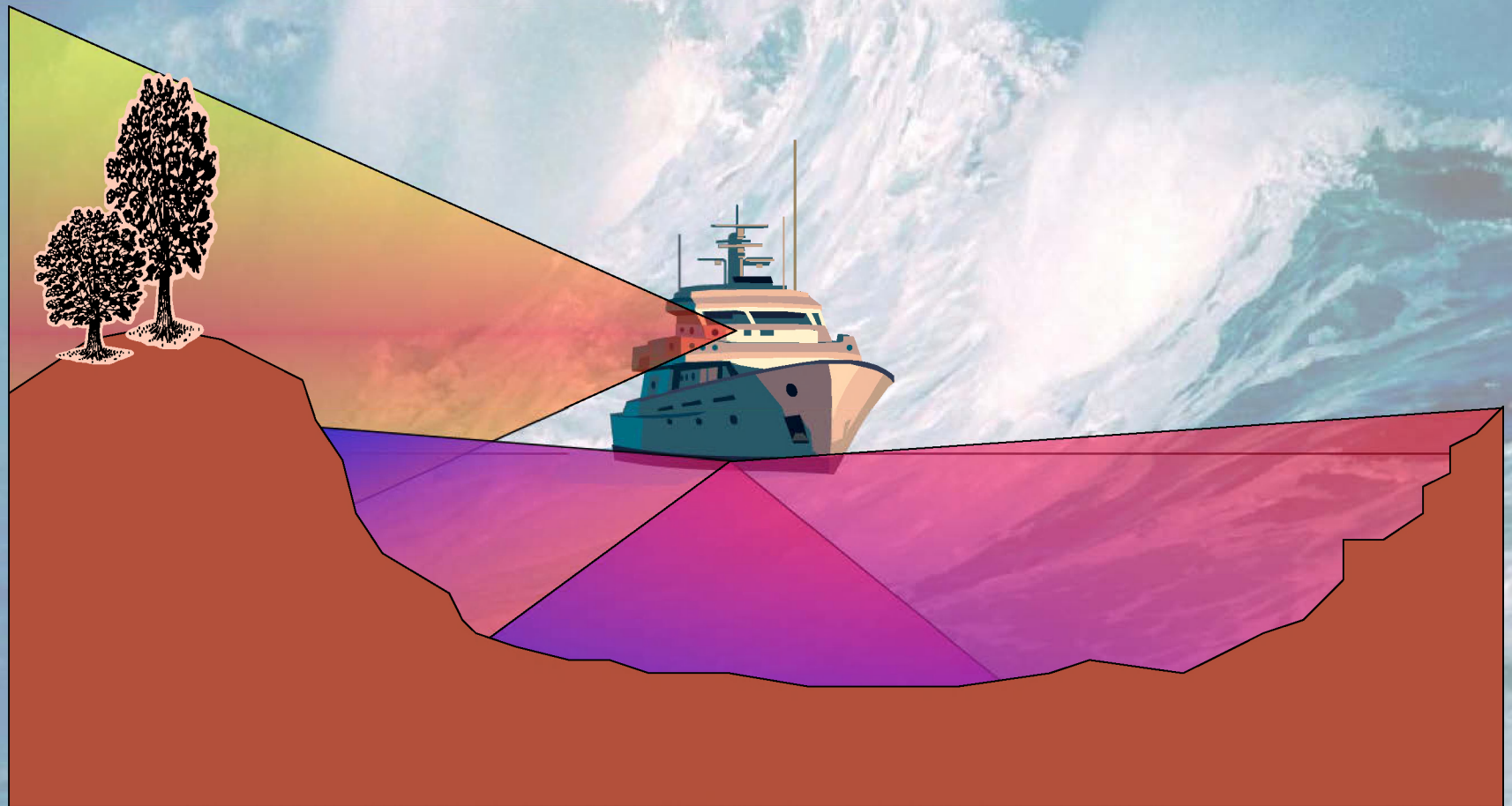
✈ US Patent 5287330 15/02/1994 – G. Gilmour



Studiedag Antwerpen 21/06/2010 : Alternatieve stortstrategie in de Westerschede
Het pilootproject Walsoorden als aanleiding voor het concept van plaatrandstortingen

✦ Componenten van een MBES installatie

- Multibeam echolood
- Bewegingssensoren
- Plaatsbepaling
- Geluidsvoortplantingssnelheid
- Acquisitie systeem
- Data processing
- Meetplatform





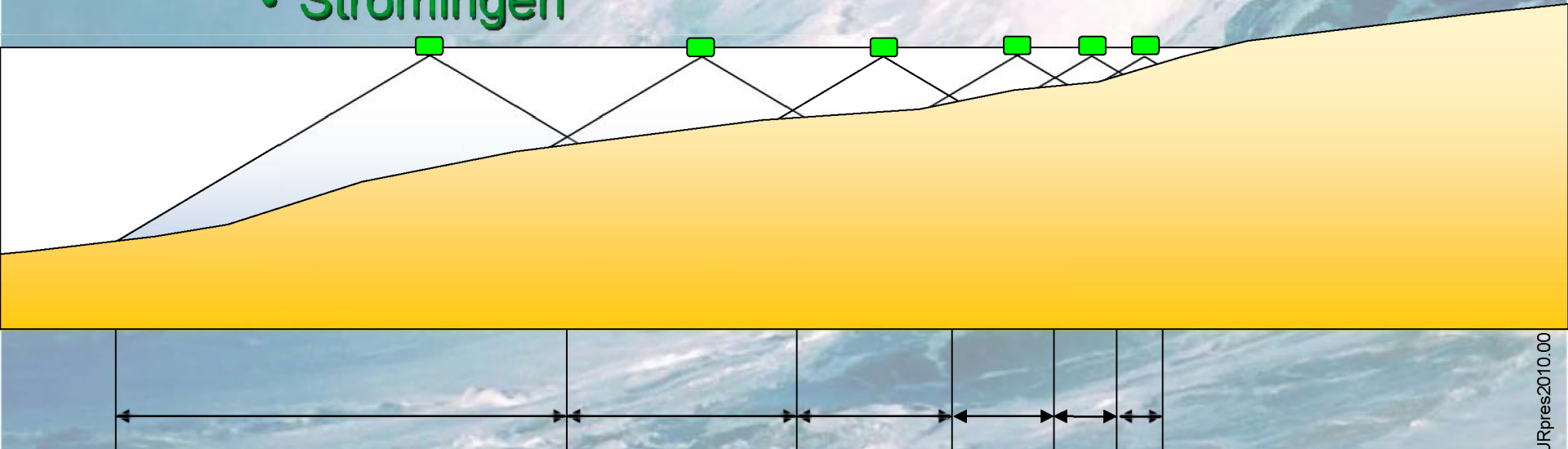


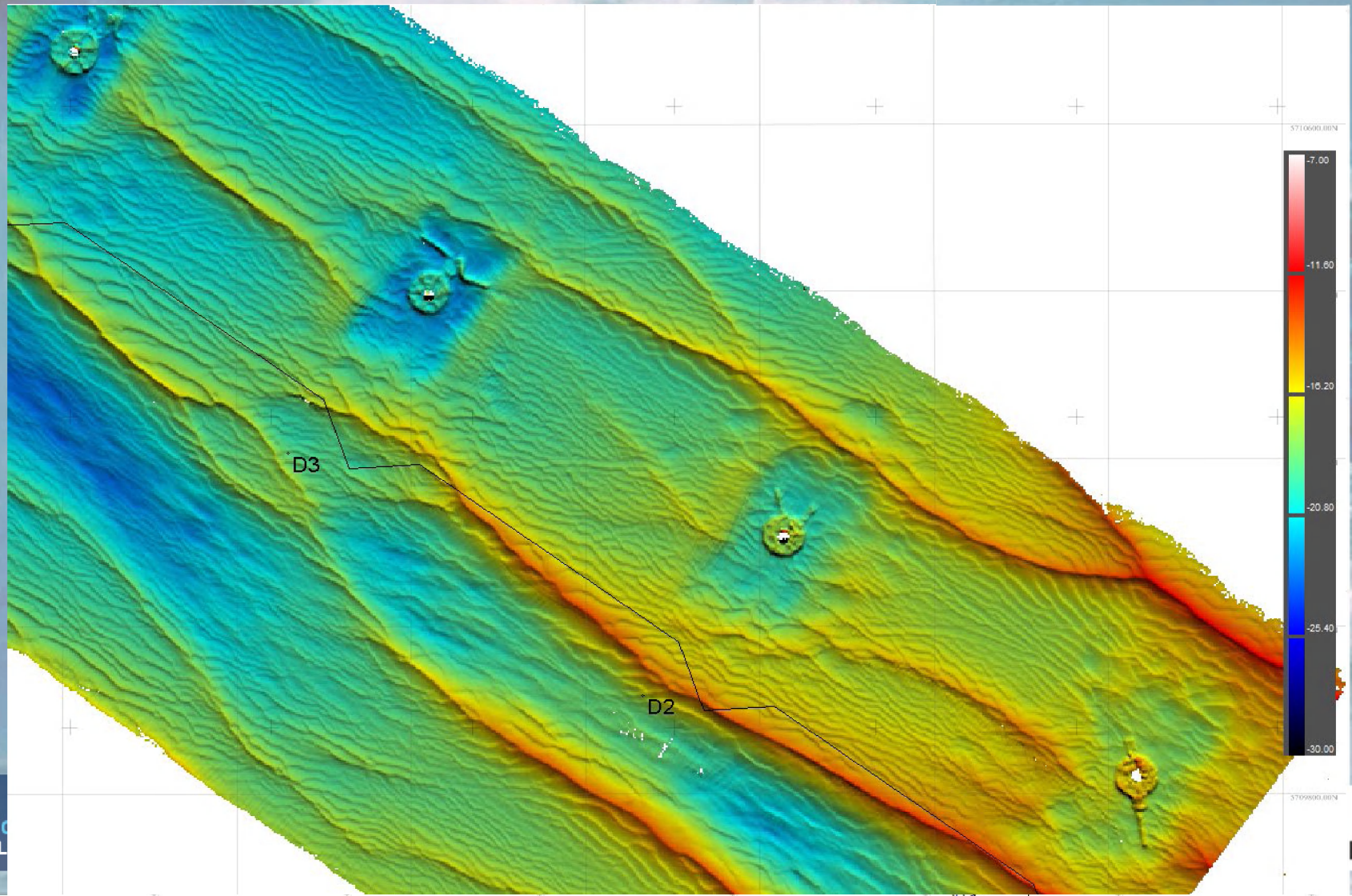


BEASAC VI

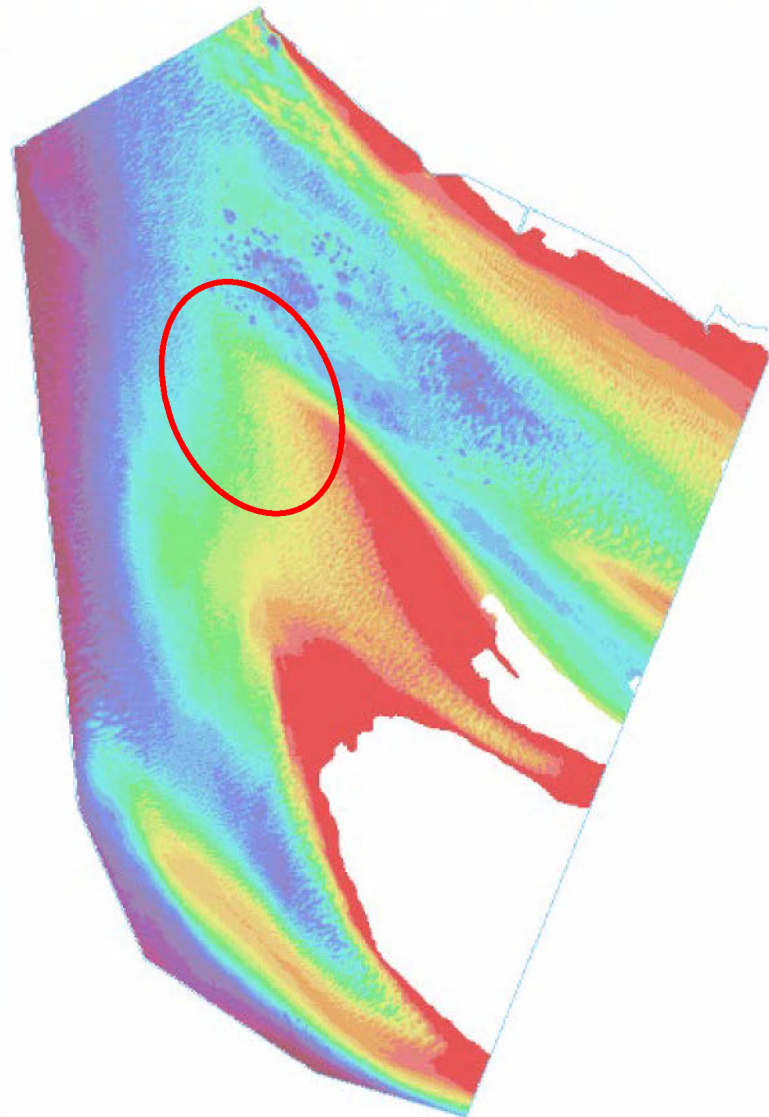
✈ Ervaringen in ondiep water op de Schelde

- Raaiafstand afhankelijk van (veranderend) reliëf
- Raaiafstand afhankelijk van getijhoogte
- Sound velocity variaties
- Stromingen

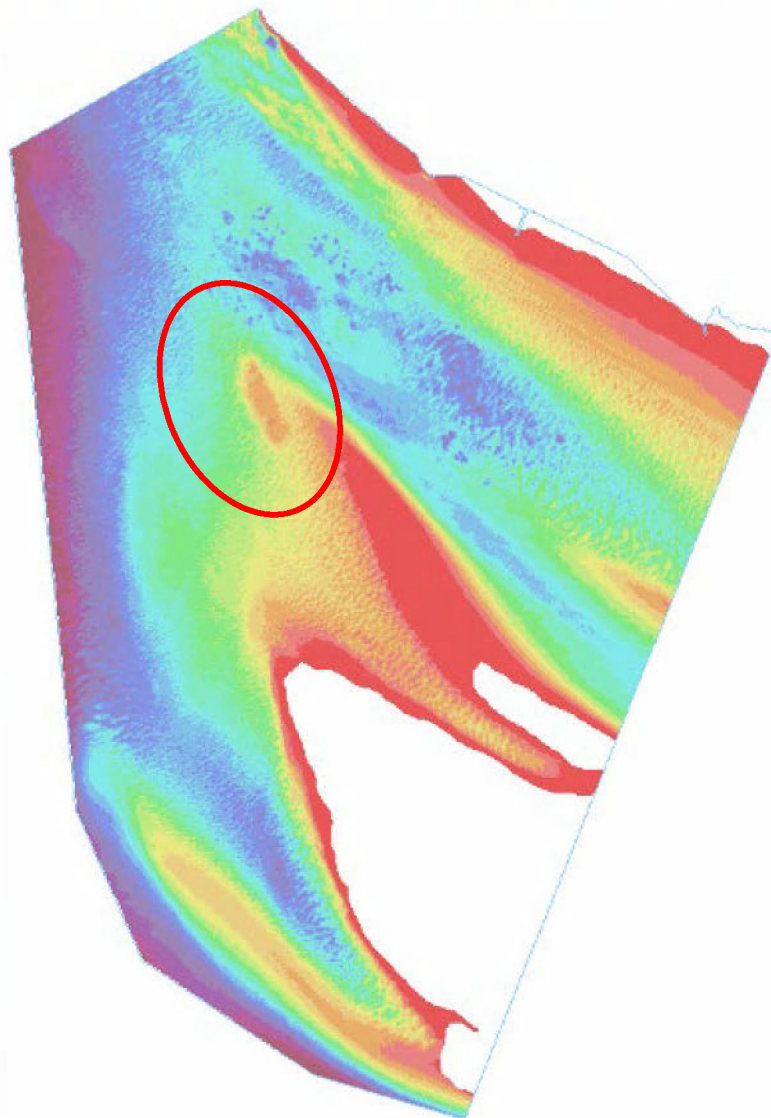




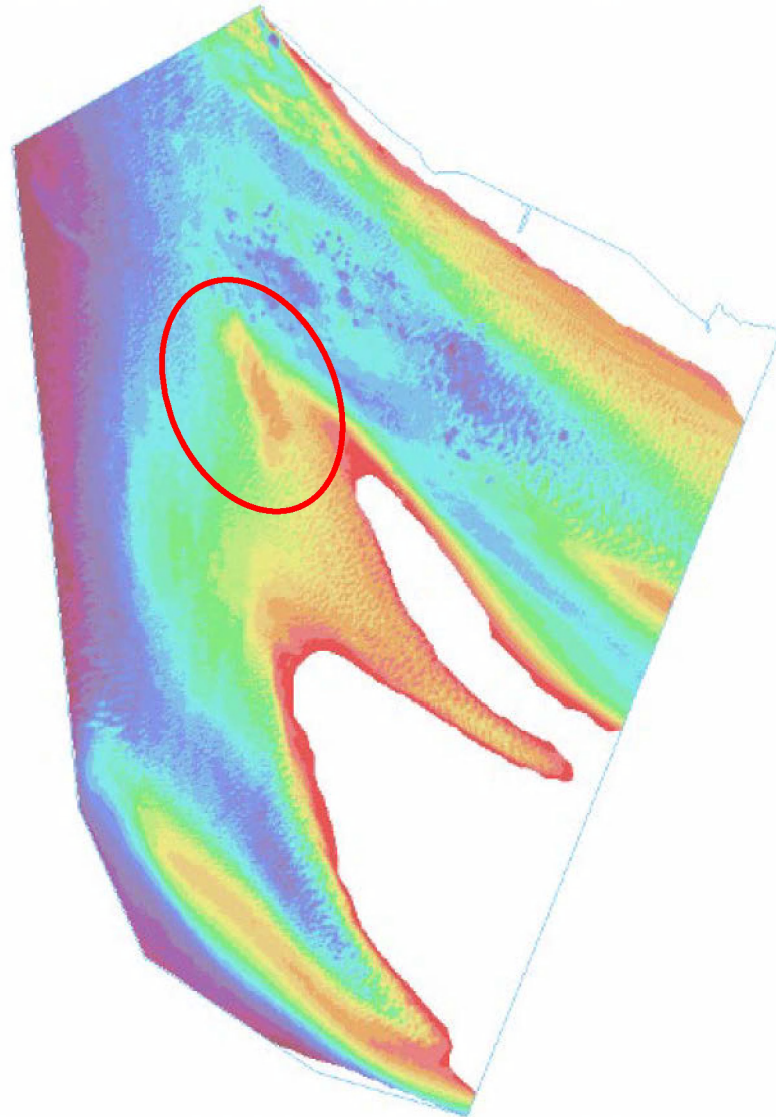
- ✈ T0 - situatie :
- ✈ 5 november 2004
- ✈ Voor de storting



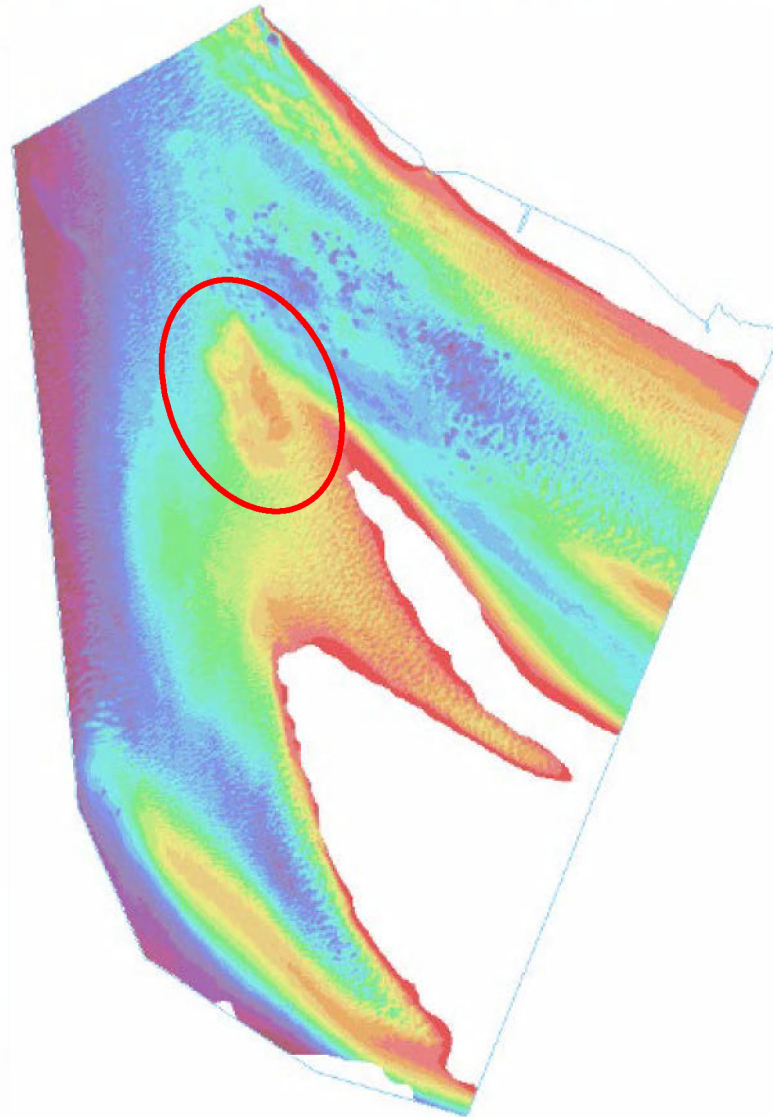
- ✈ T1 - situatie :
- ✈ 23 november 2004
- ✈ 125.000 m³ gestort



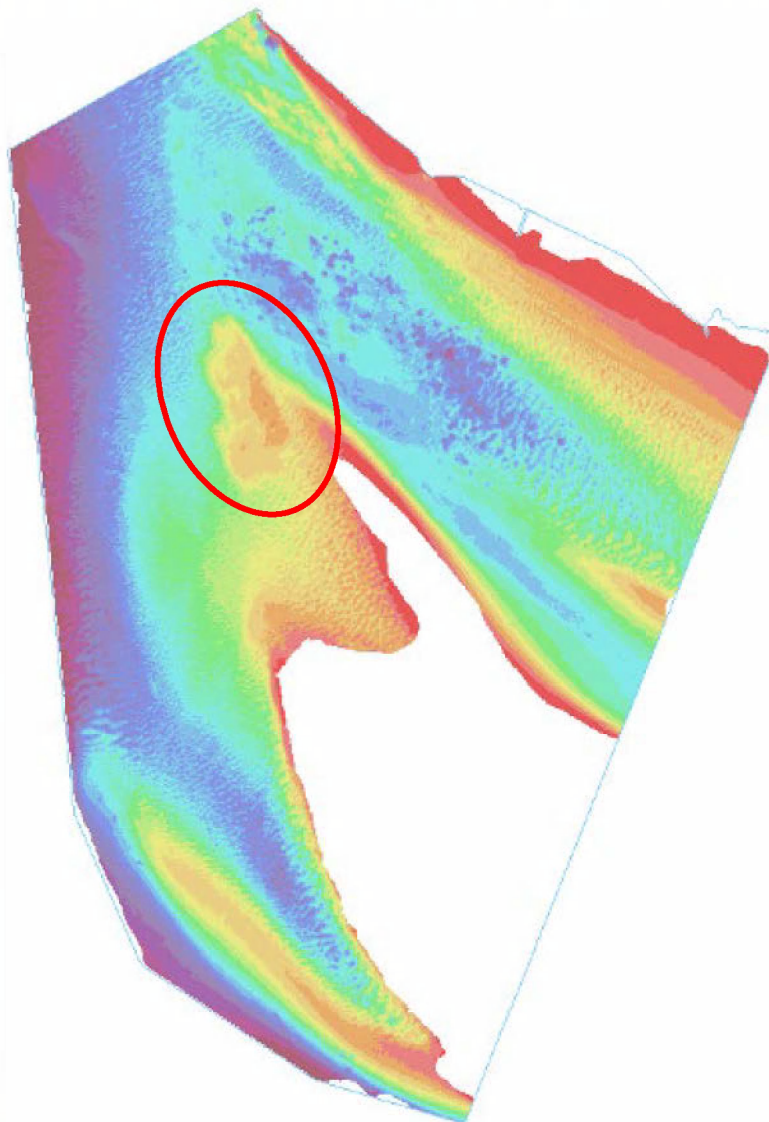
- ✈ T2 - situatie :
- ✈ 29 november 2004
- ✈ 225.000 m³ gestort



- ✈ T3 - situatie :
- ✈ 13 december 2004
- ✈ 415.000 m³ gestort

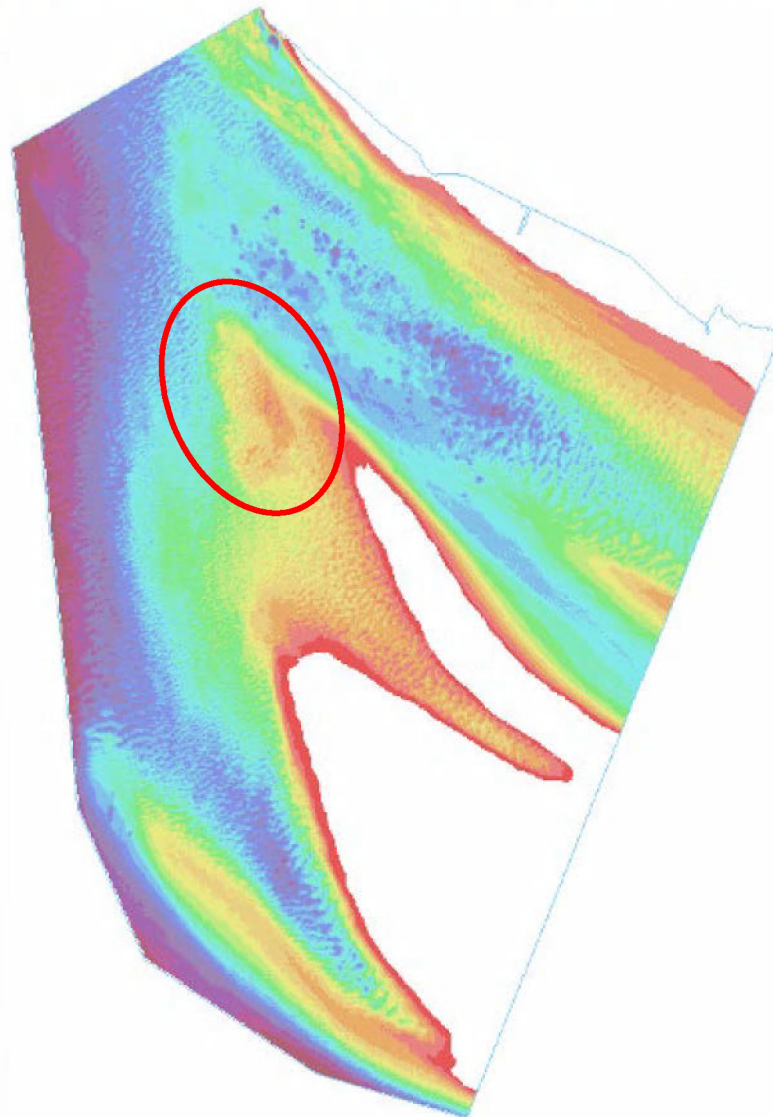


- ✈ T4 - situatie :
- ✈ 22 december 2004
- ✈ 500.000 m³ gestort



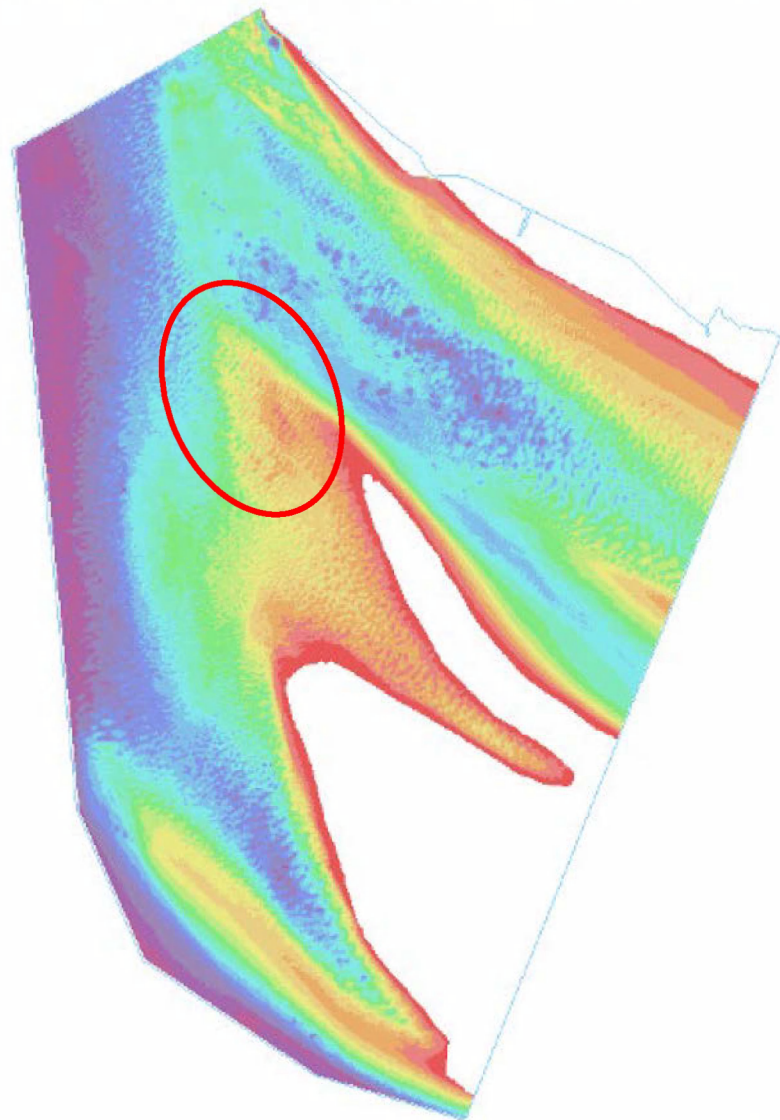
 **T11 - situatie :**

 **4 maart 2005**

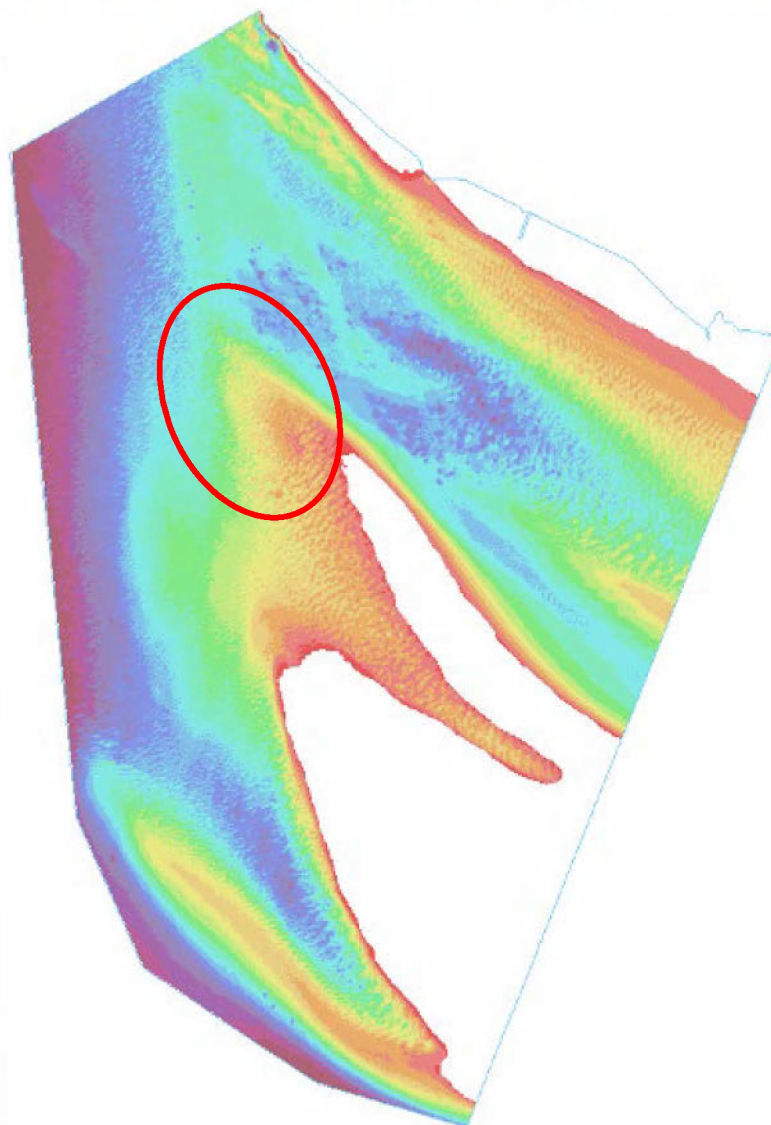


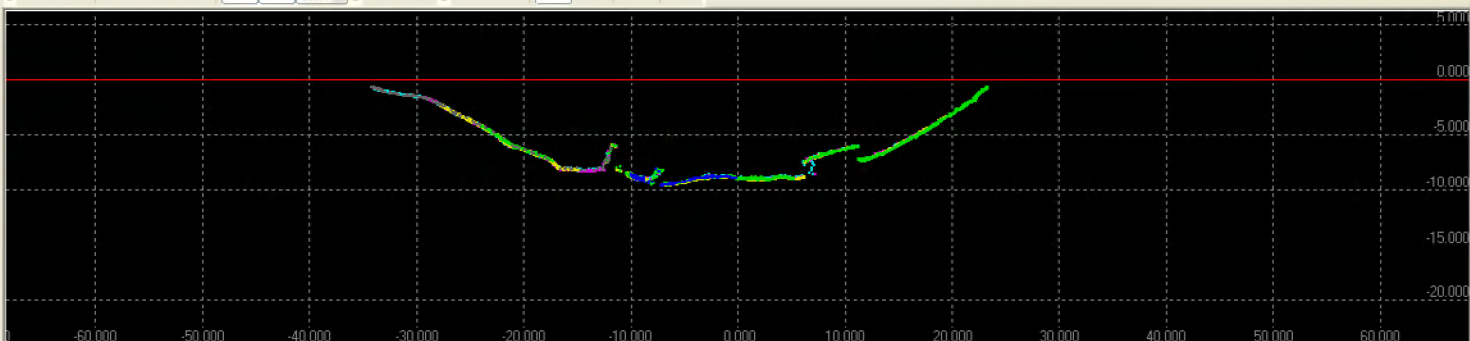
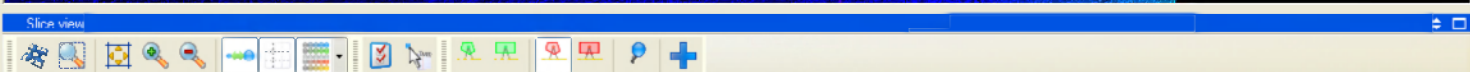
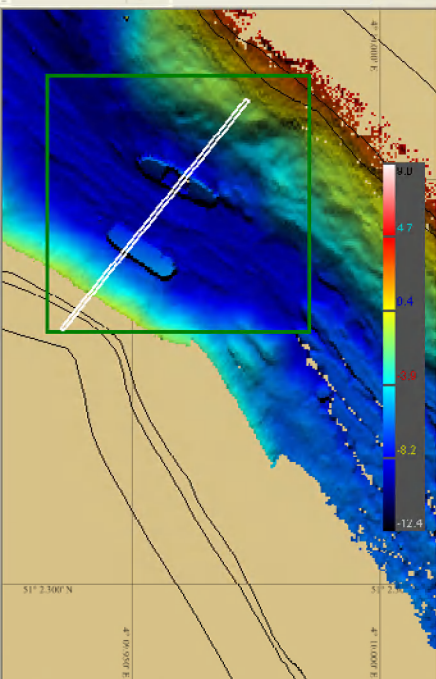
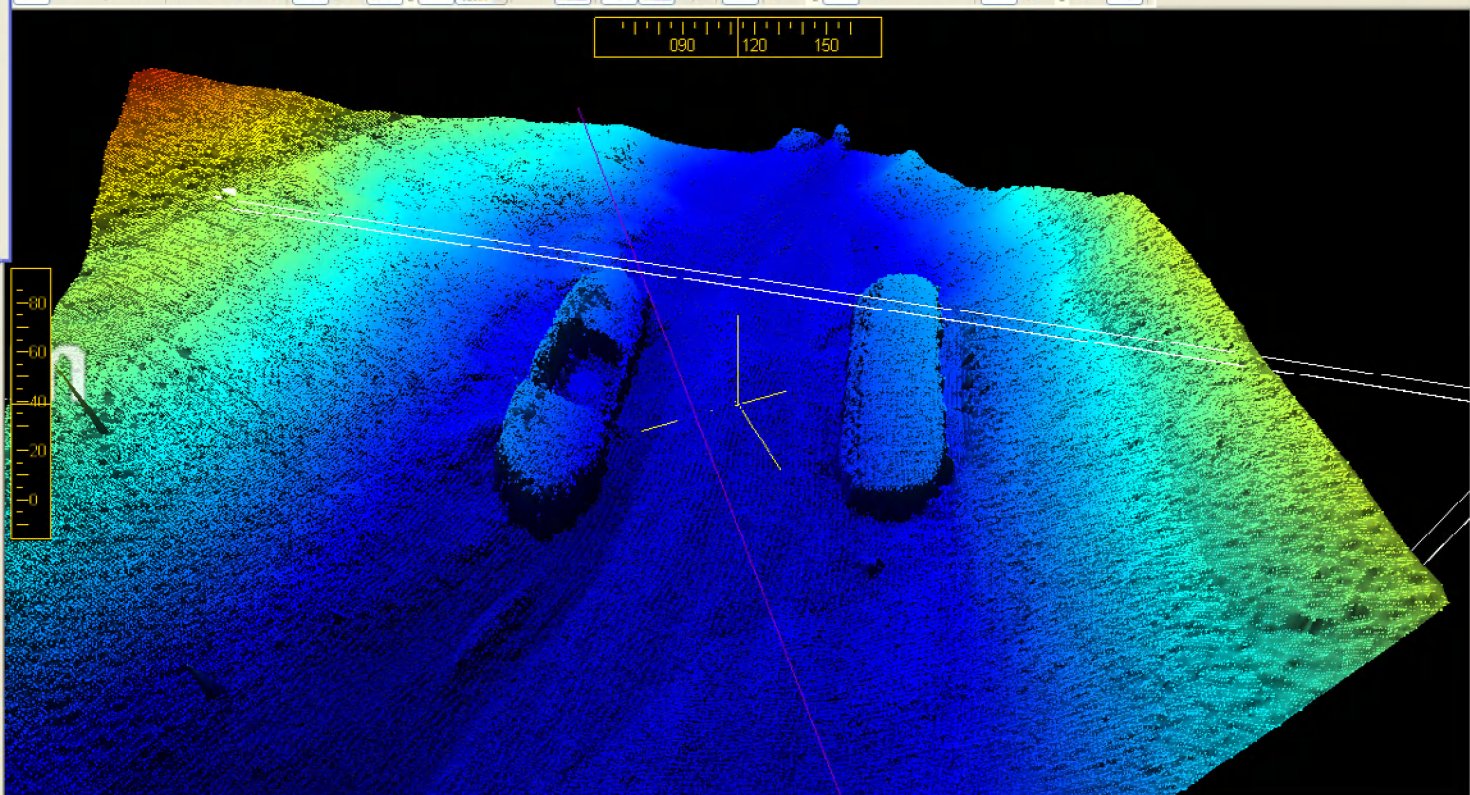
✈ T16 - situatie :

✈ 23 mei 2005

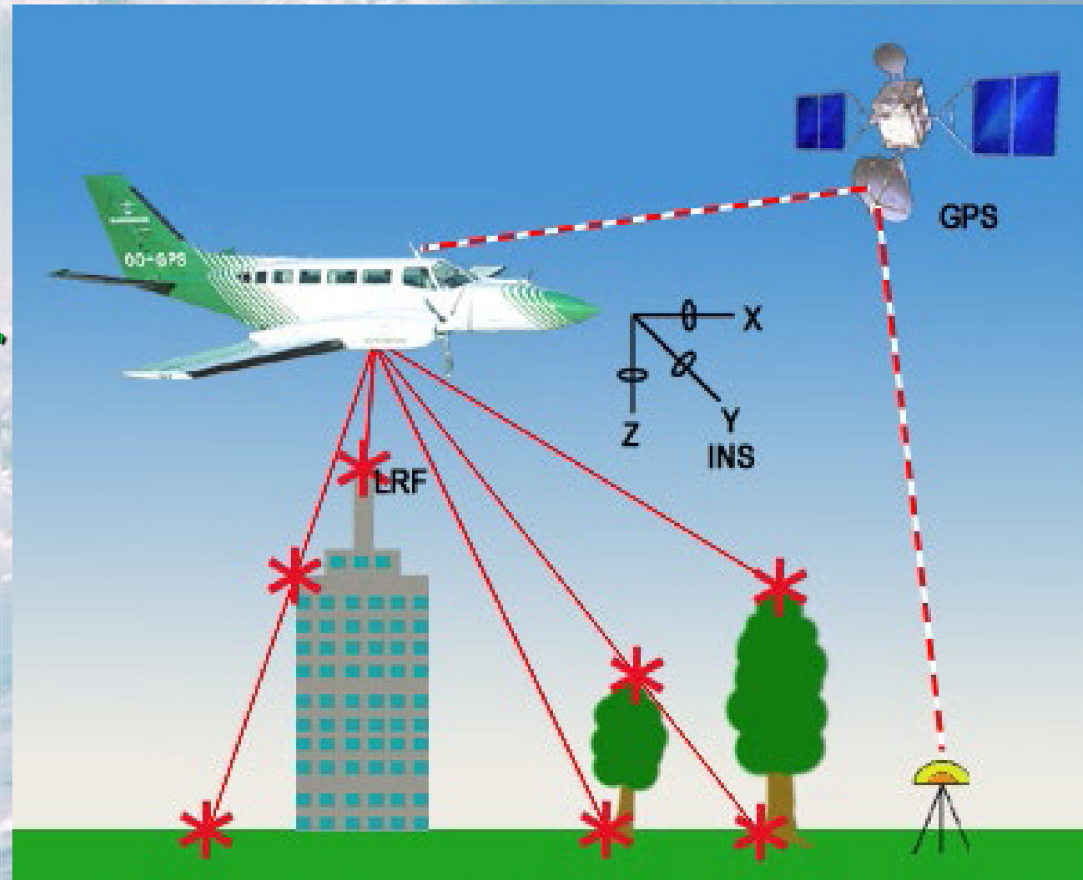


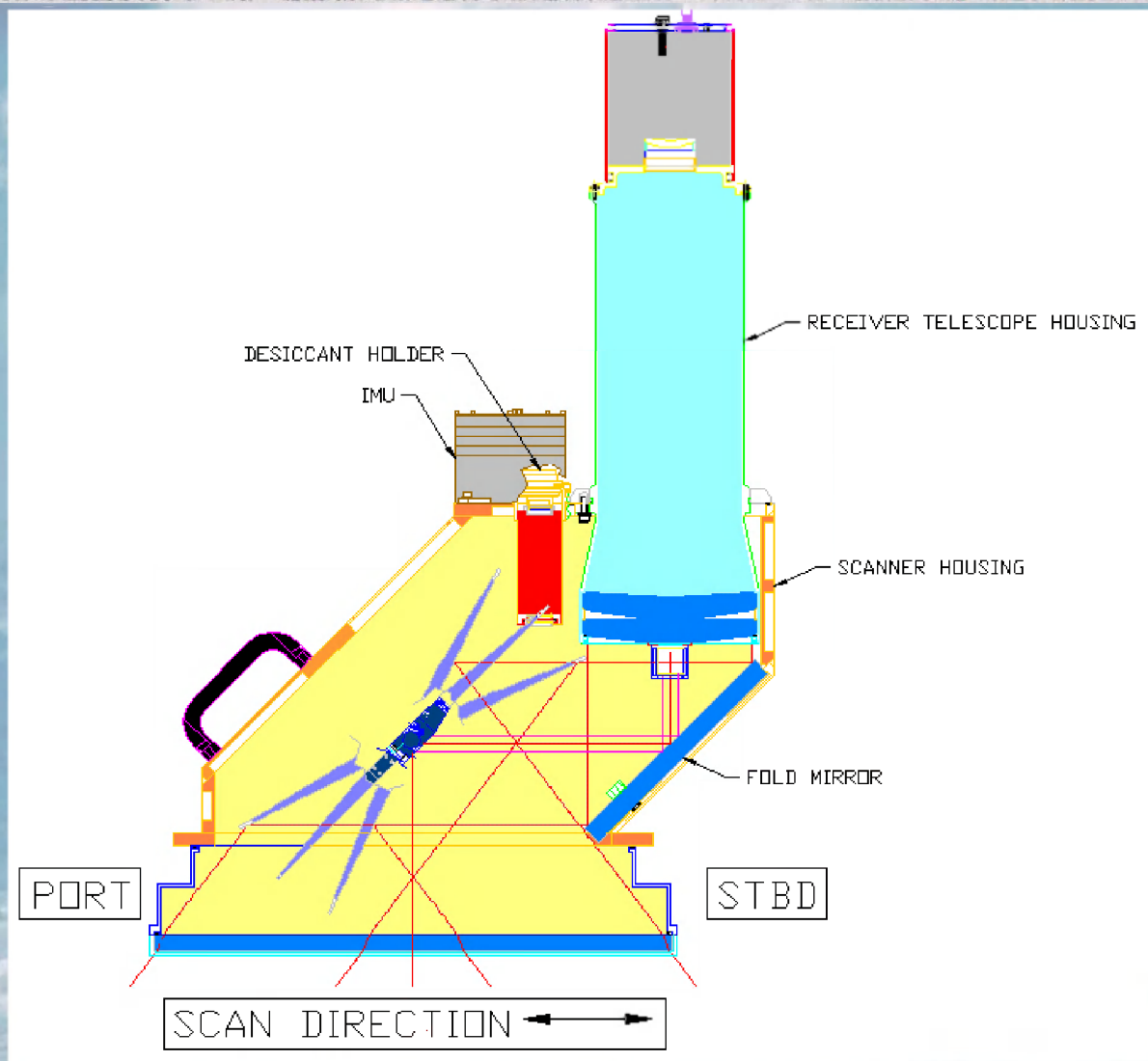
✈ T23 - situatie :
✈ 13 december 2005



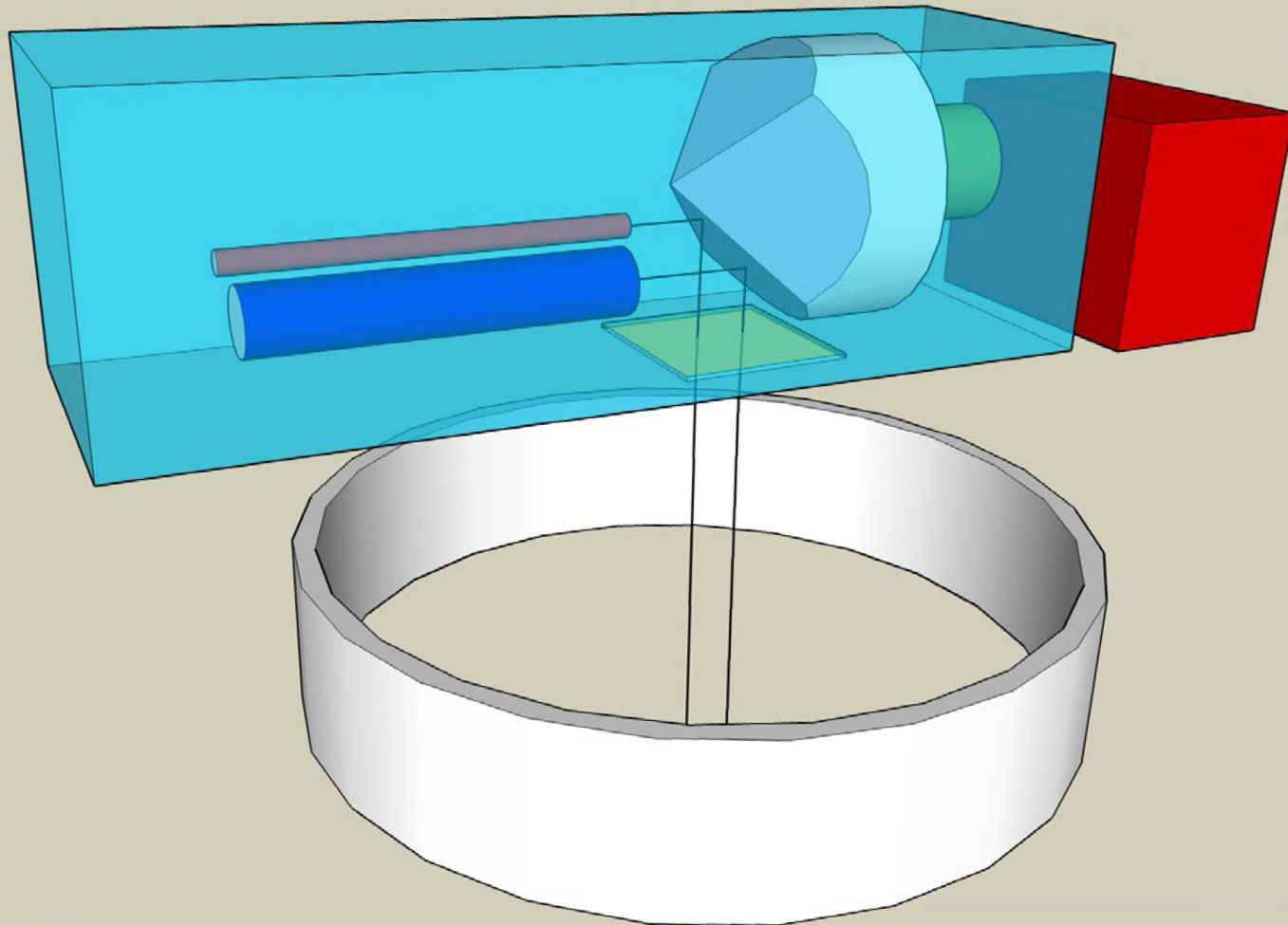


- ✈ **DGPS**
- ✈ **INS**
- ✈ **Scan optiek**
- ✈ **Laser Range Finder**







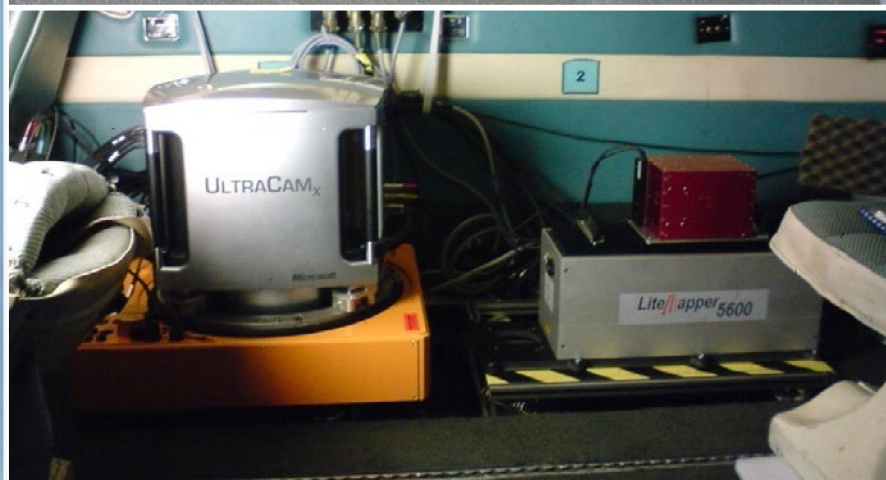


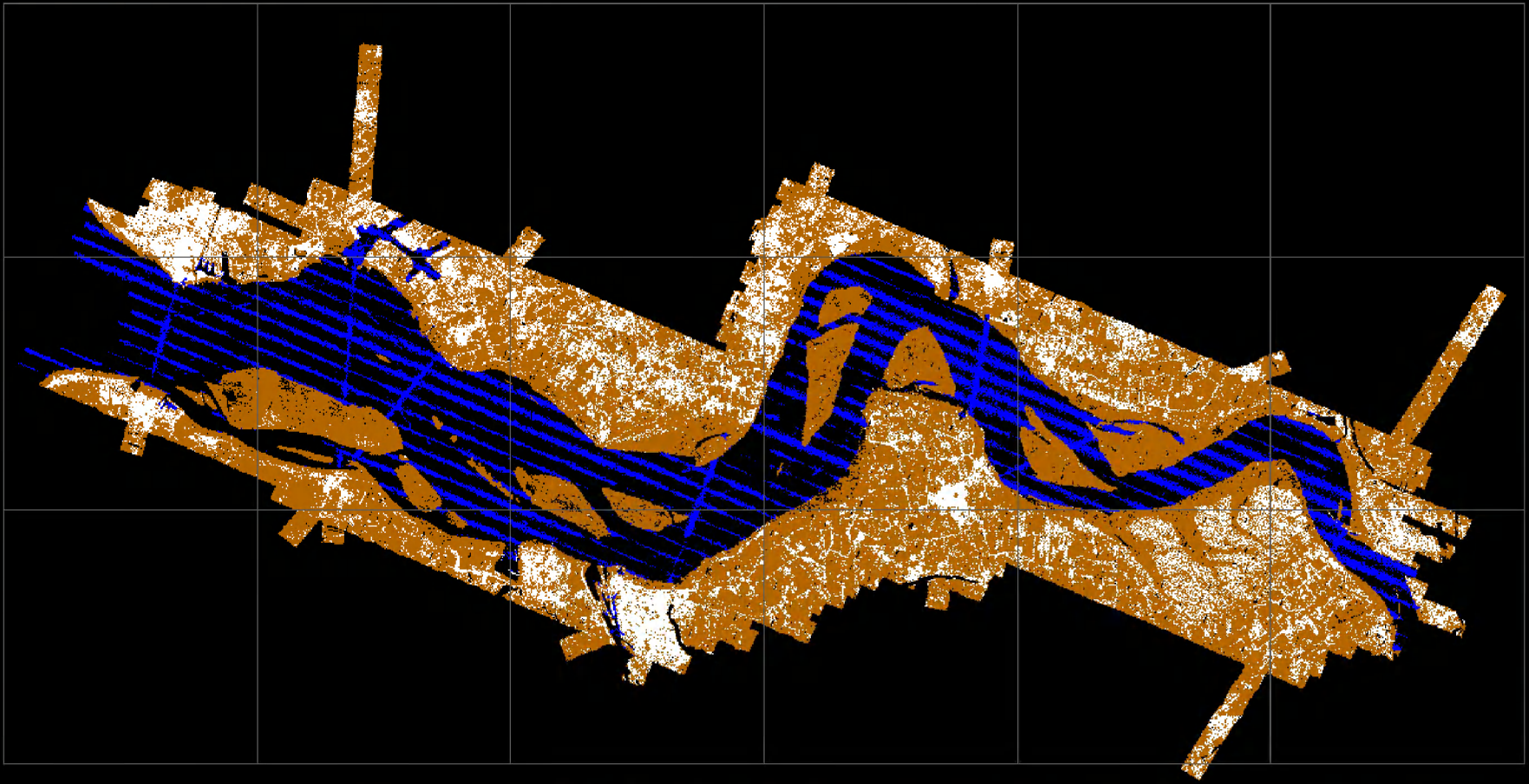


Lidar principles

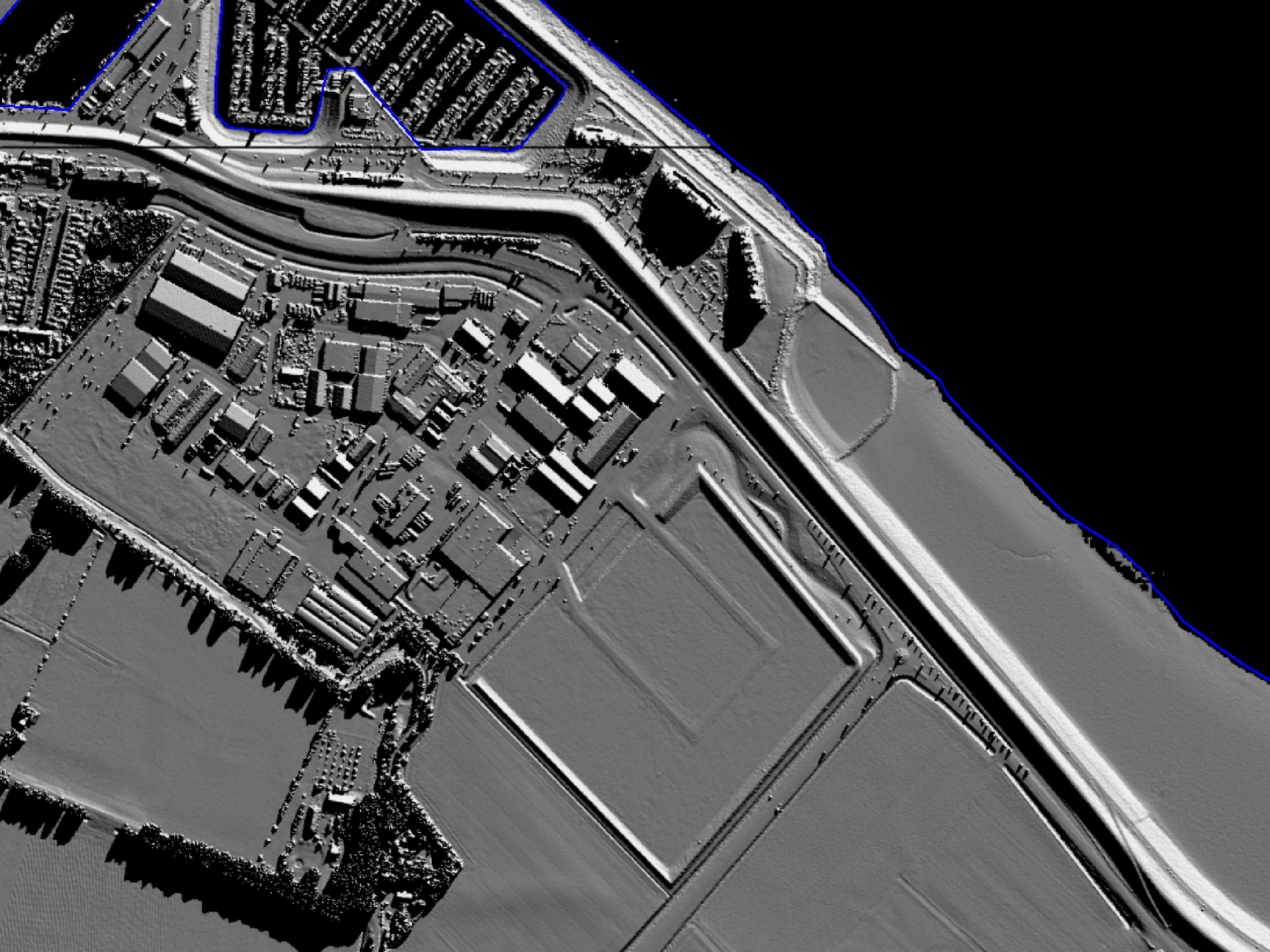
Experts in Geo Information Services





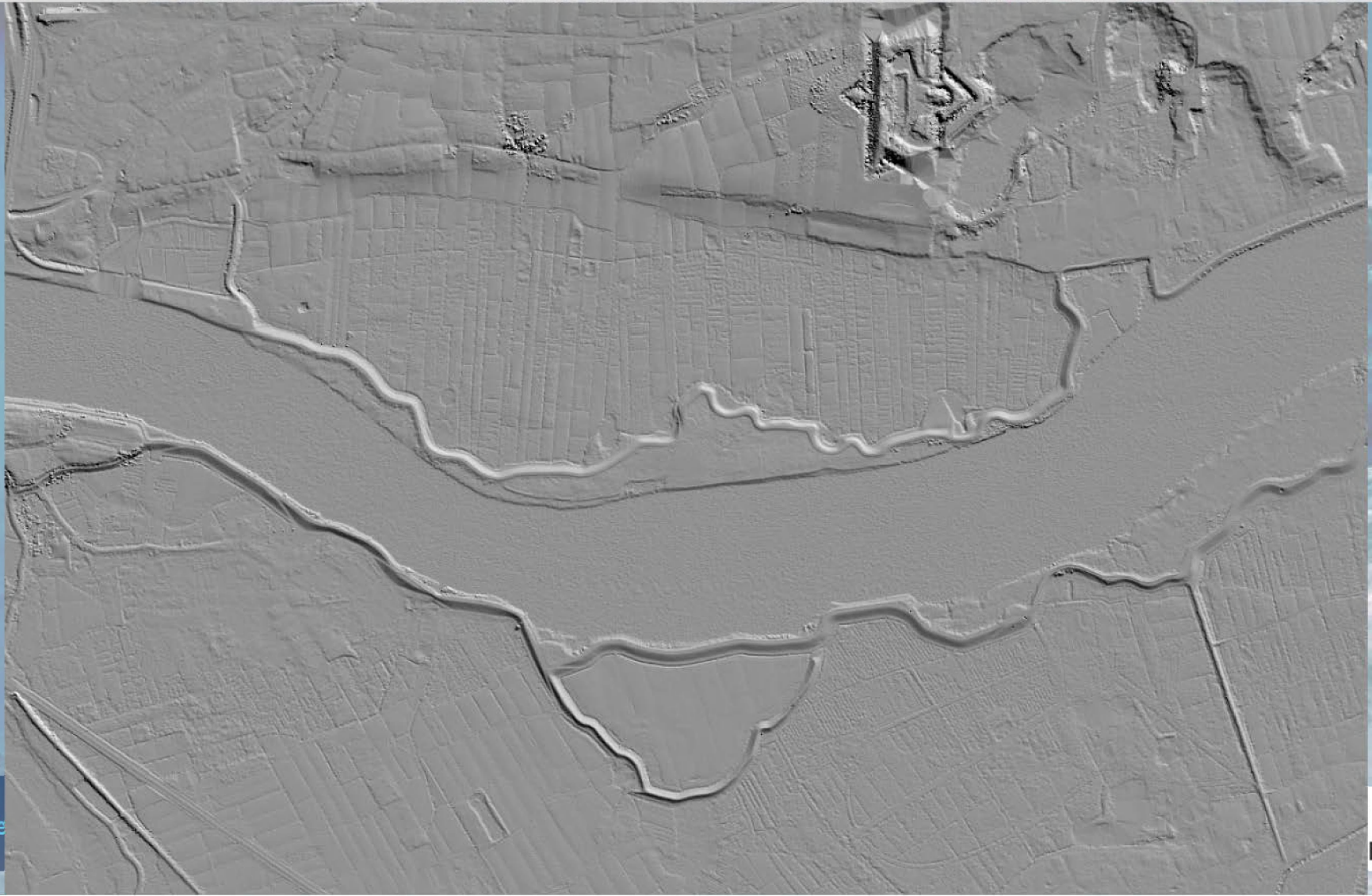










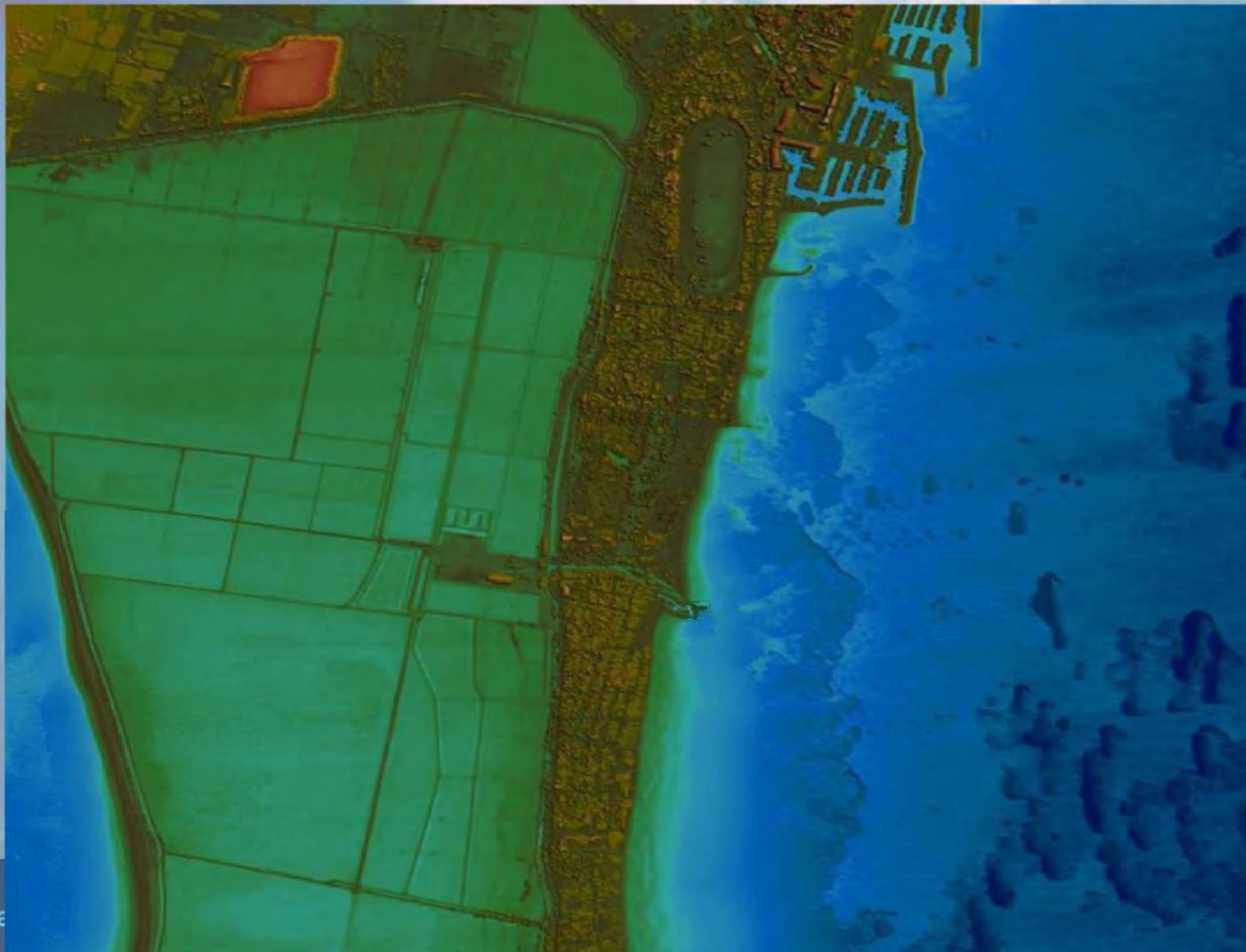




Lidar meetresultaten Bathymetrische lidar

Experts in Geo Information Services

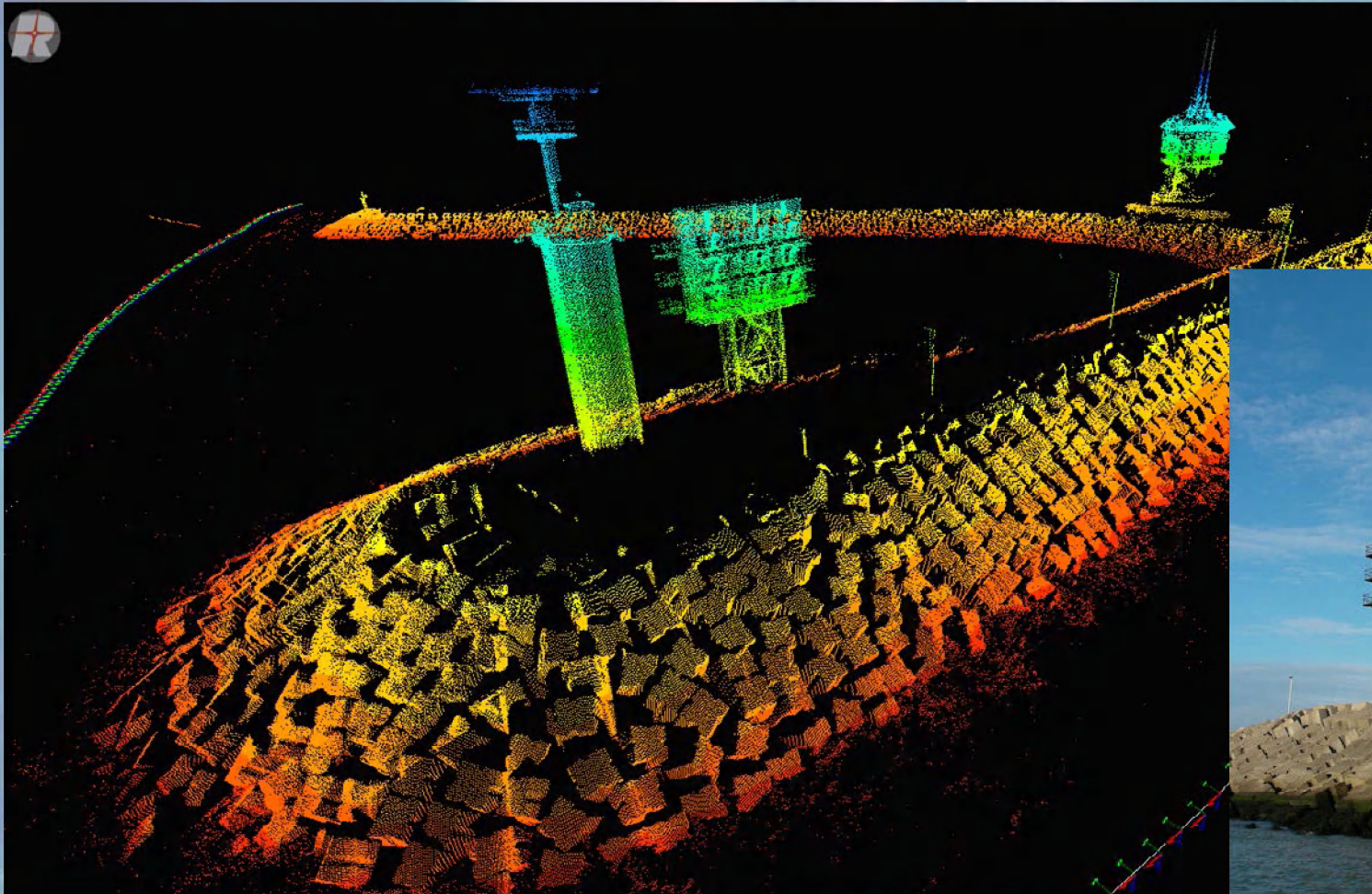




Diepte

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Eurosense's Hydrographic Activities

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