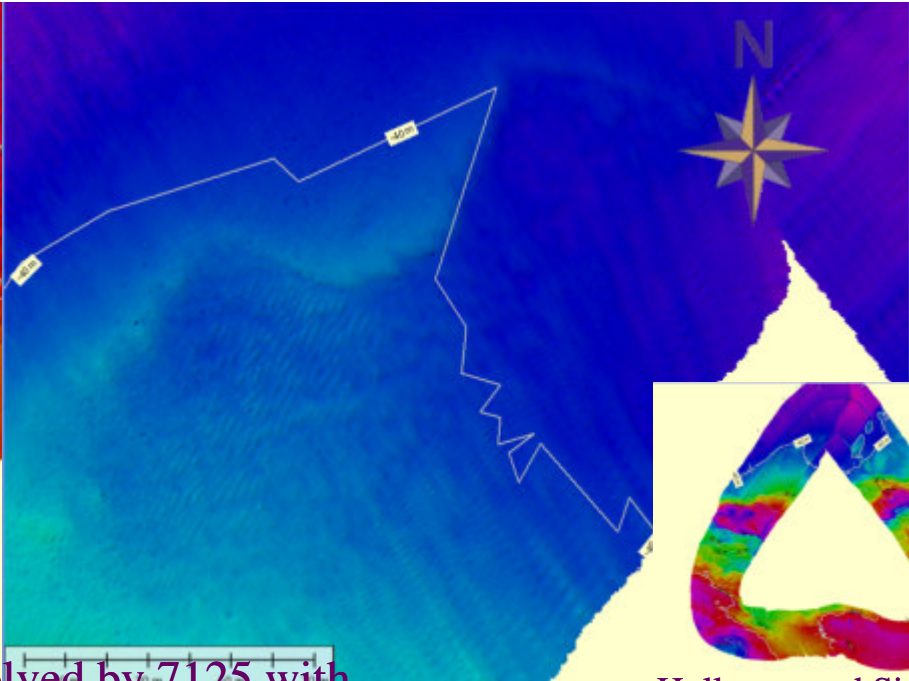
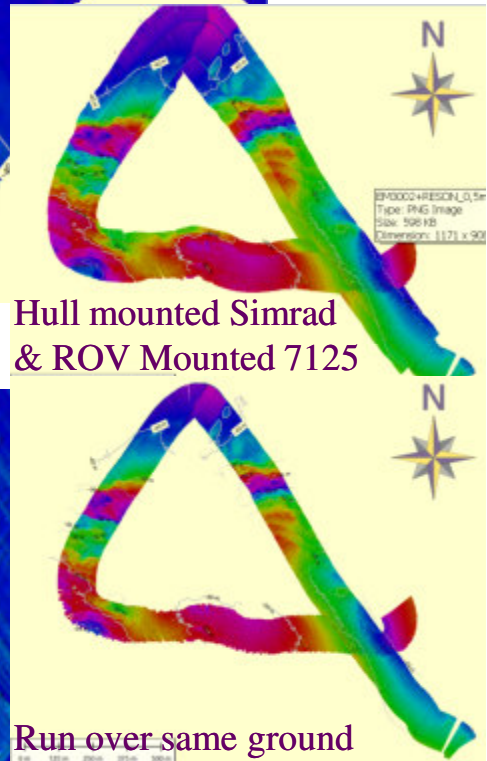


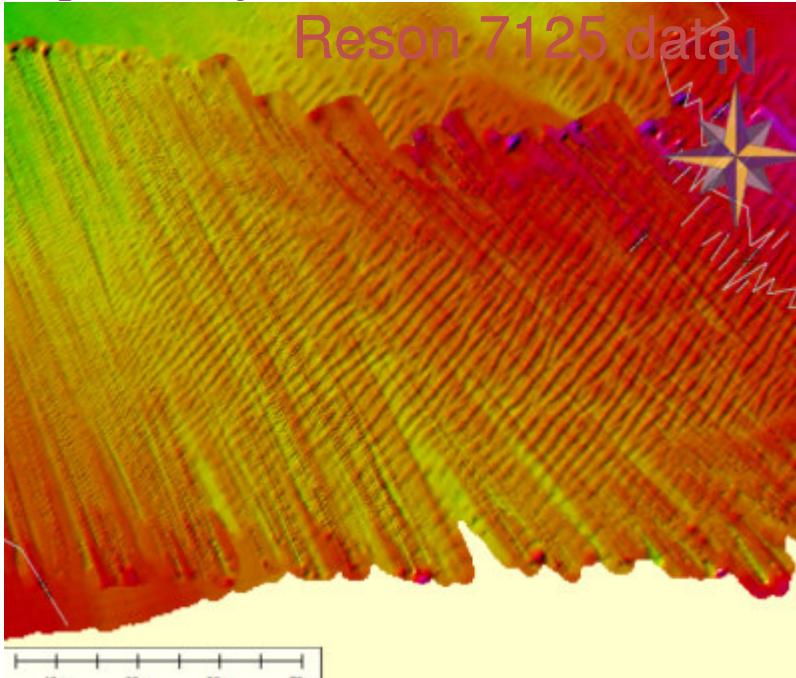
Simrad EM3002D



Hull mounted Simrad & ROV Mounted 7125



Run over same ground



Reson 7125 data



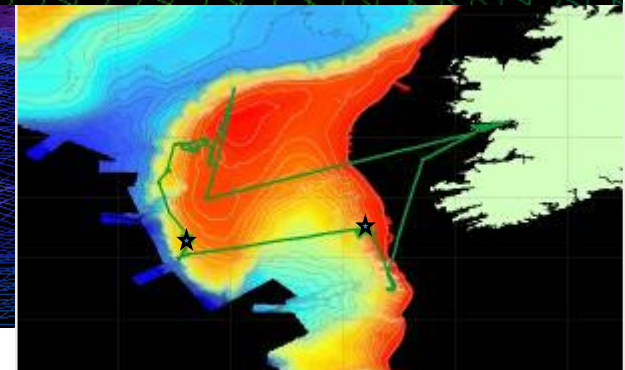
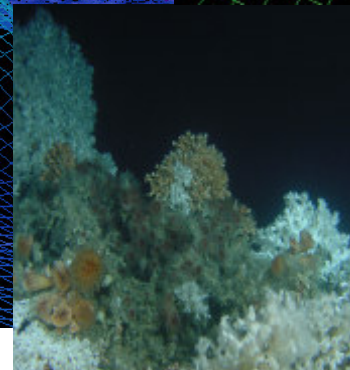
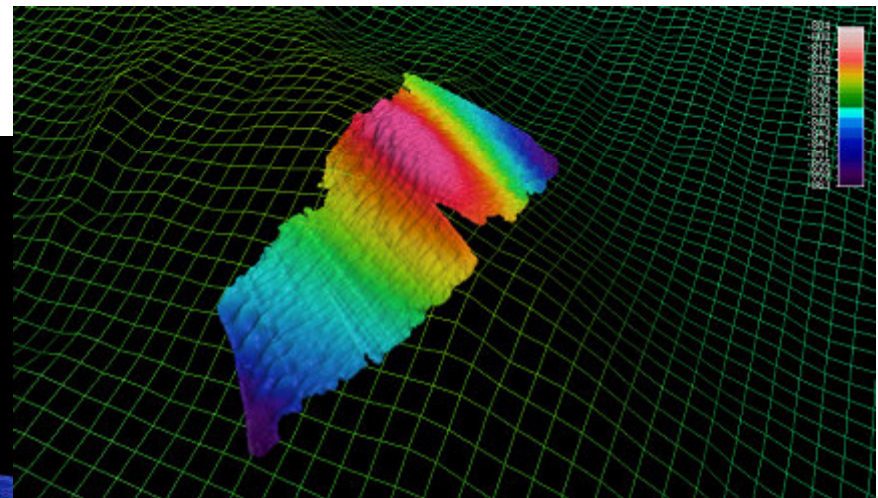
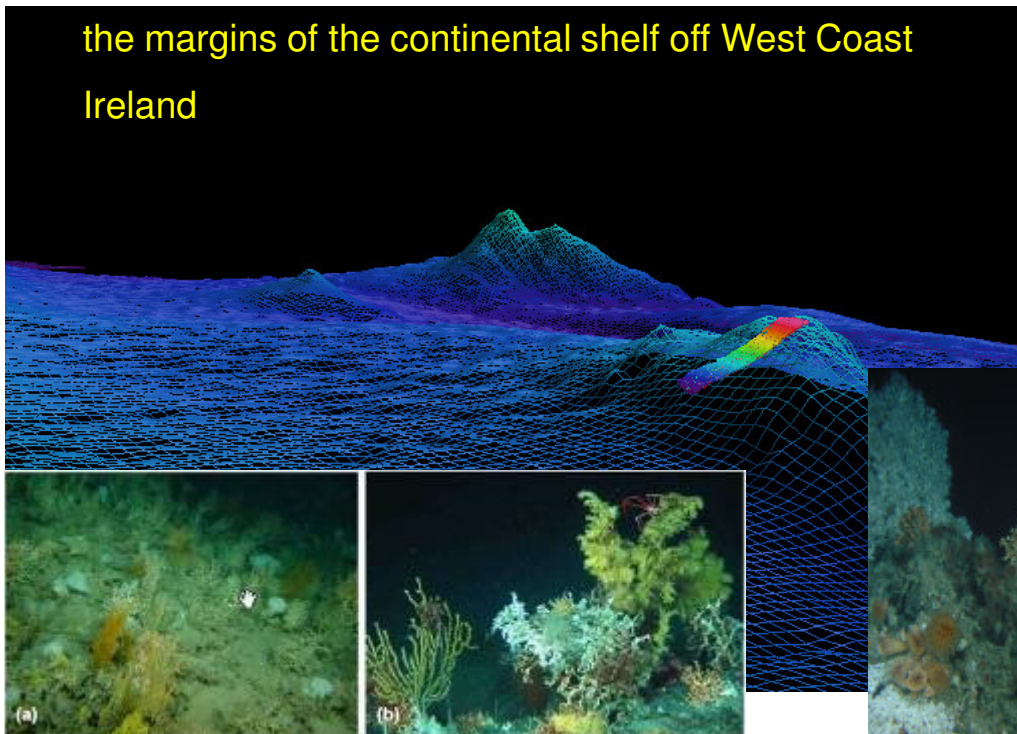
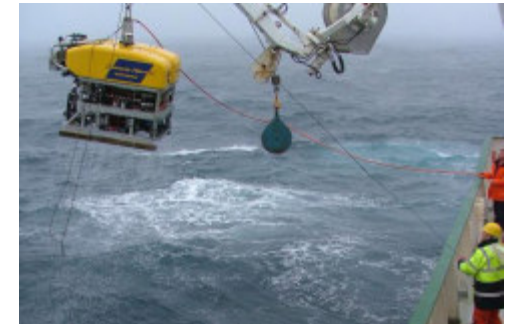
Both gridded at 0.5m.

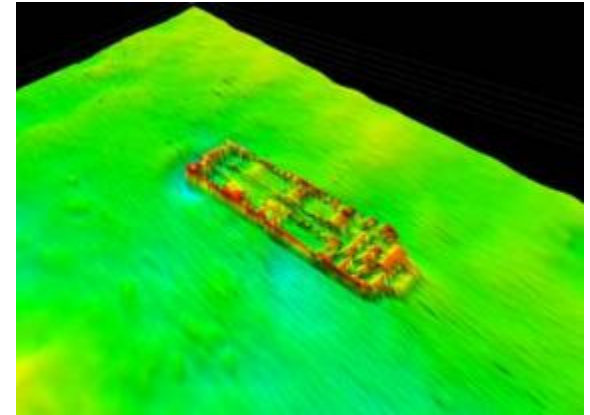
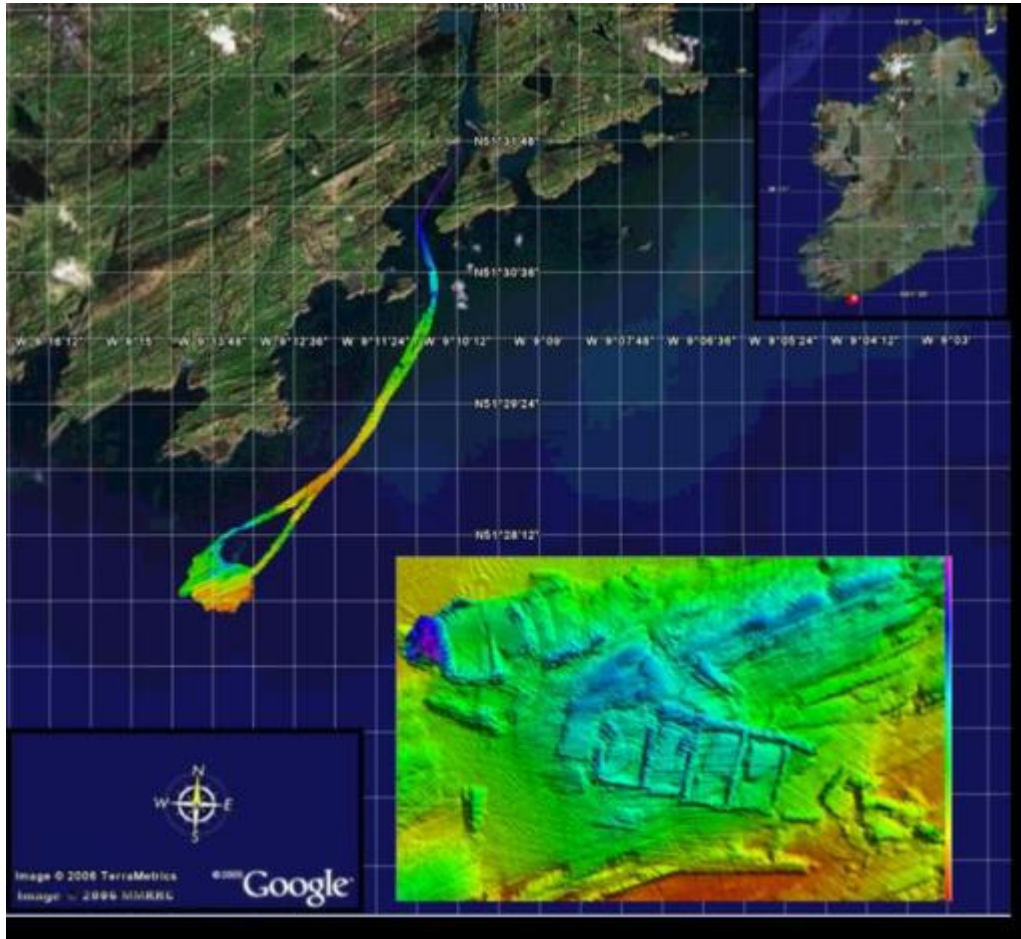
Fine details such as bedforms better resolved by 7125 with superior angular resolution (0.5 x 1.0 versus 1.5 x 1.5 (EM3002D)).

LATIS_...
Type: F...
Size: 1...
Dimens...
pixels

Deep Ocean Habitat Mapping Using an ROV

- HEA PRTL1 3 funded project 2003 – 2006 In collaboration with NUI Galway, A Grehan, C Brown.
- First Irish Led Deep Water ROV Habitat Survey Operations close to the seabed and marine structures
- High-Resolution Video and Multibeam
- Cold Water Coral Mounds discovered 800m - 1,300m at the margins of the continental shelf off West Coast Ireland





Wreck Surveys

Kowloon Bridge and Barge on Shannon

- Further research and development:
 - ROV Latis – 1,500m + winch and switch ROV power to 400Hz 2kV.
- Add Robot Arms to Latis – sampling, intervention
- Acquire High Resolution Forward Looking Sonar – Blueview or Didson Acoustic Camera
- Spin out – start-up based on ROV Latis & Smart Software
- Develop - enhance collaborations with:
NUI Galway, Marine Institute/GSI – Infomar, UCC MERC, NMCI, INS, etc.
Memorial Newfoundland, Plymouth, Rostock, Zagreb, IST Porto, etc.

Ocean Energy Research Links

- Geophysics, seabed mapping, wave/current circulation: **NUI Galway**
- Energy converter testing, test sites - **HMRC, SEAI, MI**
- Wave - vehicle interaction modelling, **NTNU - Trondheim**
- Offshore ops – **FEUP, IST Porto**
- Ocean sensor platforms, **University of Rostock**
- ROV systems: **MI-MUN, Canada**, MOU
Ireland Newfoundland Partnership: (projects in planning)
 - Integration of Ship, DP and UL ROV simulator: Oil pipe line touch down operations. Confidential!
 - Work Class Hydraulic ROV - convert to Smart ROV.
 - ROV Pilot Training, UL, MI-MUN, NMCI

Industry Links & Commercialisation

Links

- Developing wave energy converter models library for support tools
 - [Wavebob](#) – NDA, [OpenHydro](#)
- Survey of point absorber farm site and cable route to landfall
 - [Tonn Energy](#) ([Vattenfald](#), [ESBI](#), [Wavebob](#)) Plan for 1,000MW farm by 2020
- Oil & Gas – Navy (ROV Technology)
 - Brazil Embassy Dublin, Juan Carlos Parkinson: [Petrobras](#) and Brazilian Navy
 - Plus many ROV technology – ocean engineering companies

Commercialisation

- Enterprise Ireland Commercialisation: CFTD 07 313, [MPPT Ring](#) - €350k, CFTD 07 323 PulseRT, €145k
- Patent – Multi-sonar controller, through to national phase in PCT and US.
PCT Patent Application No. PCT/IE 2008/00064: "A method and apparatus for determining the topography of a seafloor and a vessel comprising the apparatus",
Riordan J, Toal D, Thurman E.

Company Spin-out

- SonarSim www.sonarsim.com

- Manual Way Point Following
- Semi-Auto Way Point Following
- Auto Way Point Following

Future Applications

