Joint Research Activities
JRA1 / JRA 2

Achievements

Gerrit Meinecke
MARUM

June 13th, 2013 - Brussels

Eurofleets

Software

Hardware

Ifremer
CSIC
CNR
OGS
MPI
MUMM
IOPAS
GeoEcoMar
MARIS

JRA 1

JRA 2

AWI
Ifremer
MARUM
MPI

JRA 1

Goal:
Development of “Up to date” software to facilitate trans-national access

Eurofleets

EARS

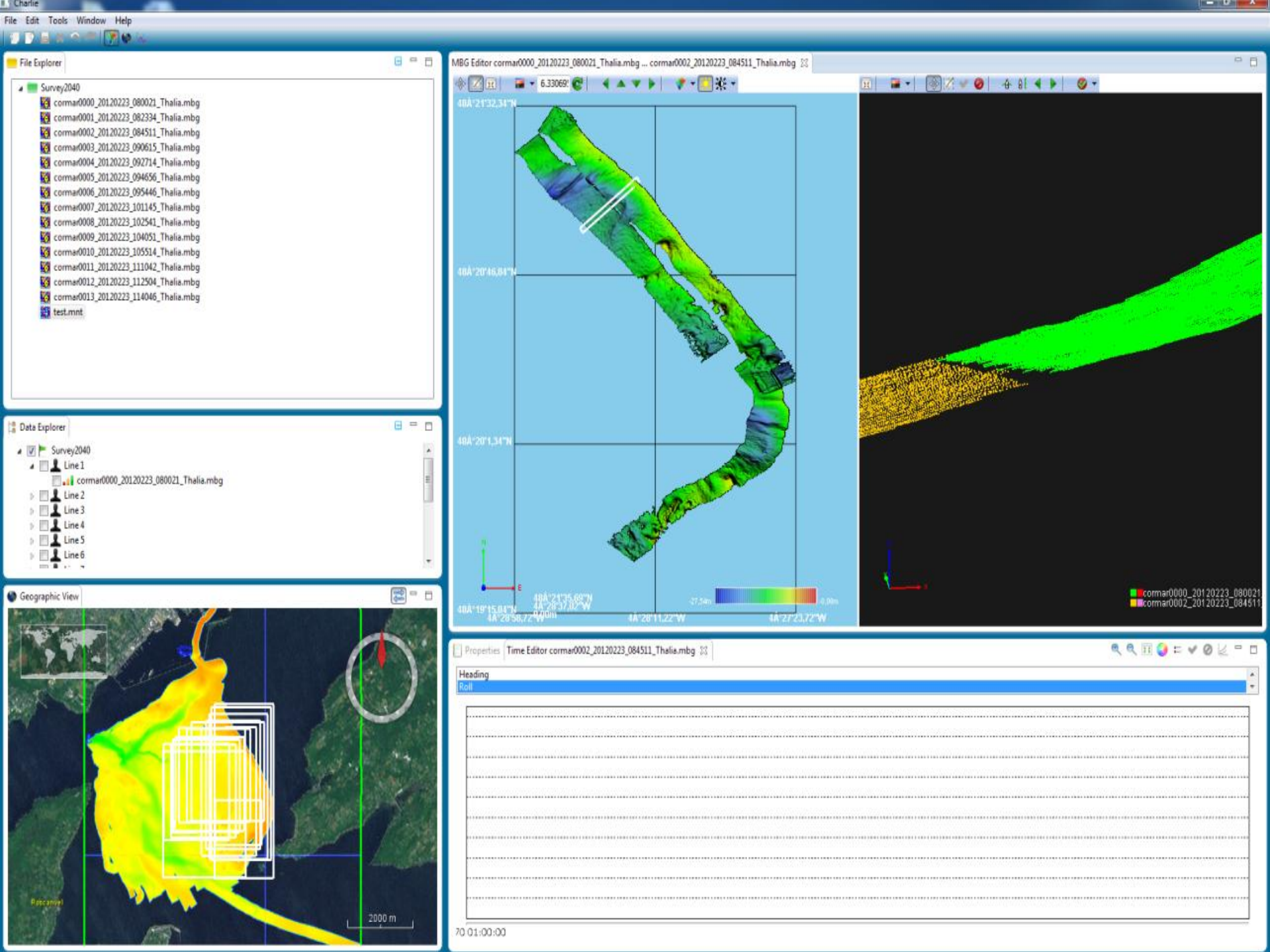
Open tree | Save tree | Create tree | Expand | Create new program | Save to file | Load from file | localhost | cruisetest1 | Choose your campaign | Save to DB | Load from DB

Personalize | Event

- Personal_Tree
  - Vessel
    - Phase_change
      - Start_transit
      - Start_track
    - At_station
      - Label
  - UnderWay_System
    - CTD_SBE_09
      - Operation
        - End_recording
        - Start_recording
          - Actor
      - Malfunction
        - Failed
  - sediment_sampler
    - Van_Veen_grab
      - Malfunction
        - Failed_too_much_stones
      - Sampling
        - Close_grab
          - Actor
          - Description
  - benthic_lander
    - Tripod
      - Malfunction
        - sensors_not_switched_on
        - instrument_not_found
        - instrument_damaged
      - Operation
        - Start_deployment
        - Start_recovery
      - Sequoia Laser In-Situ Sediment Size Transmissometer
        - Malfunction
          - Failed
        - Operation
          - Setup
            - Sensor_heigth_cm
      - CTD_SBE_09
        - Operation
          - Setup
            - Sensor_heigth_cm
        - Malfunction
          - Failed
      - ADV
        - Operation
          - Setup
            - Sensor_heigth_cm
        - Malfunction
          - Failed

Momo ×

Date	Action_Action_Property	DataProp
2012-09-27T12:50:49	Vessel :: Phase_change :: At_station :: Label	W01
2012-09-27T12:51:36	UnderWay_System :: CTD_SBE_09 :: Operation :: Start_recording :: Actor	Joan
2012-09-27T12:53:42	sediment_sampler :: Van_Veen_grab :: Sampling :: Close_grab :: Actor	Michael
2012-09-27T12:53:42	sediment_sampler :: Van_Veen_grab :: Sampling :: Close_grab :: Description	greyish mud with shell fragme
2012-09-27T12:54:10	benthic_lander :: Tripod :: Operation :: Start_deployment	
2012-09-27T12:54:19	benthic_lander :: Tripod :: CTD_SBE_09 :: Malfunction :: Failed	
2012-09-27T12:54:36	Vessel :: Phase_change :: Start_transit	
2012-09-27T12:54:39	Vessel :: Phase_change :: At_station :: Label	W03
2012-09-27T12:54:51	sediment_sampler :: Van_Veen_grab :: Sampling :: Close_grab :: Actor	
2012-09-27T12:54:51	sediment_sampler :: Van_Veen_grab :: Sampling :: Close_grab :: Description	


Charlie
File Edit Tools Window Help
File Explorer
Survey2040
cormar0000_20120223_080021_Thalia.mbg
cormar0001_20120223_082334_Thalia.mbg
cormar0002_20120223_084511_Thalia.mbg
cormar0003_20120223_090615_Thalia.mbg
cormar0004_20120223_092714_Thalia.mbg
cormar0005_20120223_094656_Thalia.mbg
cormar0006_20120223_095446_Thalia.mbg
cormar0007_20120223_101145_Thalia.mbg
cormar0008_20120223_102541_Thalia.mbg
cormar0009_20120223_104051_Thalia.mbg
cormar0010_20120223_105514_Thalia.mbg
cormar0011_20120223_111042_Thalia.mbg
cormar0012_20120223_112504_Thalia.mbg
cormar0013_20120223_114046_Thalia.mbg
test.mnt
MBG Editor cormar0000_20120223_080021_Thalia.mbg ... cormar0002_20120223_084511_Thalia.mbg
48°21'32,34"N
48°20'46,84"N
48°20'1,34"N
48°19'15,84"N
4°28'11,22"W
4°27'23,72"W
cormar0000_20120223_080021
cormar0002_20120223_084511
Data Explorer
Survey2040
Line 1
cormar0000_20120223_080021_Thalia.mbg
Line 2
Line 3
Line 4
Line 5
Line 6
Geographic View
2000 m
Properties
Time Editor cormar0002_20120223_084511_Thalia.mbg
Heading
Roll
70 01:00:00

CDIfusion and Video software

Development of a database and web based tools for the acquisition, management combined analysis of large scale genomic and contextual oceanographic data

The goal of the software is:

- to enhance the retrieval of data from database Web service Megx.net
- to add contextual information into database – CDiFusion
- to review and to annotate photos and video – Video Platform

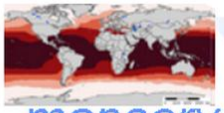
megx
marine ecological genomics

Welcome to megx.net

Megx.net allows access to integrated environmental and (meta)genomic data intended for use in marine microbial ecology

See our Video Tutorial for a guided introduction!

By integrating genomic, metagenomic and ribosomal RNA data with primary environmental data and curated metadata, we aim to offer researchers new analytical perspectives in marine ecological genomics.



mapserver

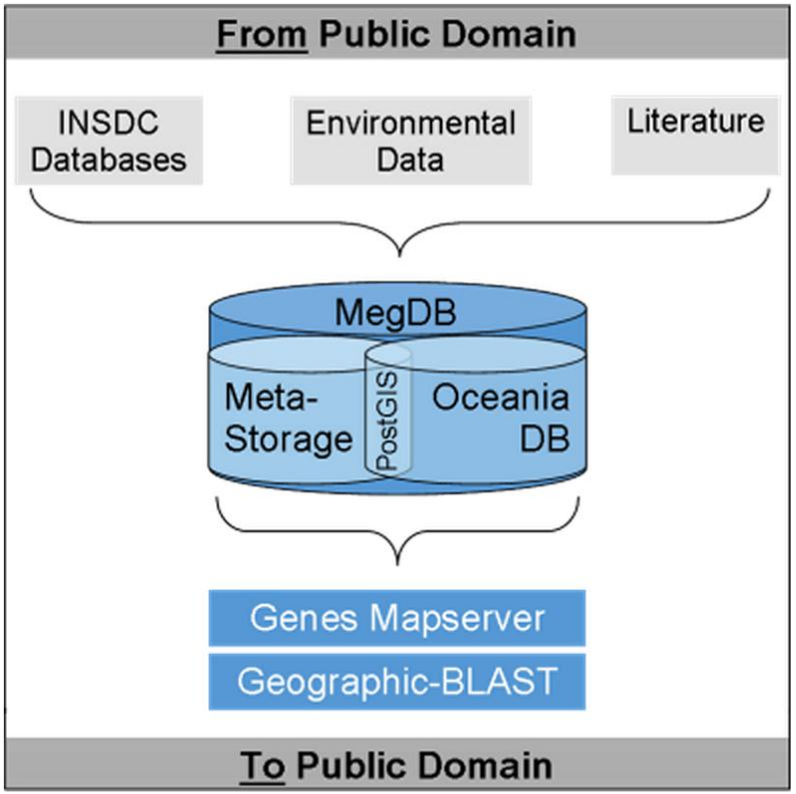
View georeferenced sampling sites in their environmental context...

GeoBLAST

BLAST your sequences against georeferenced (meta)genomes and rRNA studies to view their global distribution...

Envo-lite

Browse genome projects classified according to sampling environment...



Welcome, Marcel Zarrouk | Role: admin

Categories

- Marine Biology
- Marine Geology
- Scientific Instruments
- Marine Chemistry
- Marine Physics
- Trash
- Beauty of Deep Sea

Annotations

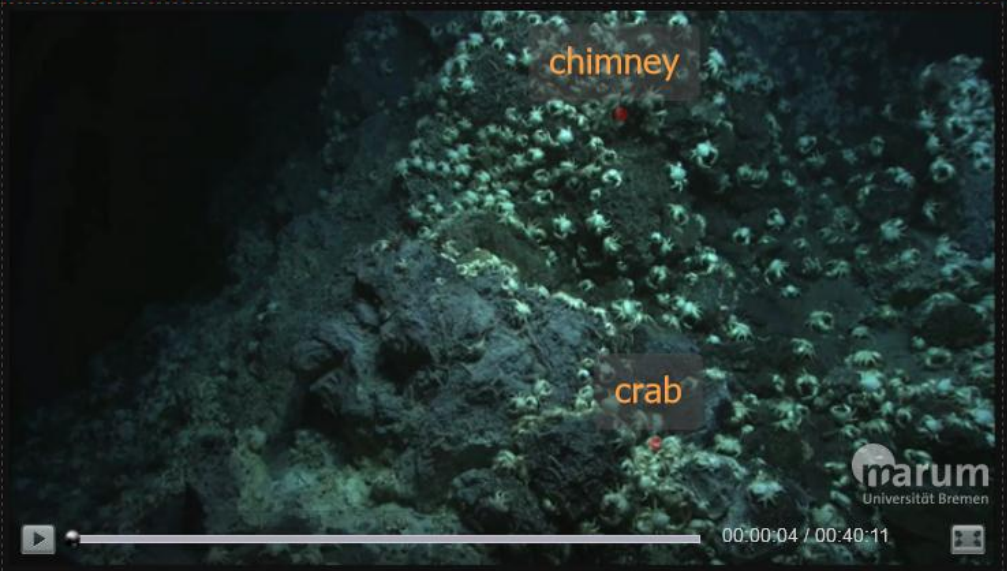
- chimney (at 3s)
- crab (at 5s)
- shrimp (at 12s)
- shimmering water (at 263s)
- shimmering water (at 293s)
- marker (at 365s)
- marker 3 (at 369s)
- bubbling site (at 847s)
- bubble box (at 1525s)

Filter

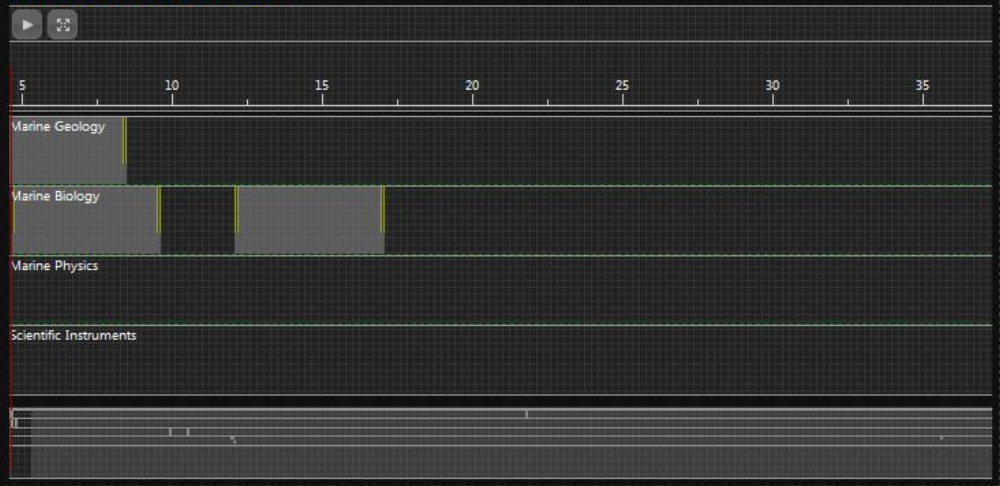
Video Time

No sequences

dive205_HD1_01



Annotations Timeline



Video Info

Name: dive205_HD1_01
Description: SO196
Duration: 00:40:11.64
Date Uploaded: 21/05/2013 12:00:00
Date Of Filming: 11/11/1111

Search Videos

GEO Search:

Click on the map to get the values!

Longitude: 33.55908035000

Latitude: 43.99219312342

Radius(KM): 2572

Time Range Filter:

Time Range: -Select Year-

Start: dd/mm/yyyy End: dd/mm/yyyy

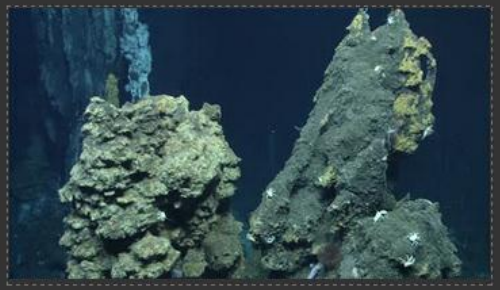
Keyword:

Keyword: Search videos by keywords

Clear search | Search

Video Search Results

Showing videos **1 - 5** of total **333**



dive312_HD1_01

SO216

Filmed by: x

Date Of Filming: 11/11/1111

Duration: 00:00:47.34

Uploaded Date: 07/06/2013 12:00:00

Video GEO Location:

Longitude: 43.086415516931

Latitude: 46.346331399209

Research area: x

Total annotations: 4

Top 10 annotations: [ray (1) , shrimp (1) , shimmering water (1) , shark (1)]

dive312_HD1_02

SO216

Filmed by: x

Date Of Filming: 11/11/1111

JRA 2

Goal:
Development of “scientific payloads” shareable among European underwater platforms

Eurofleets

Interoperable tools

BGC	Bio-Geochemical Module
ICASP	in-situ Sampling / Analyzing tool
3D-HDTV	High-End Camera System
CMPT	Common Mission Planning Tool

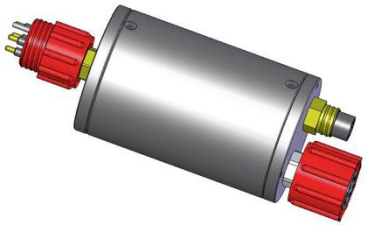
BGC – Modules MPIMM

Prototype for Sensor measurements on different underwater platforms for biogeochemical investigations in various ecosystems

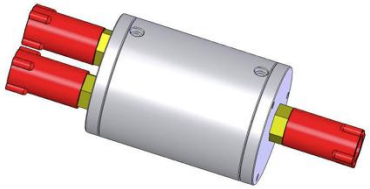
BGC-Modules: Modular system

toolbox

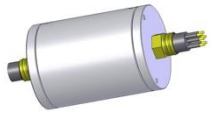
Sensor-Module
13 chemical parameter



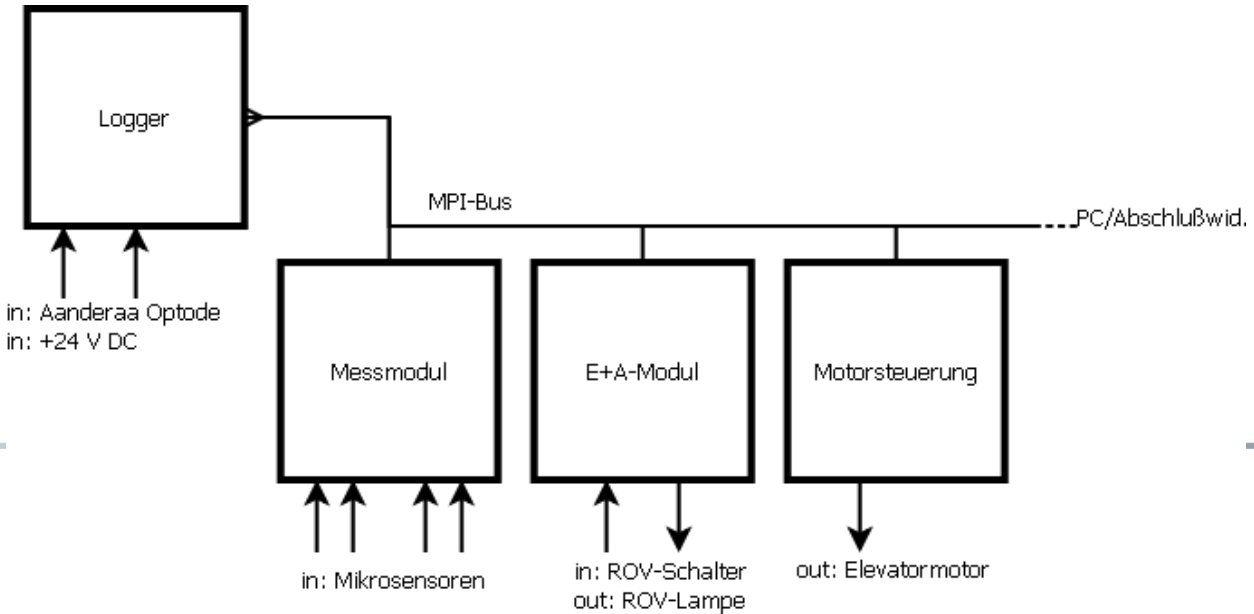
Logger-Module

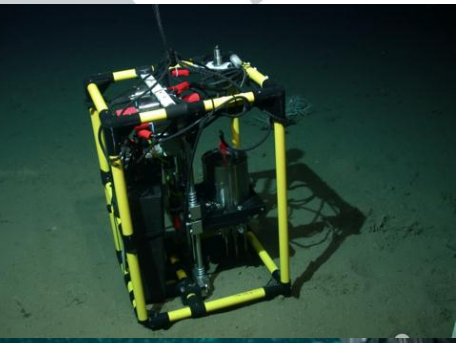


ROV-Switch/LED
-Module



Motor-Module





ROV-System:

Micro-Profiler
(autonomous mode)

Crawler-System:

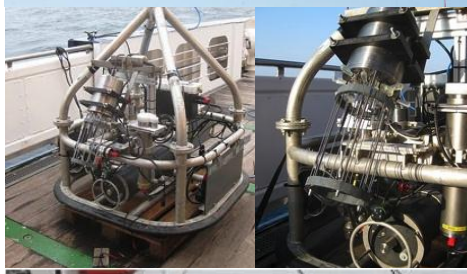
Micro-Profiler
(autonomous or
real-time mode)

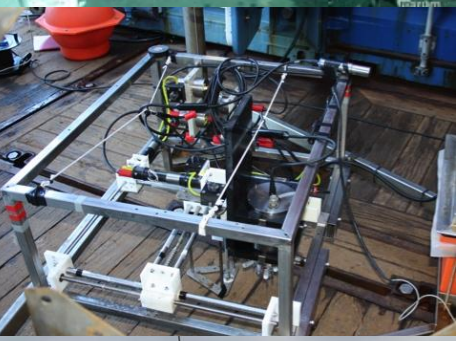
ROV-System:

Handheld
(autonomous or
real-time mode)

Meduda-System:

Handheld
(autonomous or
real-time mode)





Lander-System:

XYZ-Profiler
(autonomous mode)

OFOS-System:

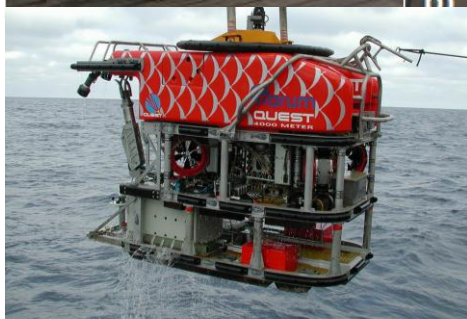
XYZ-Profiler

AUV-System:

Sensor-System
(autonomous mode)

ROV-System:

Sensor-System
(real-time mode

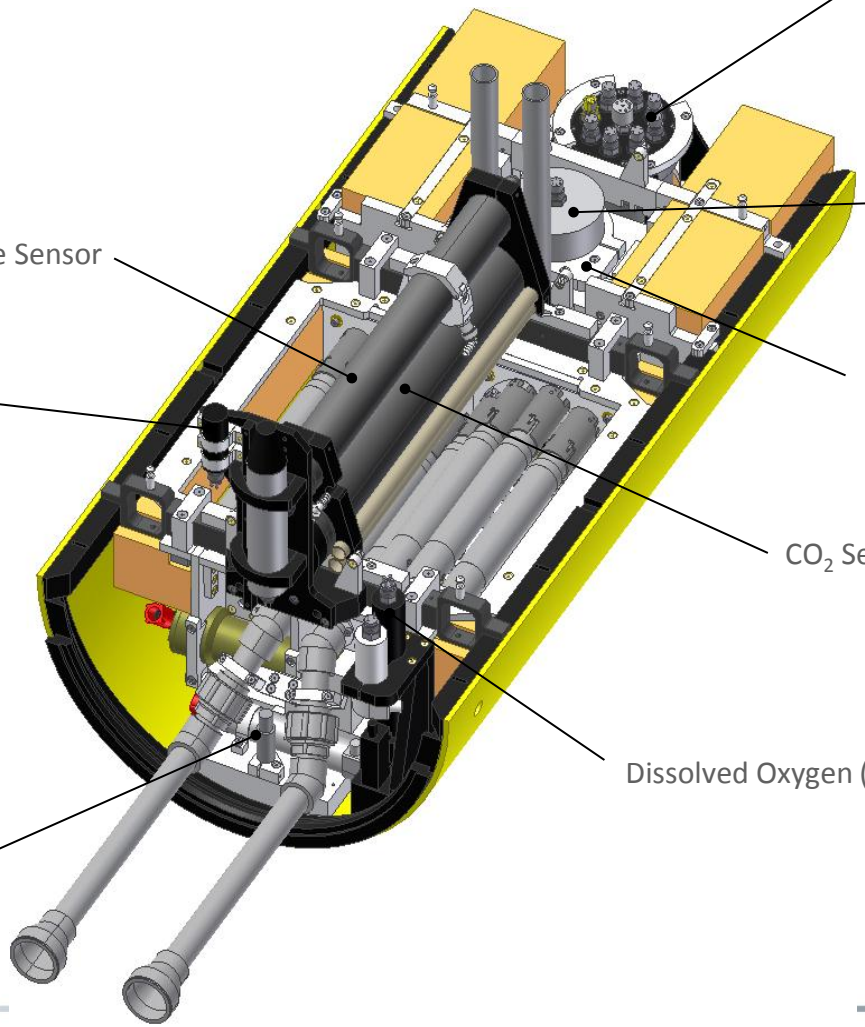


ICASP – Module

Prototype for “in-situ chemcial analysis and sampling payload”

(intention – operable on AUV’s)

ICASP and its sensors (2012)



Payload Control Computer (PCC)
ICASP´s core unit

BGC Module
EUROFLEETS contribution of the Max Planck Institute for Marine Microbiology (MPIMM)

Nitrate Sensor

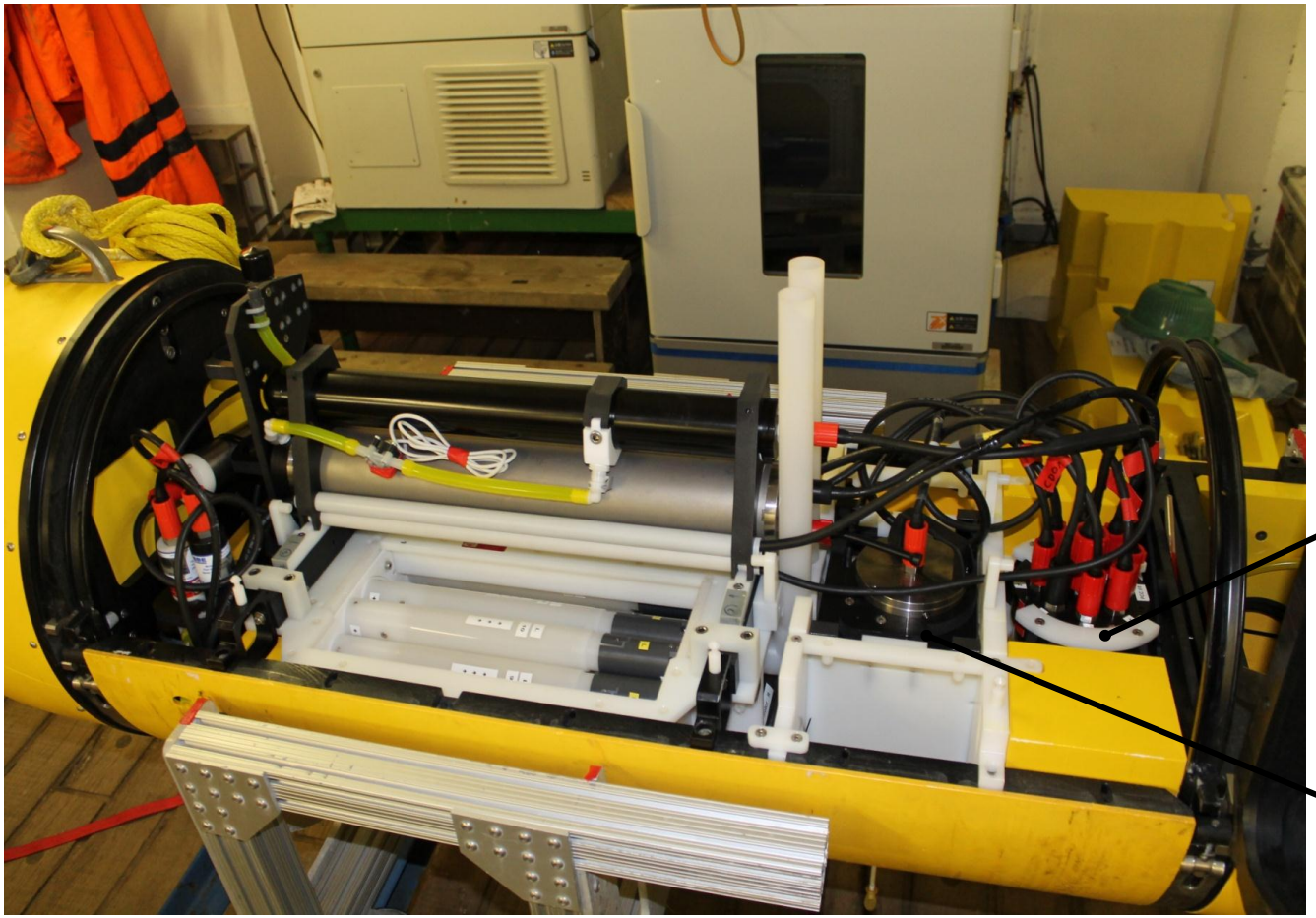
Photosynthetically Active Radiation (PAR) Sensor

Fluorometer (Chl-a)
(Underneath the BGC module)

CO_2 Sensor

Dissolved Oxygen (DO) Sensor

Colured Dissolved Organic Matter (CDOM) Sensor


PCC / ICASP
BGC Module

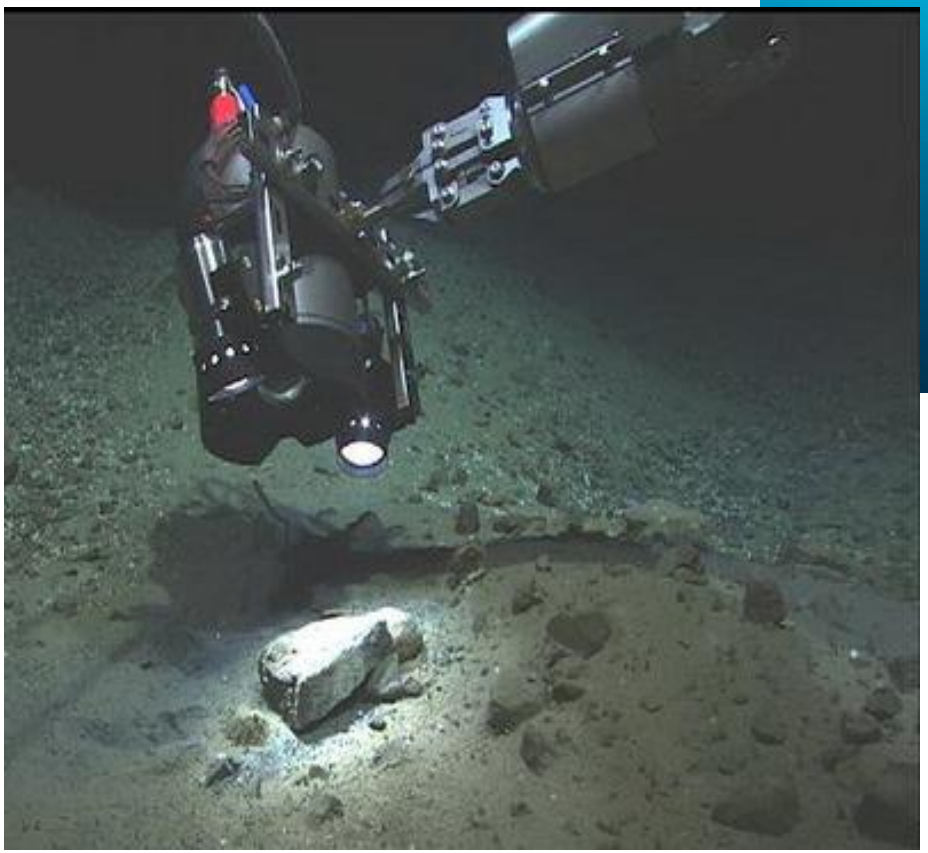
AWI – AUV in operation with BGC

3D-HDTV Camerasystem

Prototype for an “ultra-compact high-end HD camera-system”, designed to be used for 3-dimensional real-time video imaging

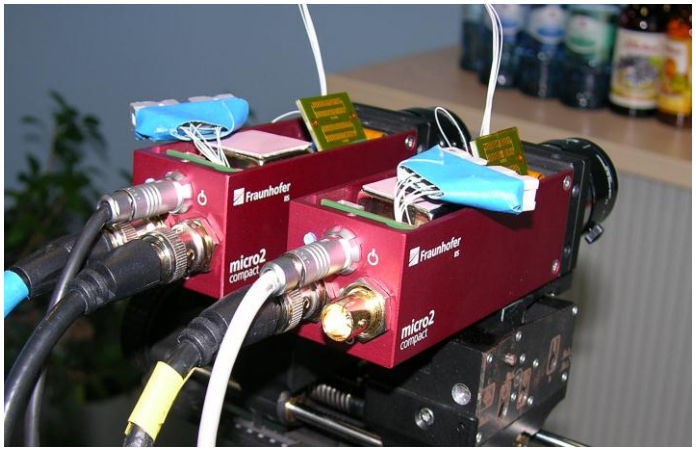
(intention – used on ROV’s or observatories)

3D HD Operational Mode:
Manipulator-mounted “3D Inspection”



Example:
MPI- digital still “MegaCam” held by Marum QUEST Orion manipulator for extreme detailed close-up photography

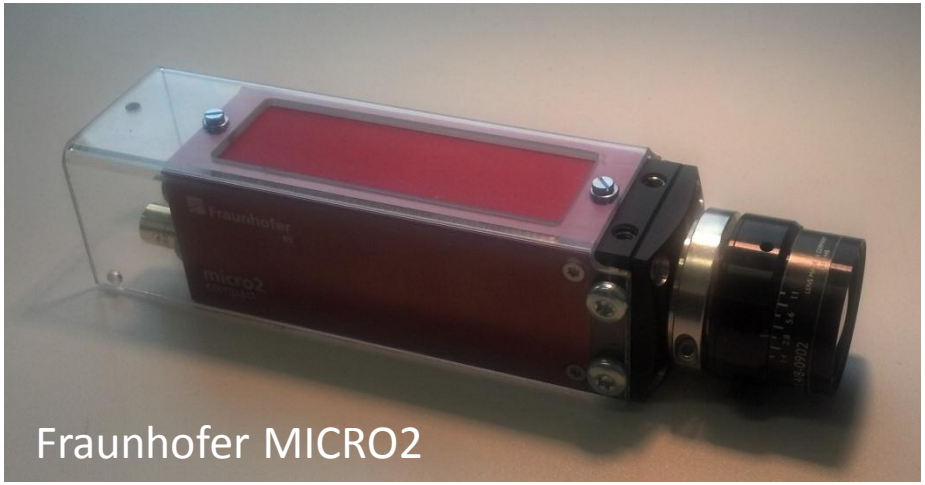
3D HDTV Camera System

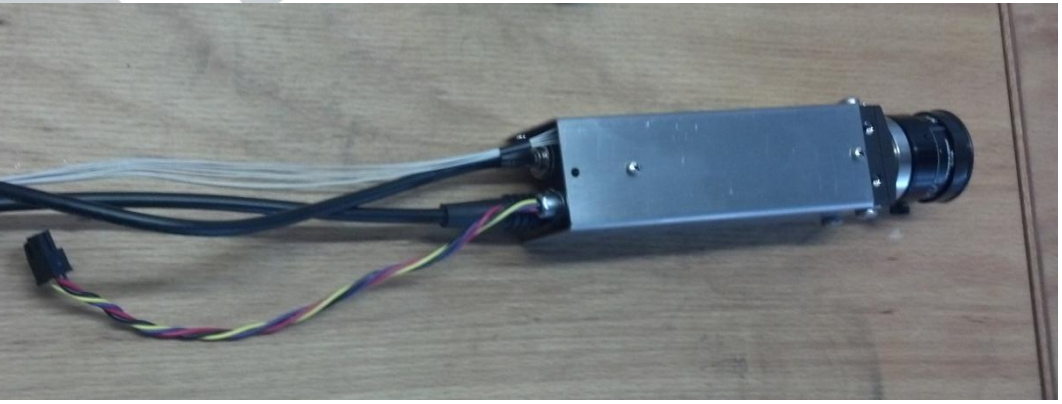


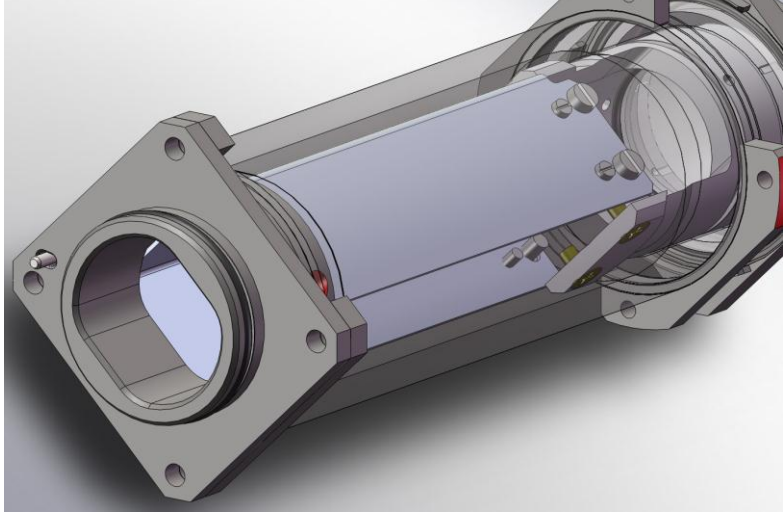
2011 – functional Prototype at Fraunhofer IIS, Erlangen

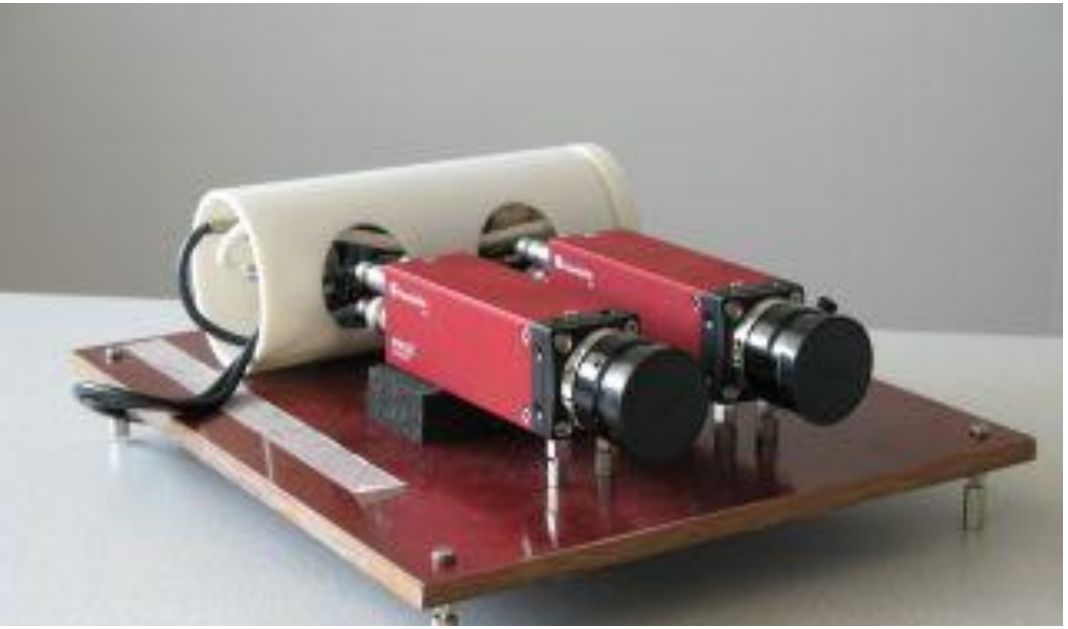
Challenge:

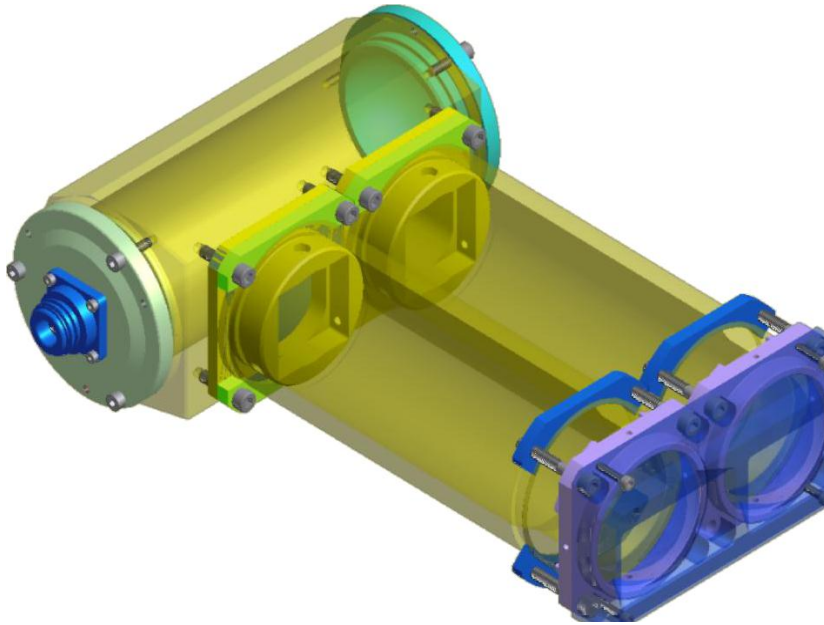
- **find a small „high-end“ HD cameras**
- **integrate them in „near eye distance“**
- **merge 2 HD signals into 1 HD stream**
- **transmit 1 combined 3D signal**
- **view 3D HD stream quality in „real time“**









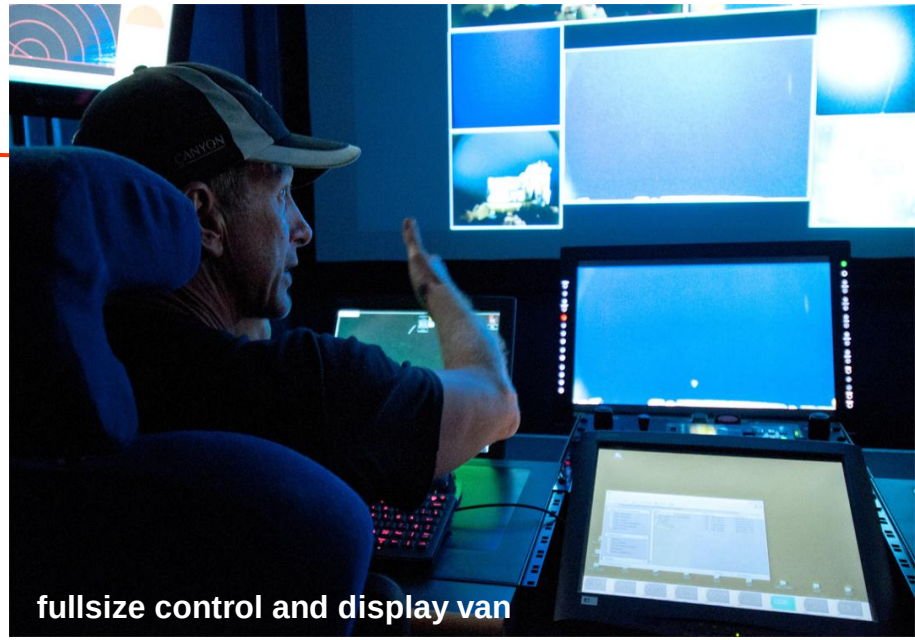


3D HD Testbed with final camera version
for housing design and optical path definition

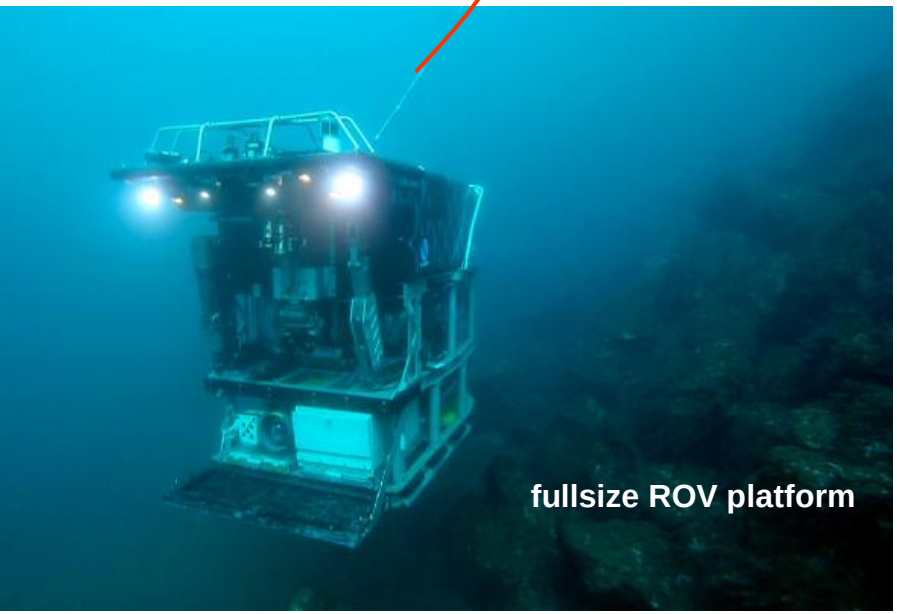
2 SME‘s involved for housings

Topside Display Path 1: “Broadcast“ Quality

1 x HD-SDI Videosignal


fullsize control and display van

ROV IP Telemetry


fullsize ROV platform

3D-capable Monitor:
Polarized Stereo Glasses
or 3D Projection
others possible

Topside Display Path 2: Small Systems
„Easy View“

3D Display on Consumer Laptop via Bino Player
Free OpenSource Project **http://bino3d.org**


small ROV platform

transparent
ROV IP
Telemetry

Simple laptop

Common Mission Planning Tool

Prototype for a mission planning tool

Goal – a tool for mission planning

Interoperable (institute, vessel, smart-phone)

ready for **Multi-vehicle use** (AUV, Glider, ROV, ….)

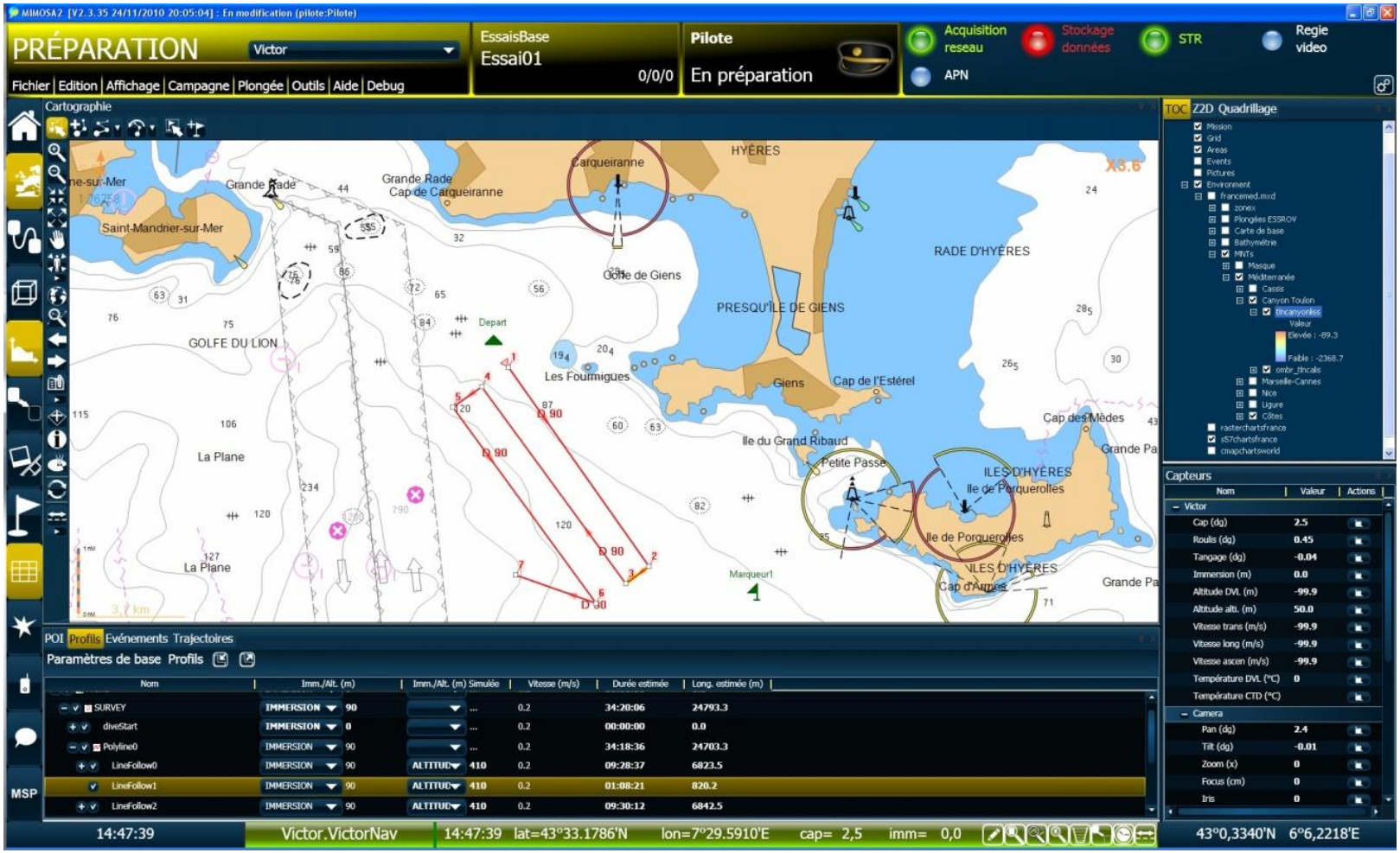
to be used by **Scientists and Operator**

capable for **Missing planning and observation**

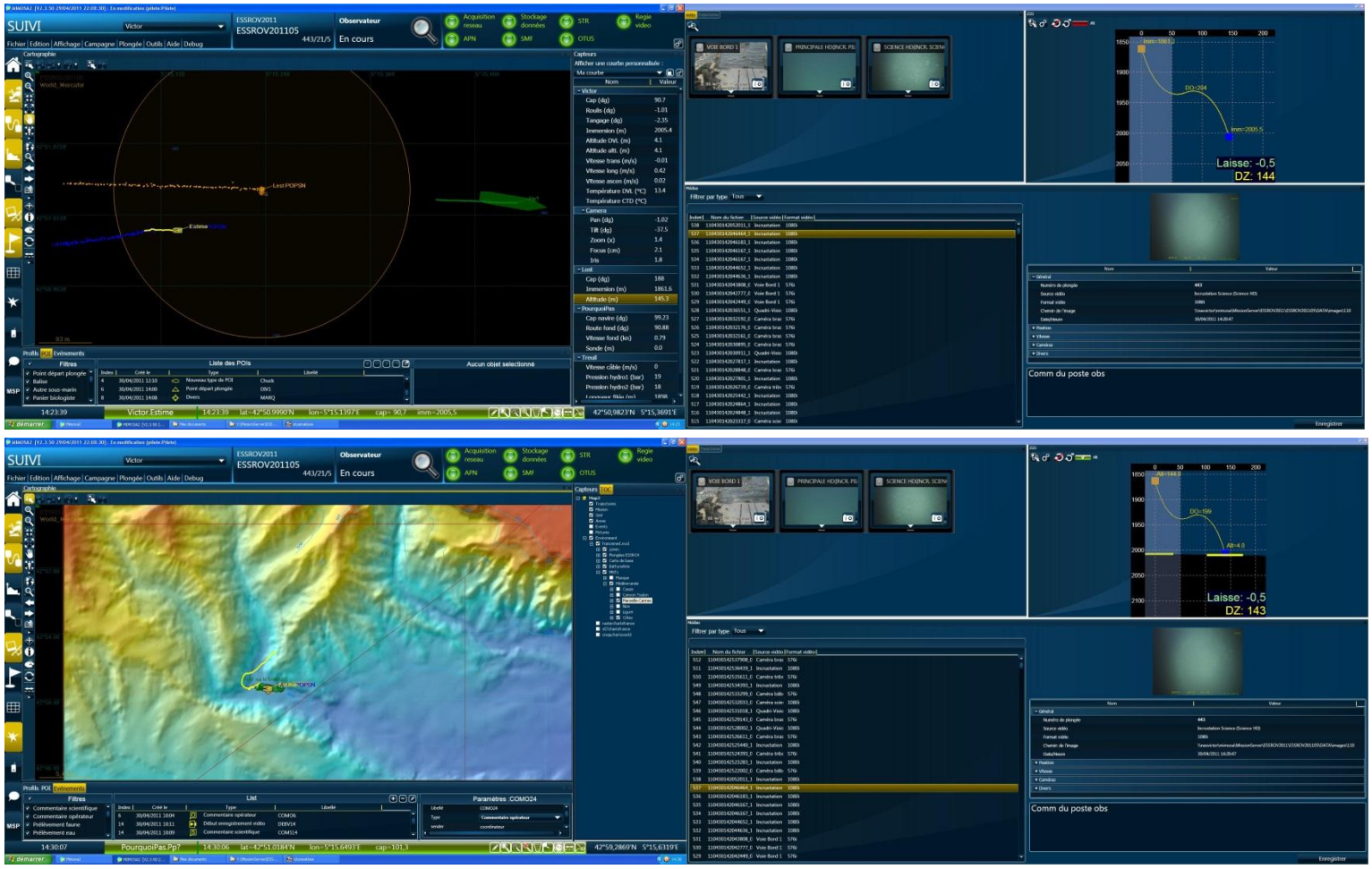
capable for **Data display**

capable to feed in **external** signals (video, still pictures, ..)

mission planning



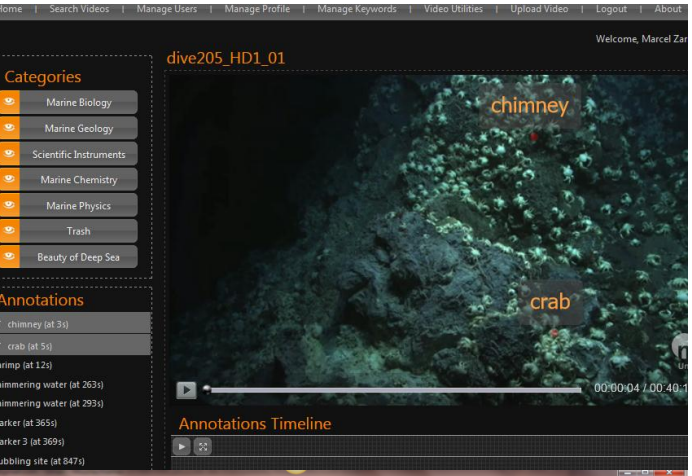
control and observation

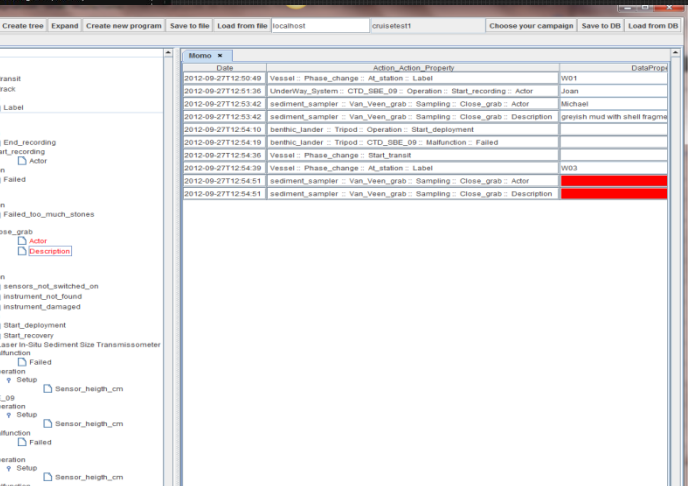


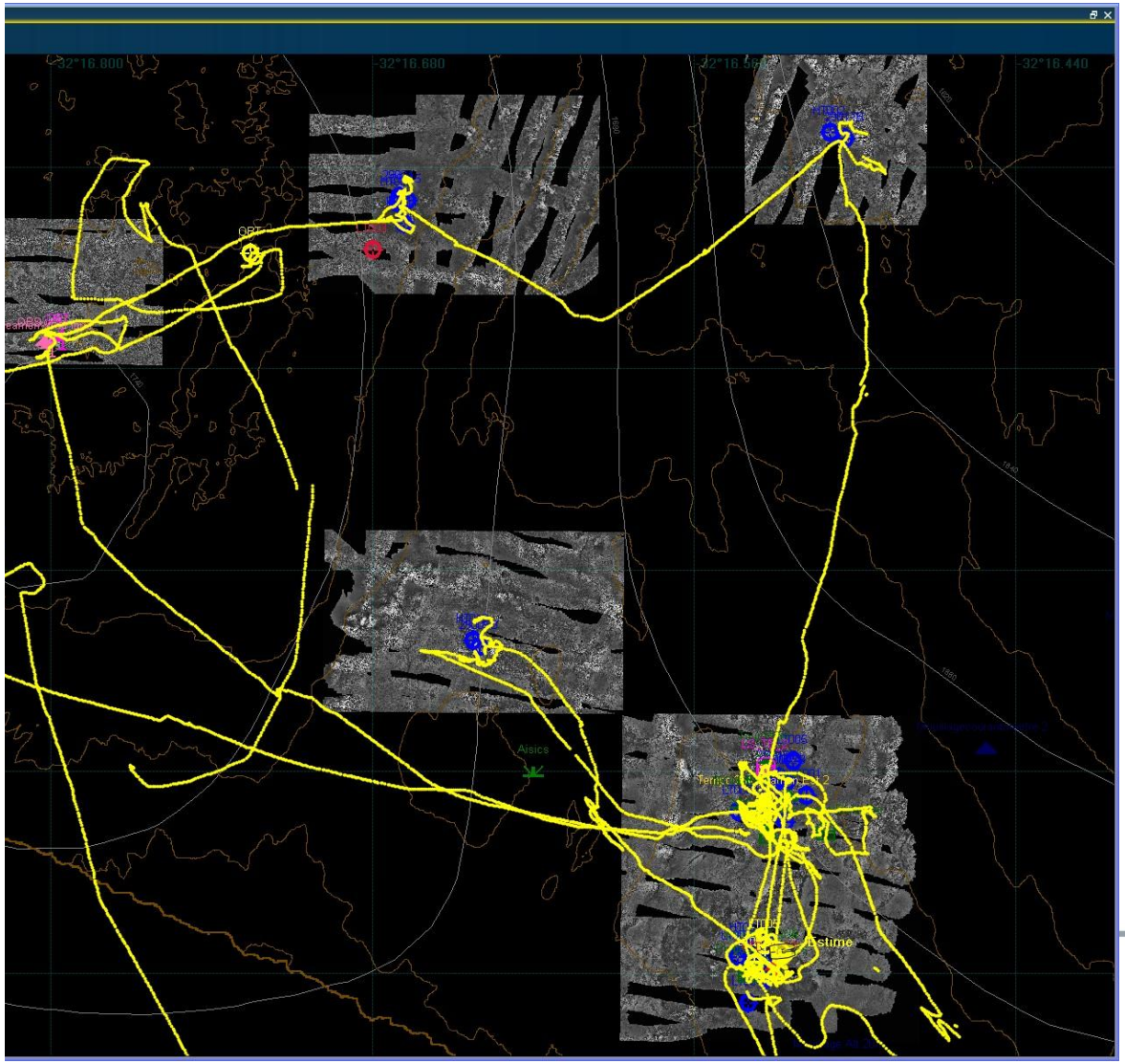
data display

Conclusion


Victor
EssaisBase
Essai01
Pilote
En préparation
Acquisition reseau
Stockage données
STR
Regie video
APN
HYERES
RADE D'HYERES
PRESQU'ILE DE GIENS
ILES D'HYERES
Victor.VictorNav


Home | Search Videos | Manage Users | Manage Profile | Manage Keywords | Video Utilities | Upload Video | Logout | About
Welcome, Marcel Zar
Categories
Marine Biology
Marine Geology
Scientific Instruments
Marine Chemistry
Marine Physics
Trash
Beauty of Deep Sea
Annotations
chimney (at 3s)
crab (at 5s)
dive205_HD1_01
chimney
crab
Annotations Timeline


Create tree
Expand
Create new program
Save to file
Load from file
Choose your campaign
Save to DB
Load from DB
Momo
Date
Action_Action_Property
DataProp


32°16.600
32°16.680
32°16.440
Aisics
Estime

Outreach and dissemination

Search Videos

GEO Search

Click on the map to get the values!

Longitude: 33.55908035000

Latitude: 43.99219312342

Radius(KM): 2572

Time Range Filter

Time Range: -Select Year-

Start: dd/mm/yyyy End: dd/mm/yyyy

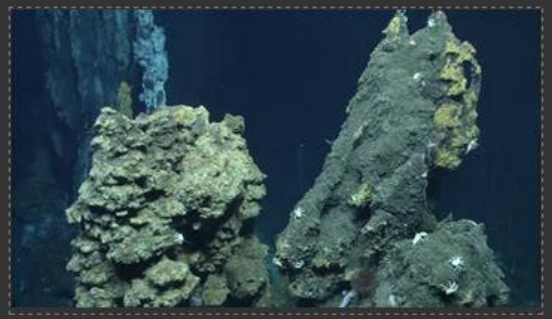
Keyword

Keyword: Search videos by keywords

Clear search | Search

Video Search Results

Showing videos **1 - 5** of total **333**



dive312_HD1_01

SO216

Filmed by: x

Date Of Filming: 11/11/1111

Duration: 00:00:47.34

Uploaded Date: 07/06/2013 12:00:00

Video GEO Location:

Longitude: 43.086415516931

Latitude: 46.346331399209

Research area: x

Total annotations: 4

Top 10 annotations: [ray (1), shrimp (1), shimmering water (1), shark (1)]


Thank you for your kind attention!