ACTIVE HEAVE COMPENSATION

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UNOLS East Coast Winch Pool

Purpose

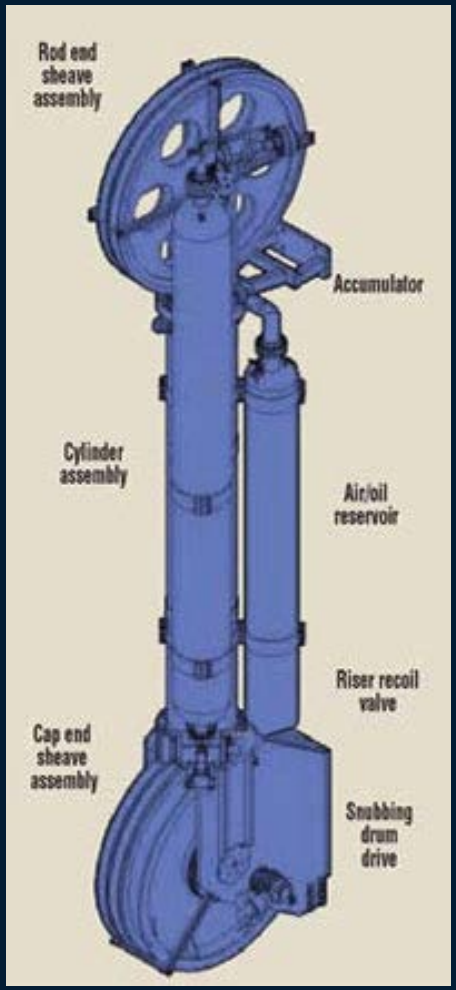
Why

- Reduce Package Movement
  - ROV Docking
  - Steady Sampling
- Remove Slack Conditions
- Alleviate Snap Loading

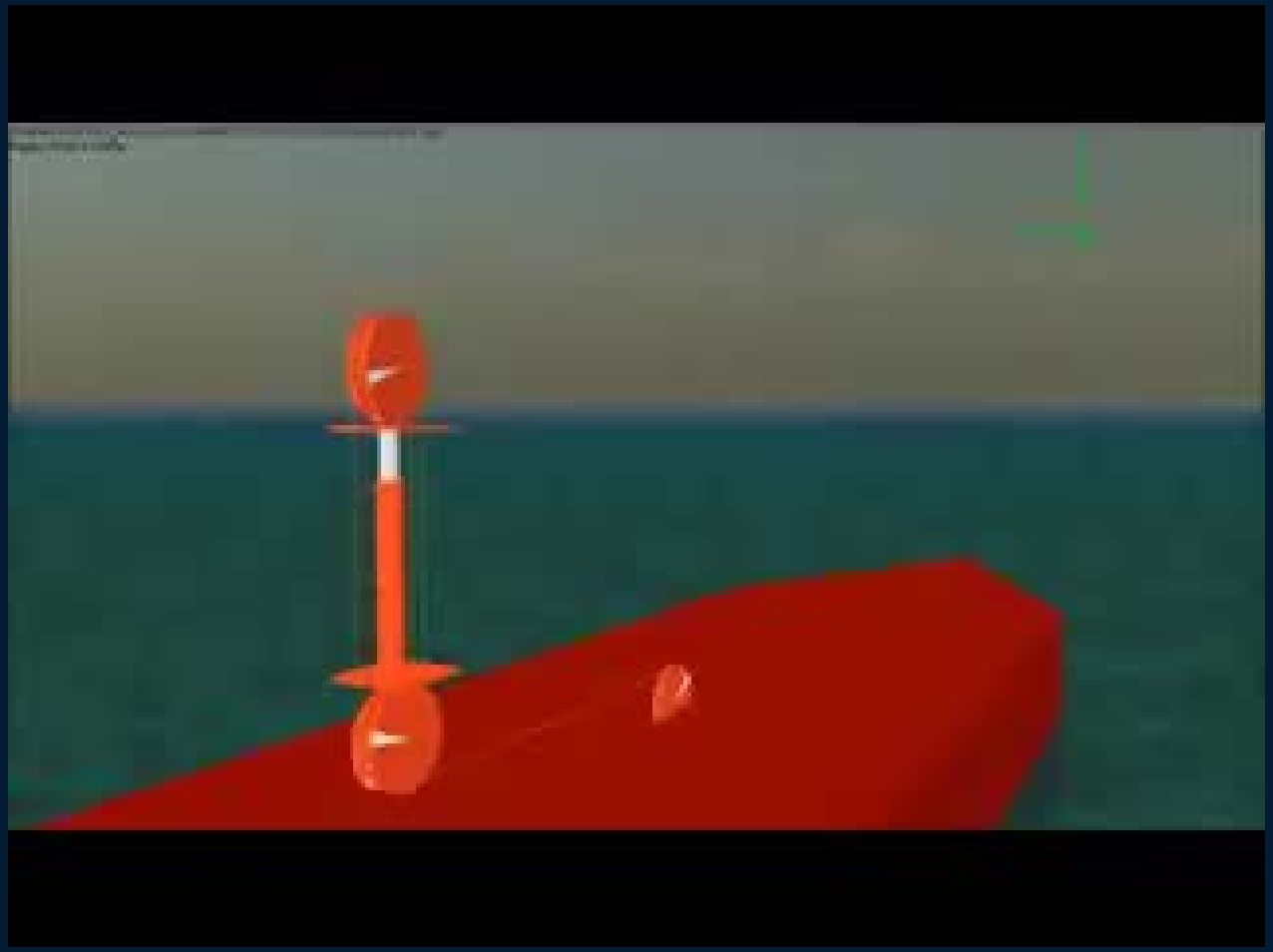
Methods of Compensation

Slack Tensioner

- Limited Range
  - +- 3.5 meters
- Multiple Sheaves
- Complicated Maintenance
- Complex Set Up
- Difficult Running



Example



Bobbing Crane

- Limited Motion
  - +-1.25 meters
- Fixed Installation
- Complicates Wire Path

No Example

Active Heave Compensation

- Electric and Hydraulic
- Expensive MRU
- High Accuracy
- Ship Survey

Example


AHC ON
AHC OFF
SCANTROL AHC
Load Depth: 2330m
Surface vessel motion: 4-6m

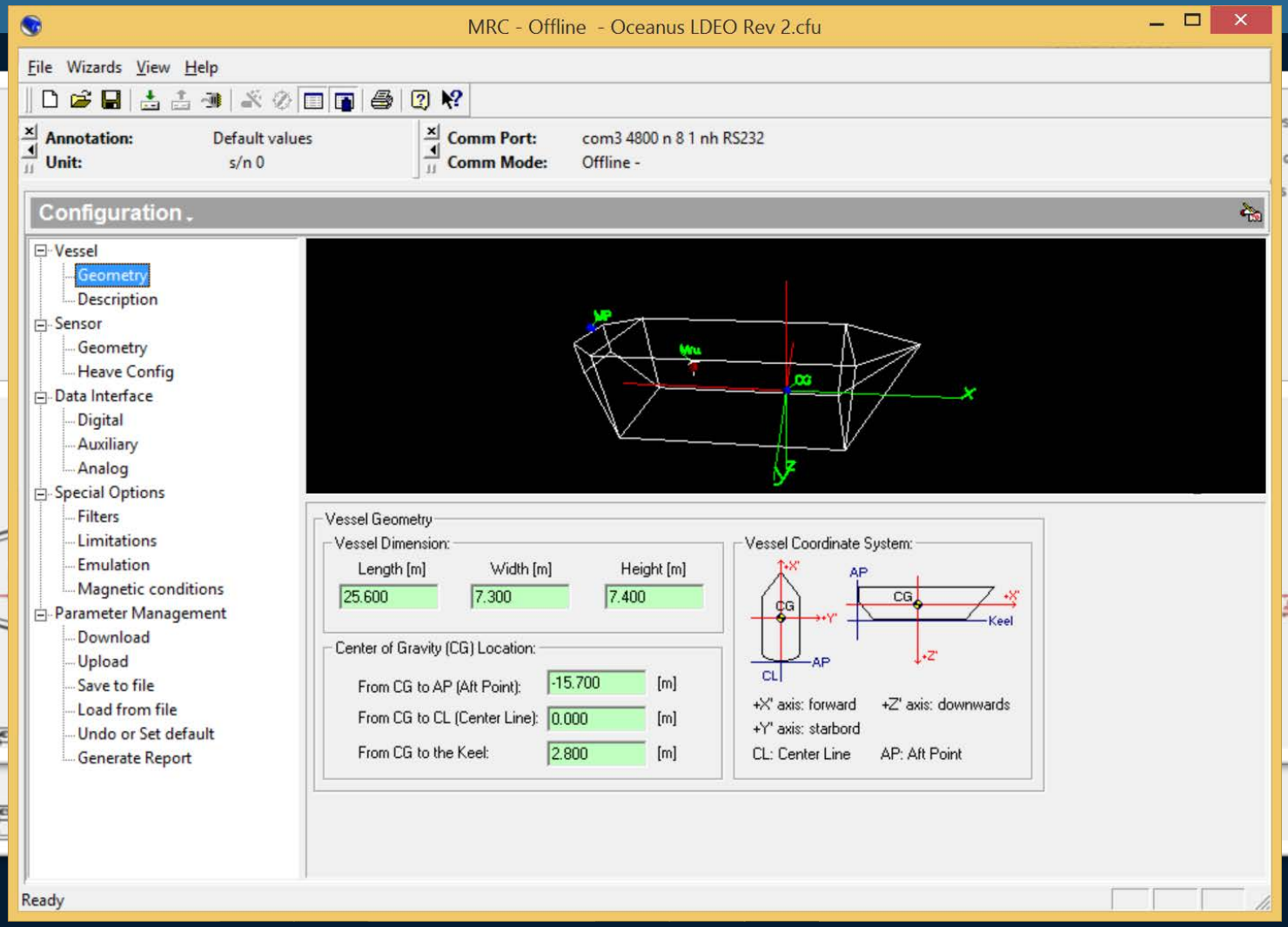
The MRU

Expensive Piece of Kit

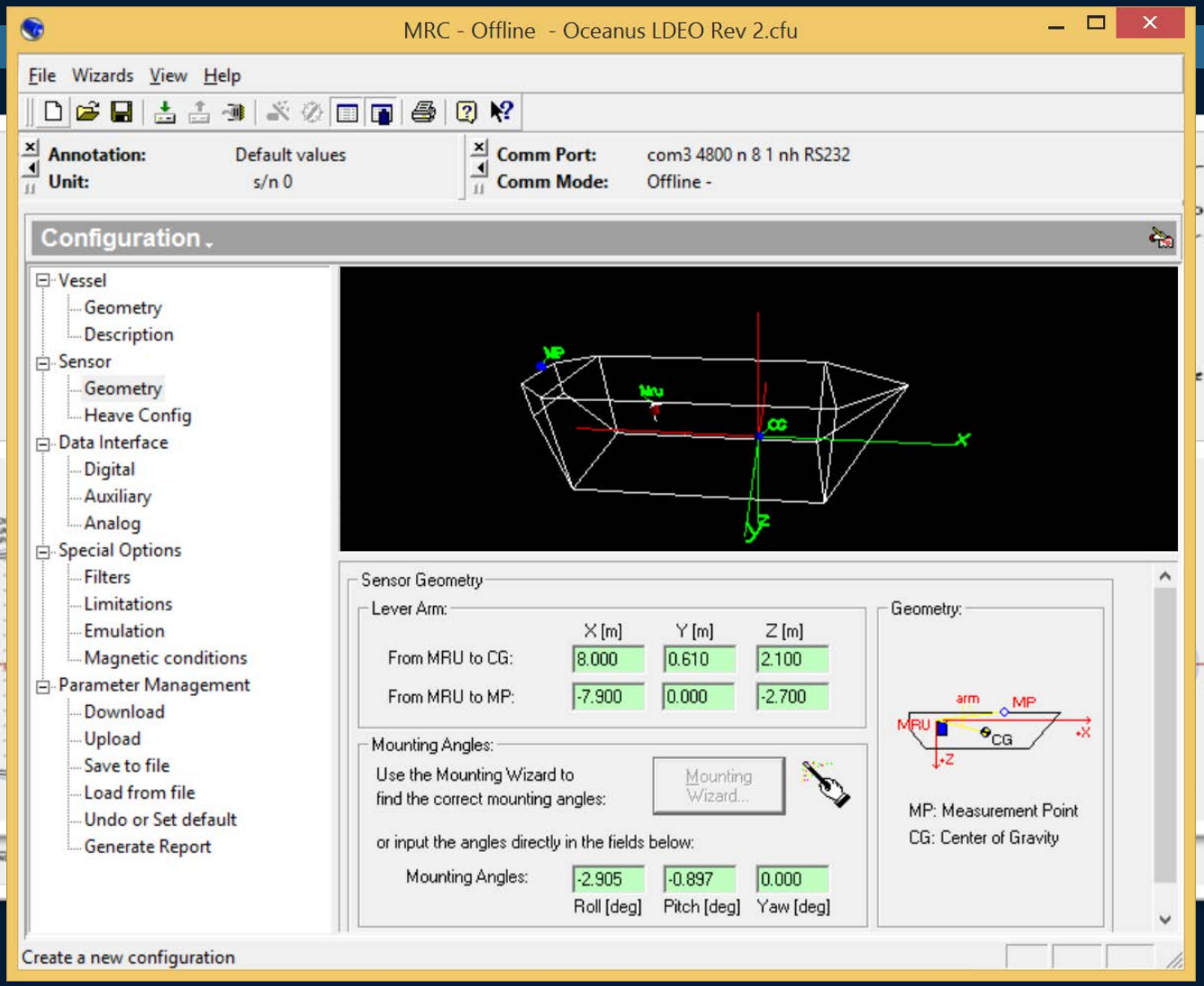
- $30K
- Calibration
- Placement
- Other Uses
- Out Put

The Survey

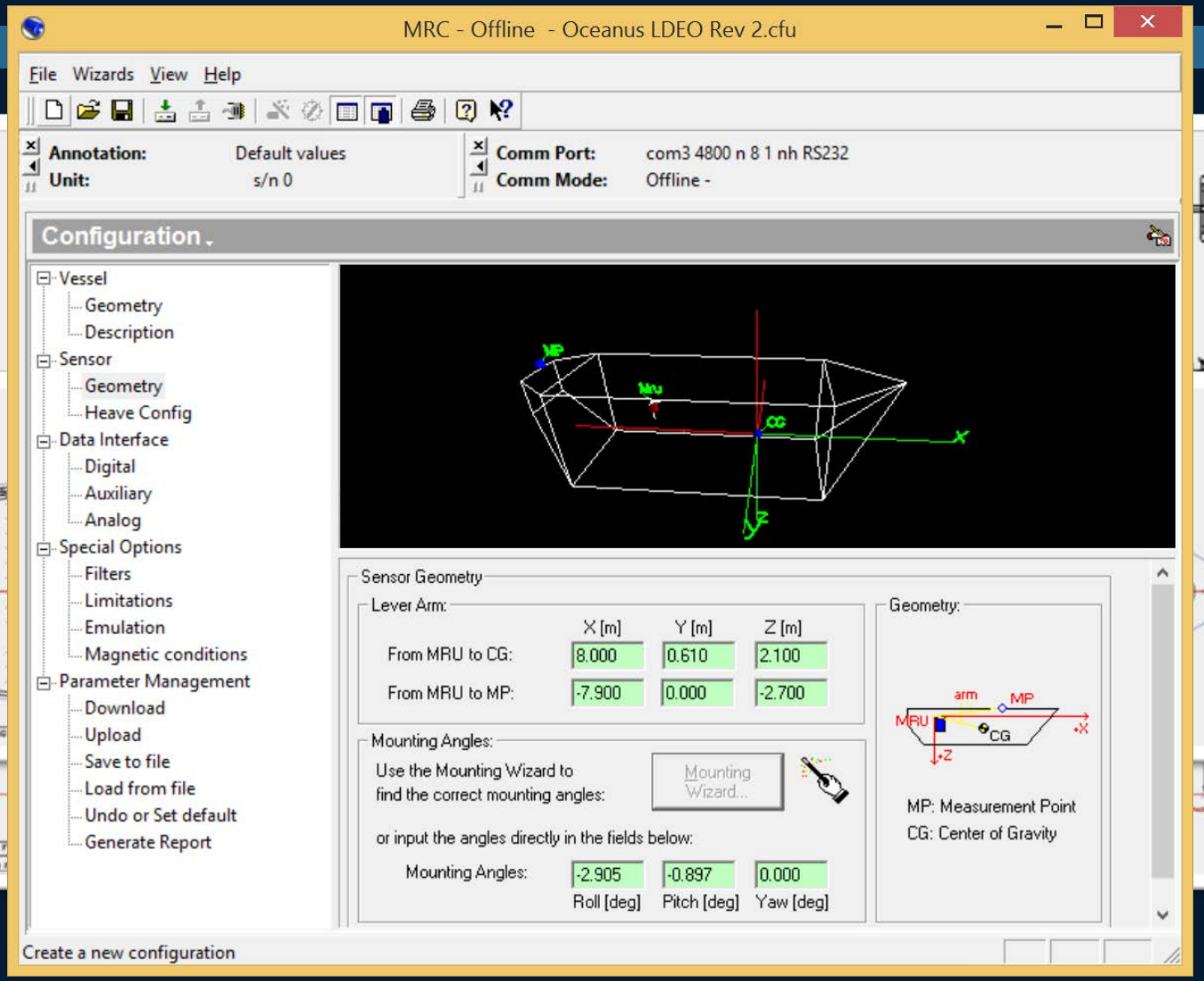
Ship CG


MRC - Offline - Oceanus LDEO Rev 2.cfu
File Wizards View Help
Annotation: Default values
Unit: s/n 0
Comm Port: com3 4800 n 8 1 nh RS232
Comm Mode: Offline -
Configuration
Vessel
Geometry
Description
Sensor
Geometry
Heave Config
Data Interface
Digital
Auxiliary
Analog
Special Options
Filters
Limitations
Emulation
Magnetic conditions
Parameter Management
Download
Upload
Save to file
Load from file
Undo or Set default
Generate Report
MP
Mru
CG
X
Z
Vessel Geometry
Vessel Dimension:
Length [m]
Width [m]
Height [m]
25.600
7.300
7.400
Center of Gravity (CG) Location:
From CG to AP (Aft Point):
-15.700
[m]
From CG to CL (Center Line):
0.000
[m]
From CG to the Keel:
2.800
[m]
Vessel Coordinate System:
+X'
CG
+Y'
AP
CL
AP
CG
Keel
+X'
+Z'
+X' axis: forward
+Z' axis: downwards
+Y' axis: starbord
CL: Center Line
AP: Aft Point
Ready

MRU Placement



Overboarding Point



Method

- Simple Survey
- Calculation of Movement Around CG
- Lever Arms

Innovations

New MRUs

- Kongsberg Series 5
- Multiple Overboarding Points

New Concept

- Heave Sensor
- Small
- No Survey
- Place on any Sheave

Questions