

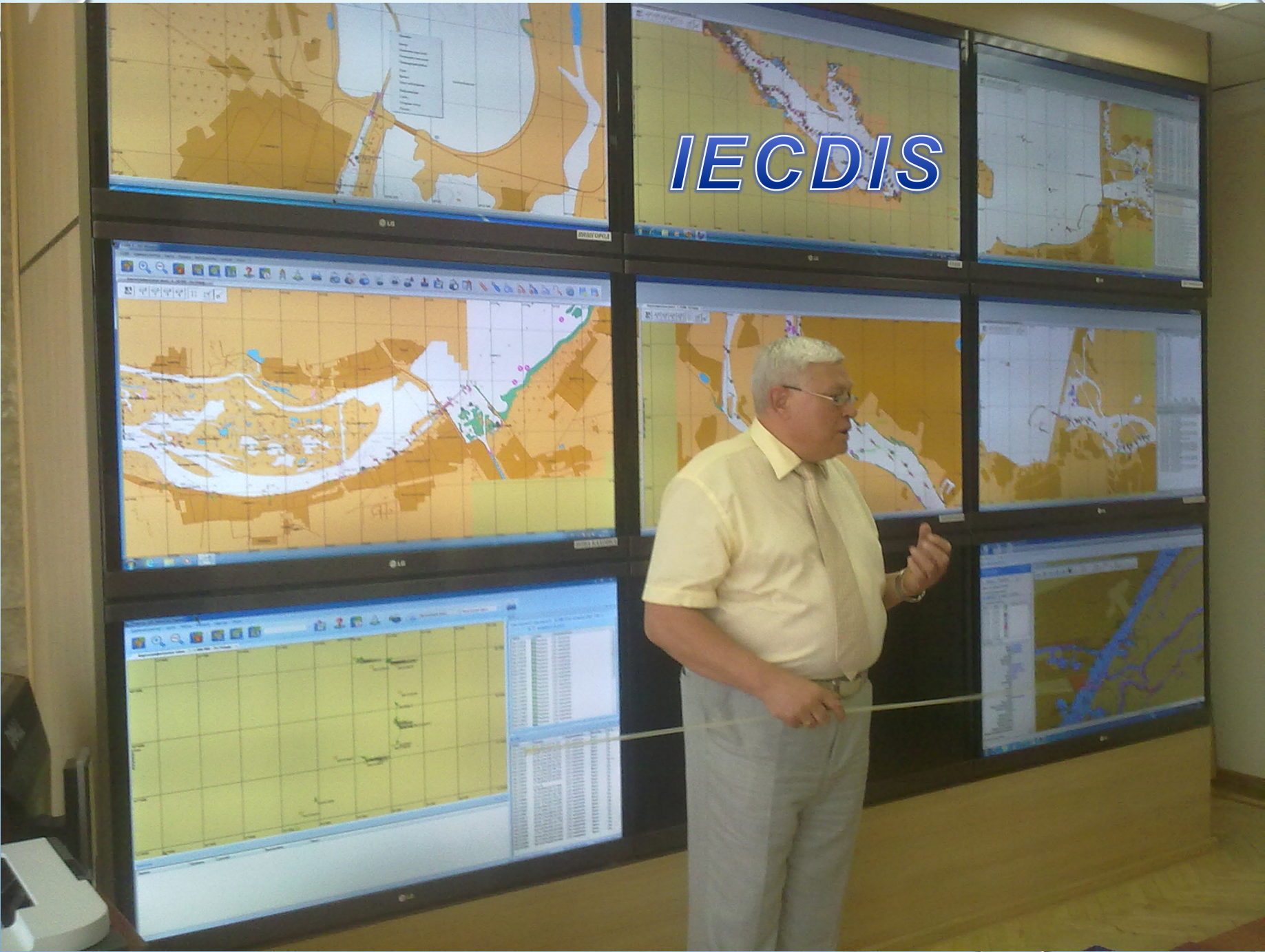


# DEVELOPMENT OF DIGITALIZATION ON THE INLAND WATERWAYS OF UKRAINE

UN ECE 62-ND SESSION

GENEVA 04,10,2018

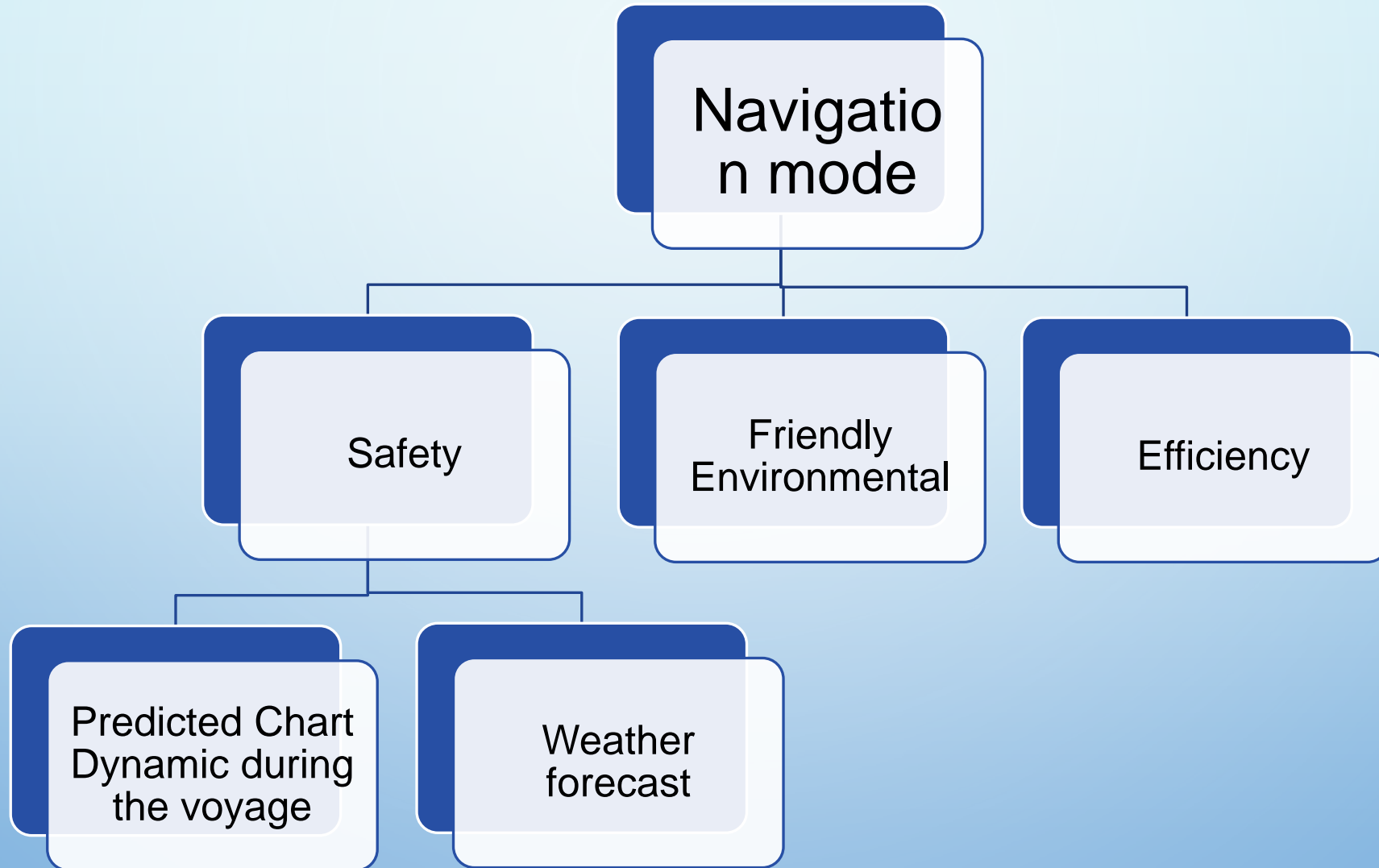
# IECDIS



# Inland ECDIS

Information  
mode

Navigation  
mode



Information mode

up to experience

Depend of stakeholders

For instance

Logistic management

Making agreement

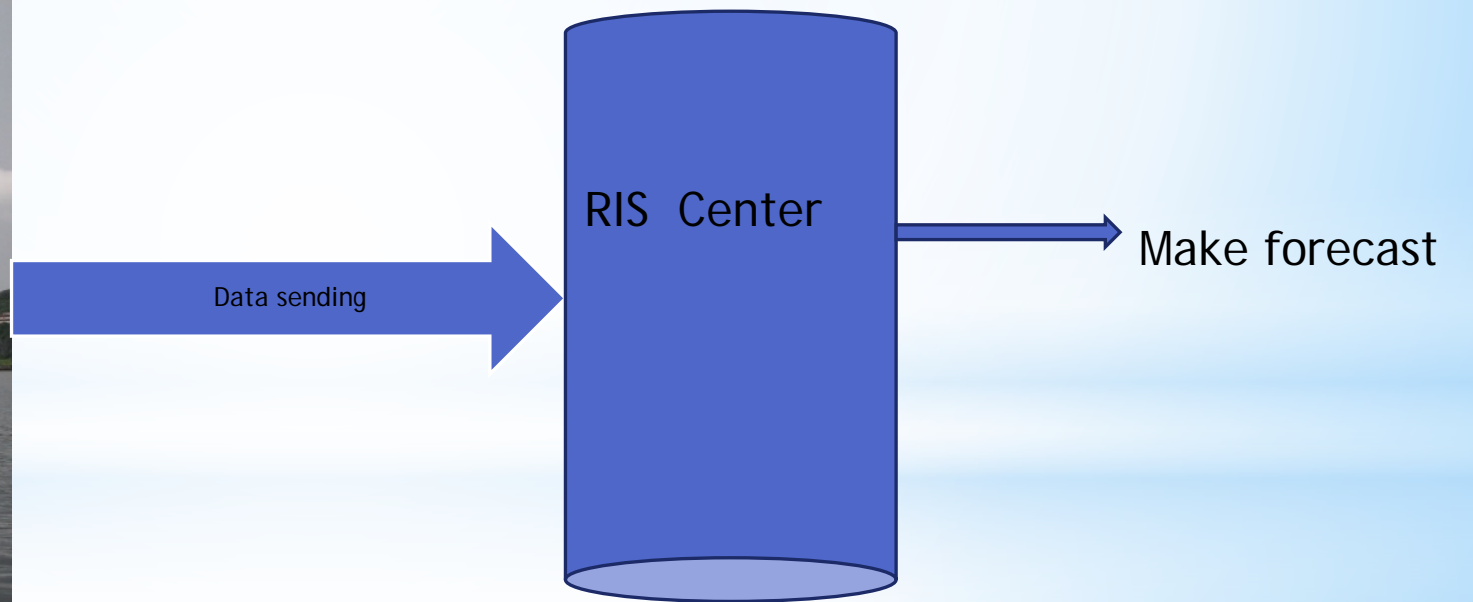
Customs & bordering

Should be mandatory

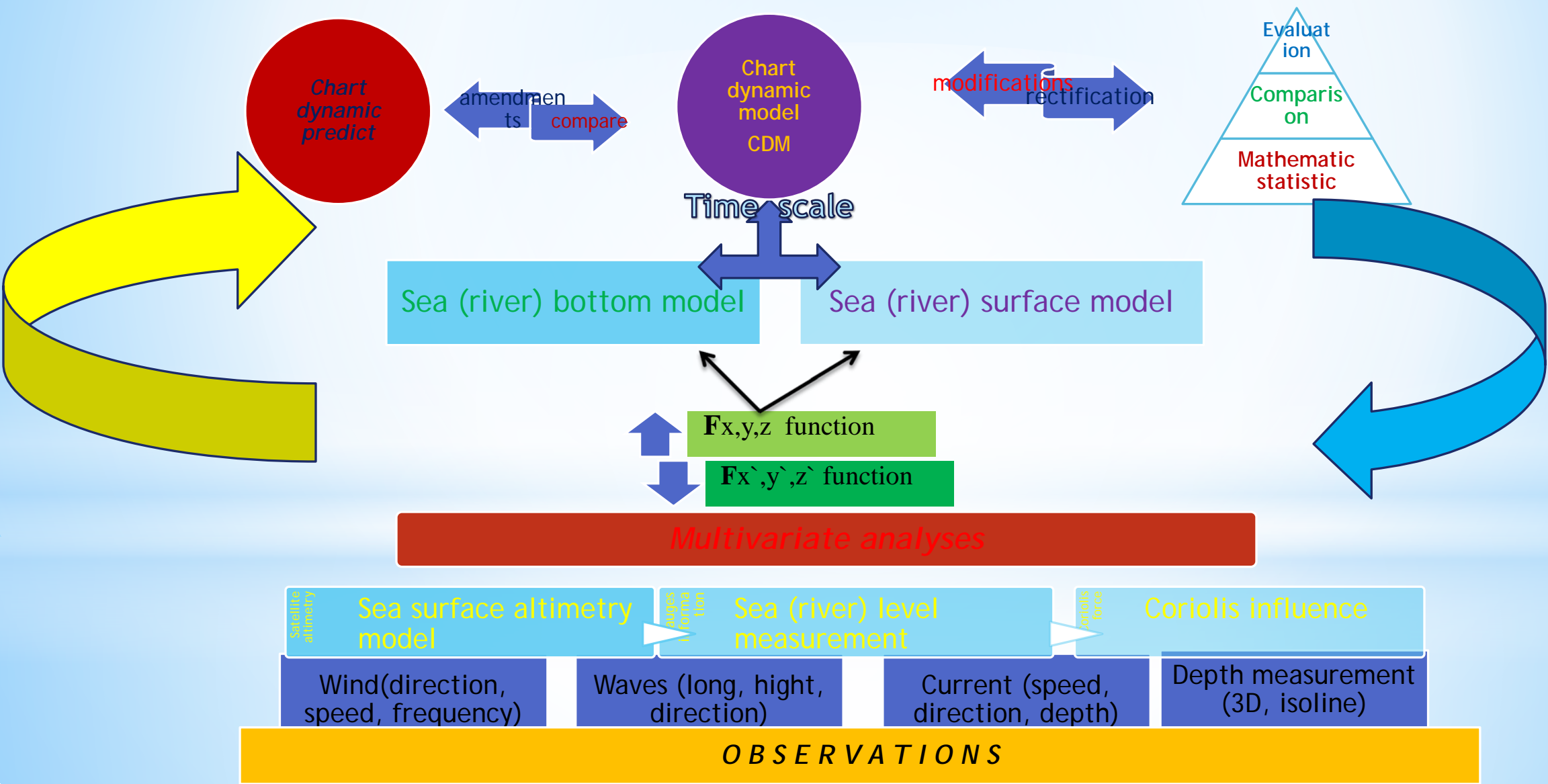
Cargo management

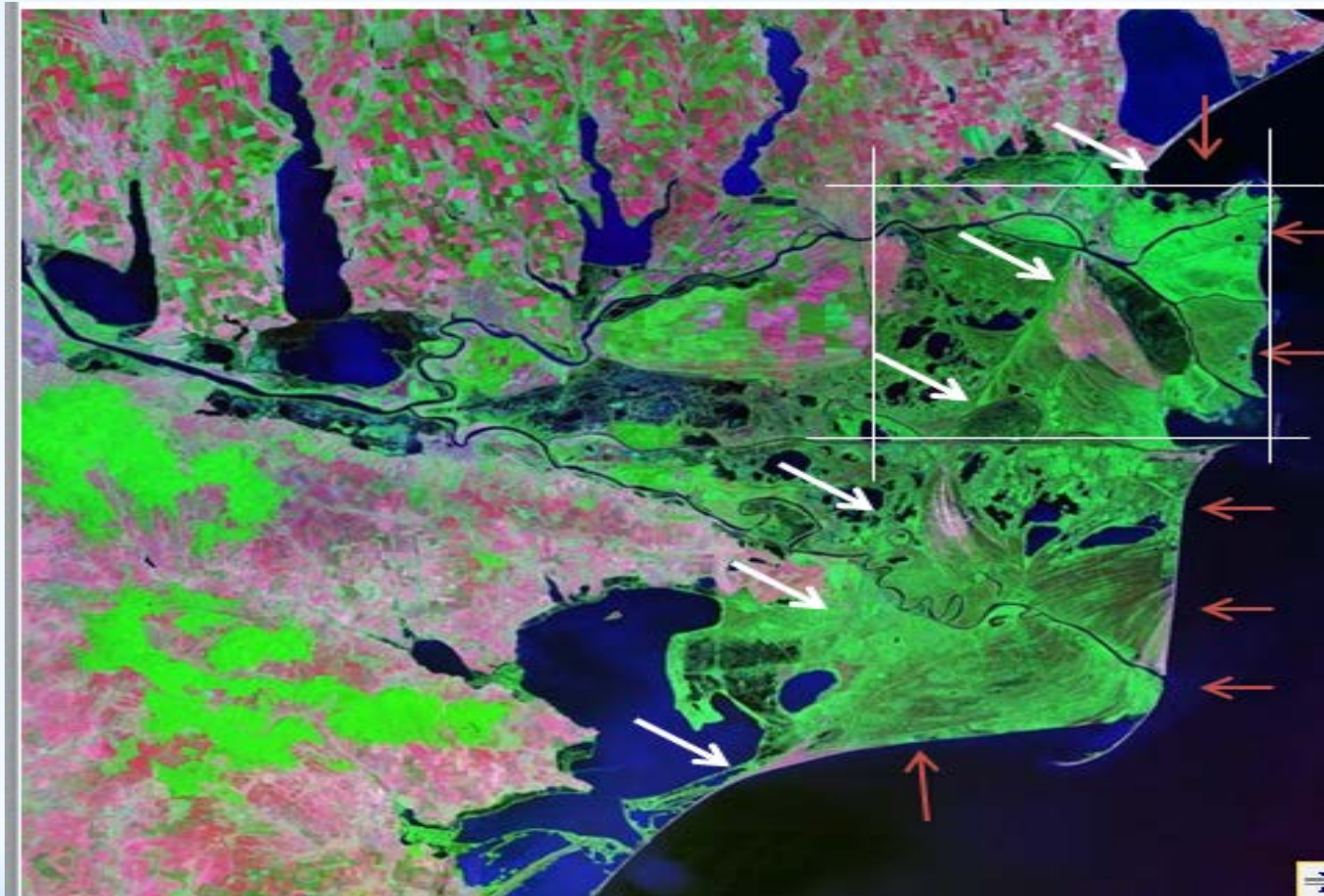
Depend of liability

## Data manager

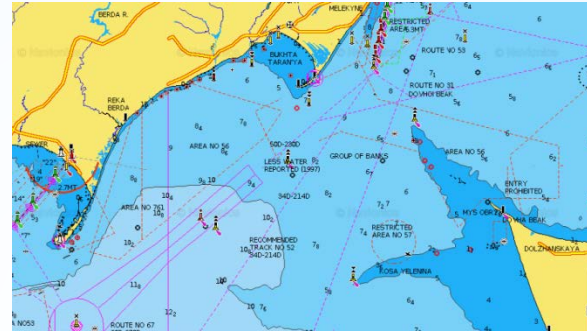
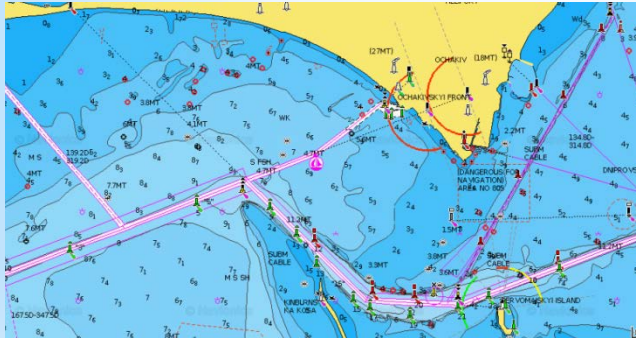


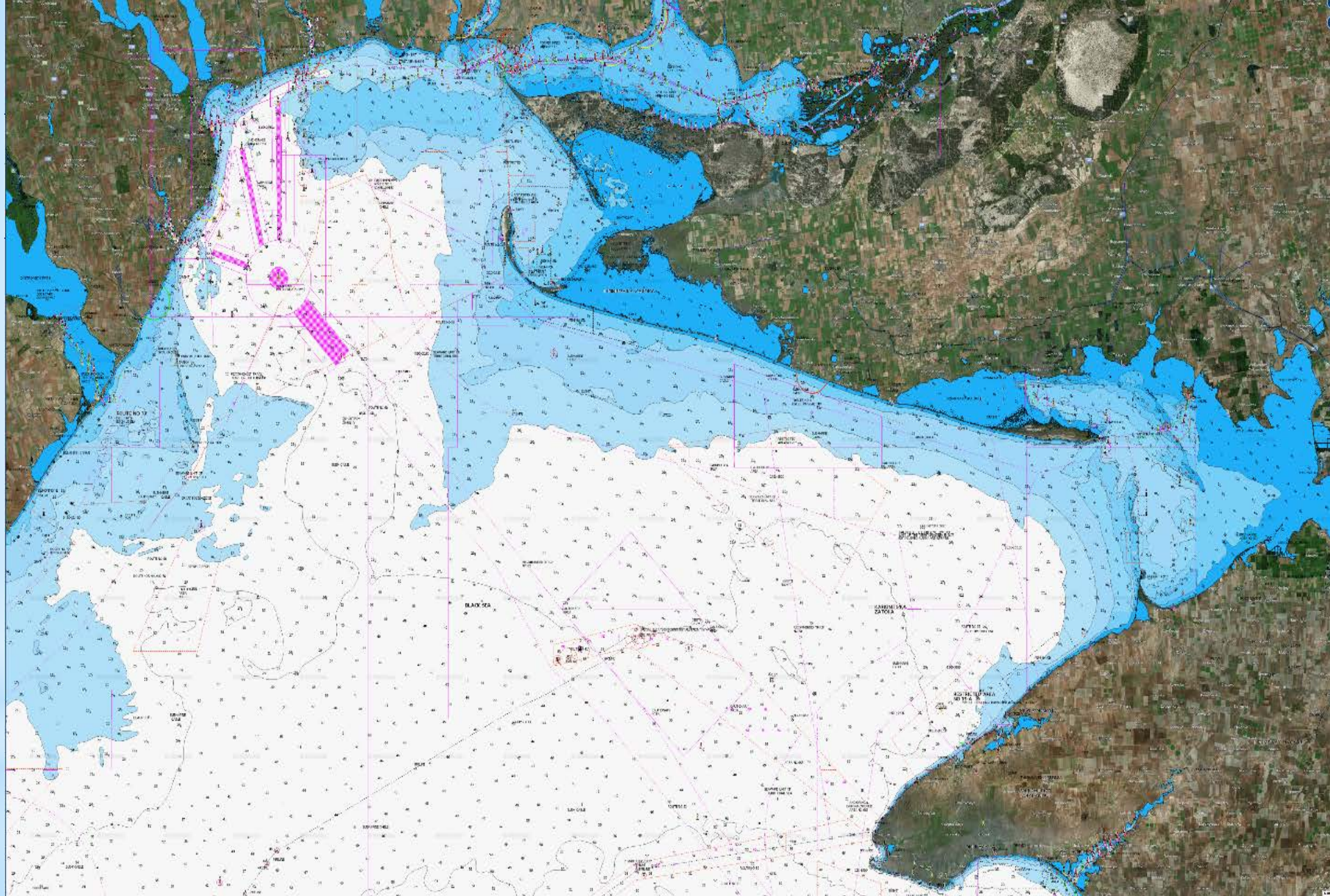
# CHART DYNAMIC MODEL

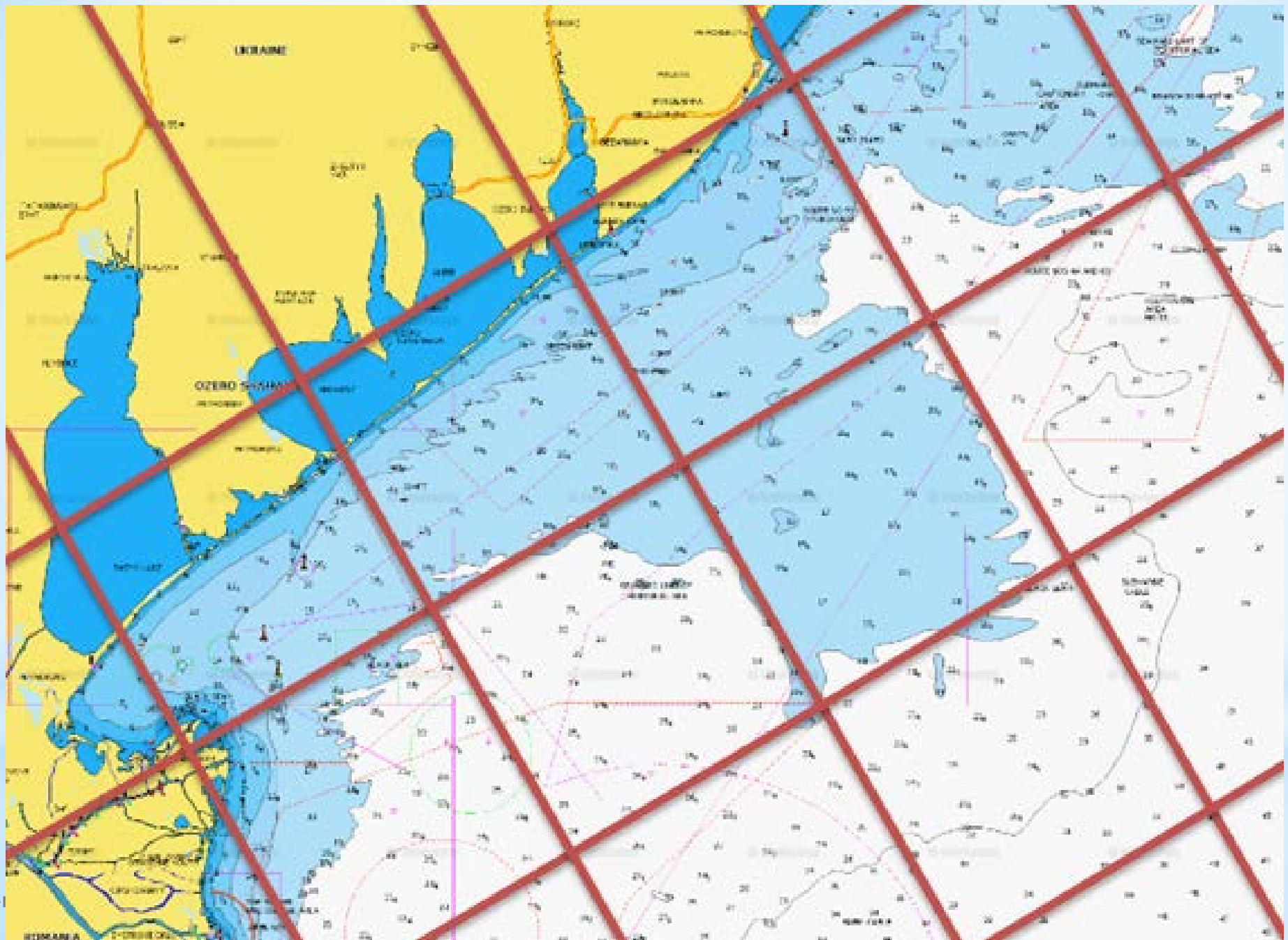












Geneva 62-

**Skipper has possibility to  
take the 3D vessel moving  
view in IENS in information  
mode**

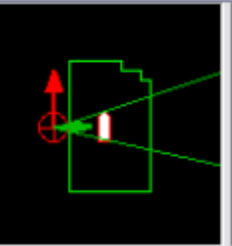
### 3D Terrain Viewer - 3DTV\_Project.3dv

File View Terrain Camera Lighting Objects Vessels Tools Window Help

Attached to Vessel

Enable Stereo Eye Distance 0.50 Focal Point Distance 10 Show Focal Point

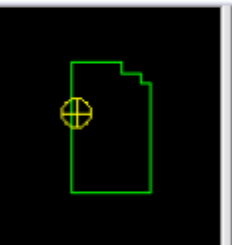
#### Camera Position ...



675.7  
13.8 Max  
-64.5 Min

X: 7833149.34 Y: 724553.47 Elevation: 22

#### Light Position Win...



675.7  
13.8 Max  
-64.5 Min

X: 7833262.54 Y: 724634.29 Elevation: 36

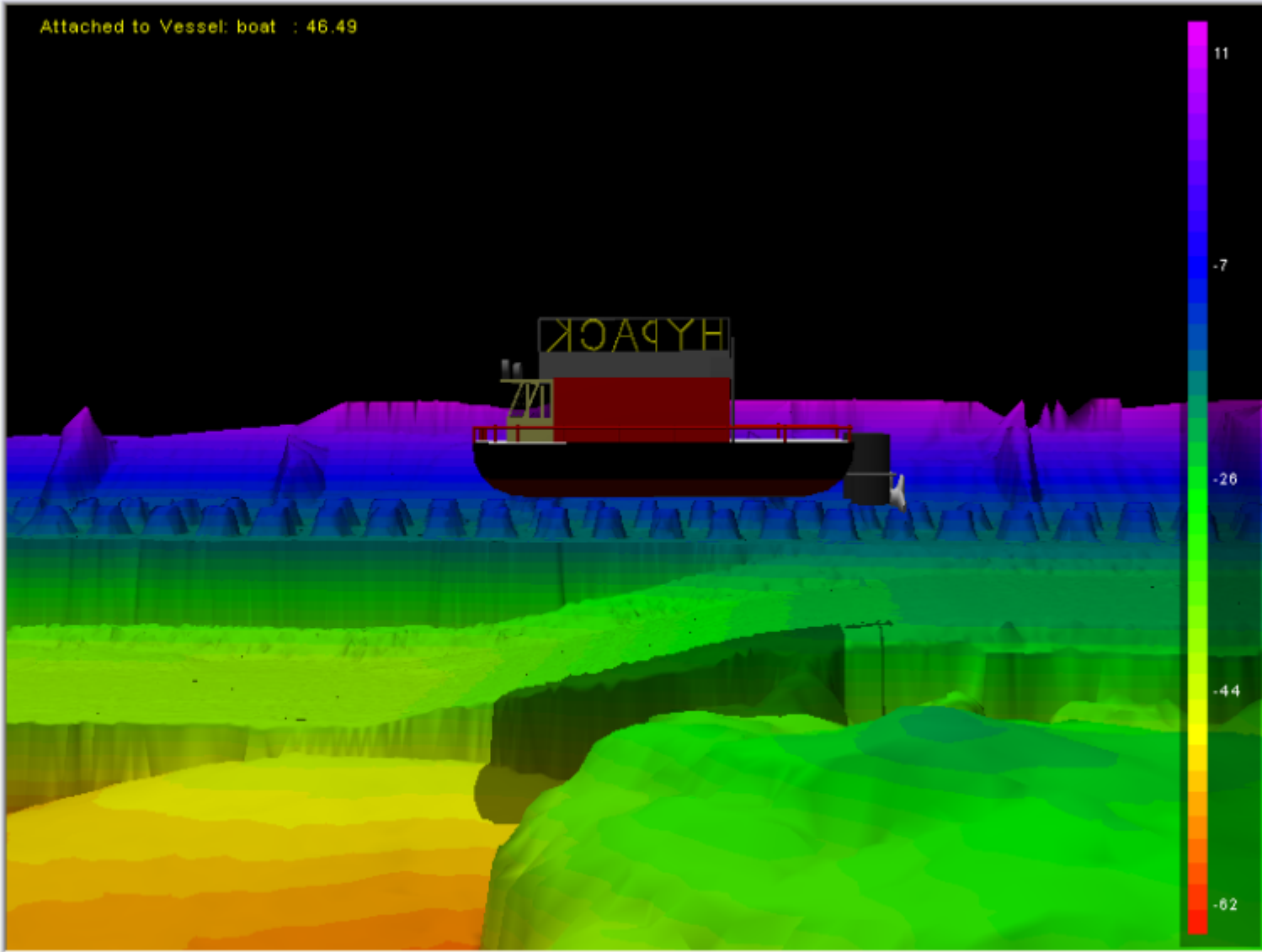
#### Compact Camera Control

Tilt | Height and Zoom  
Speed and Turn | Yaw

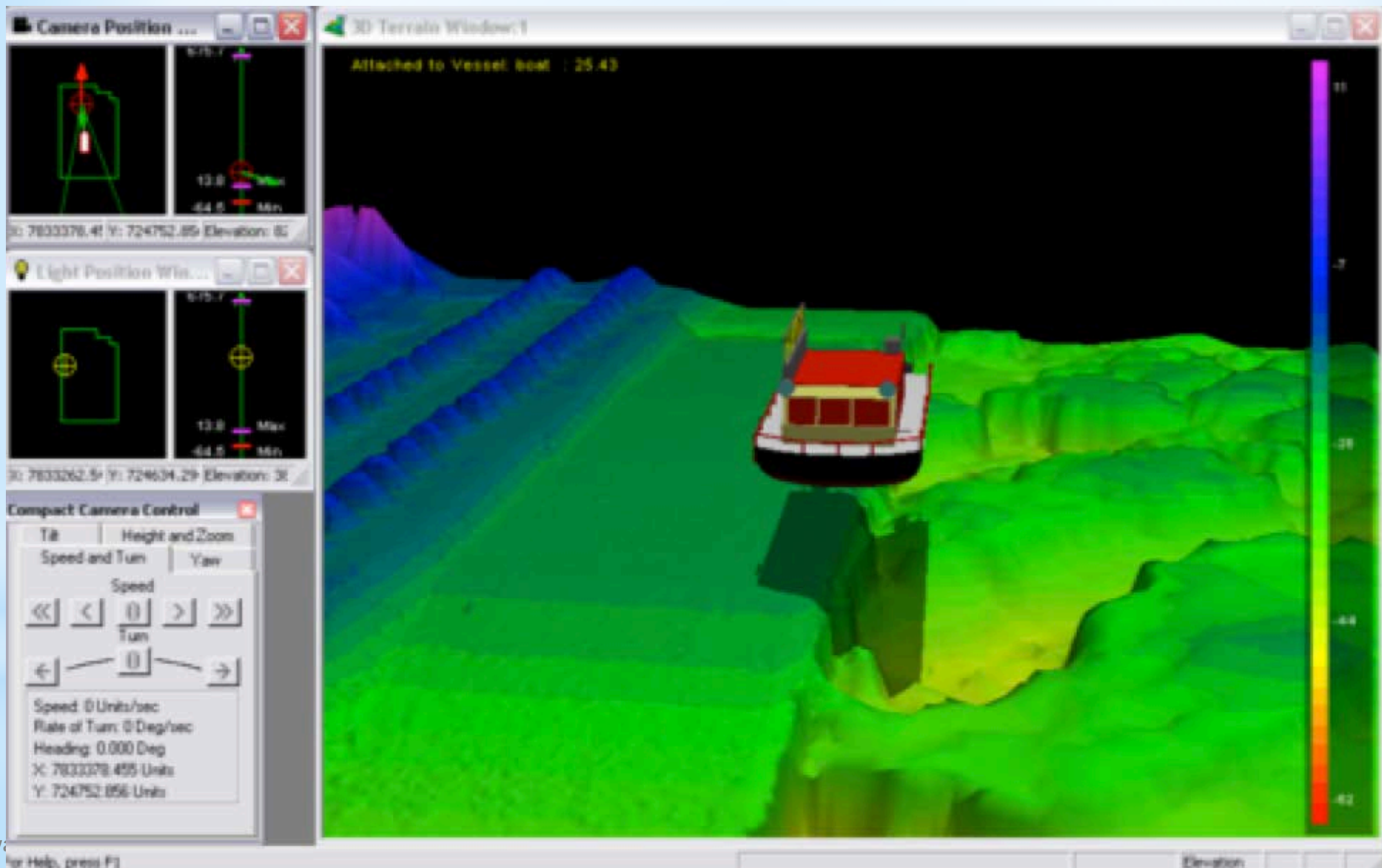
Speed  
Speed: 0 Units/sec  
Rate of Turn: 0 Deg/sec  
Heading: 0.000 Deg  
X: 7833149.344 Units  
Y: 724547.476 Units

#### 3D Terrain Window: 1

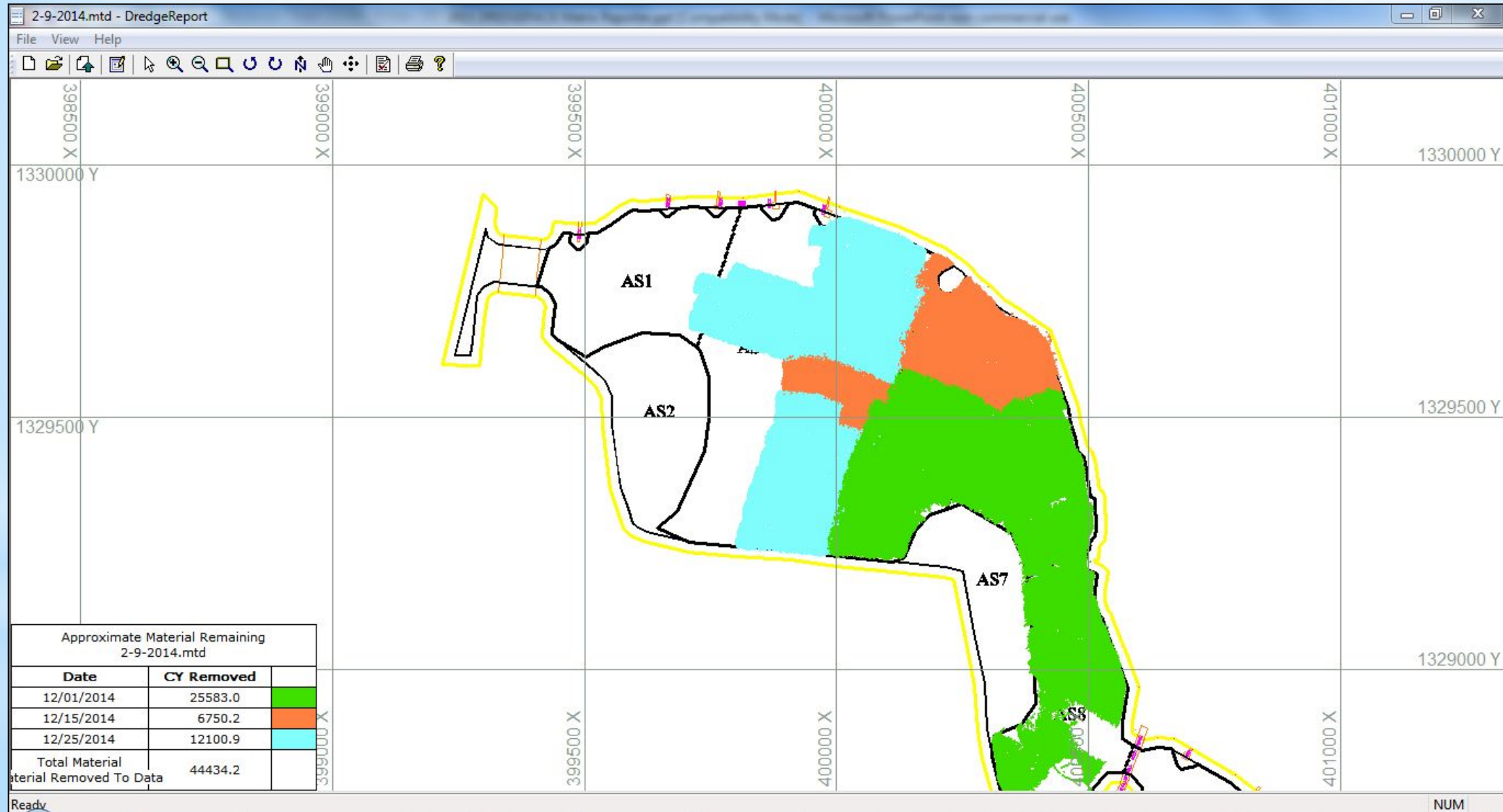
Attached to Vessel: boat : 46.49



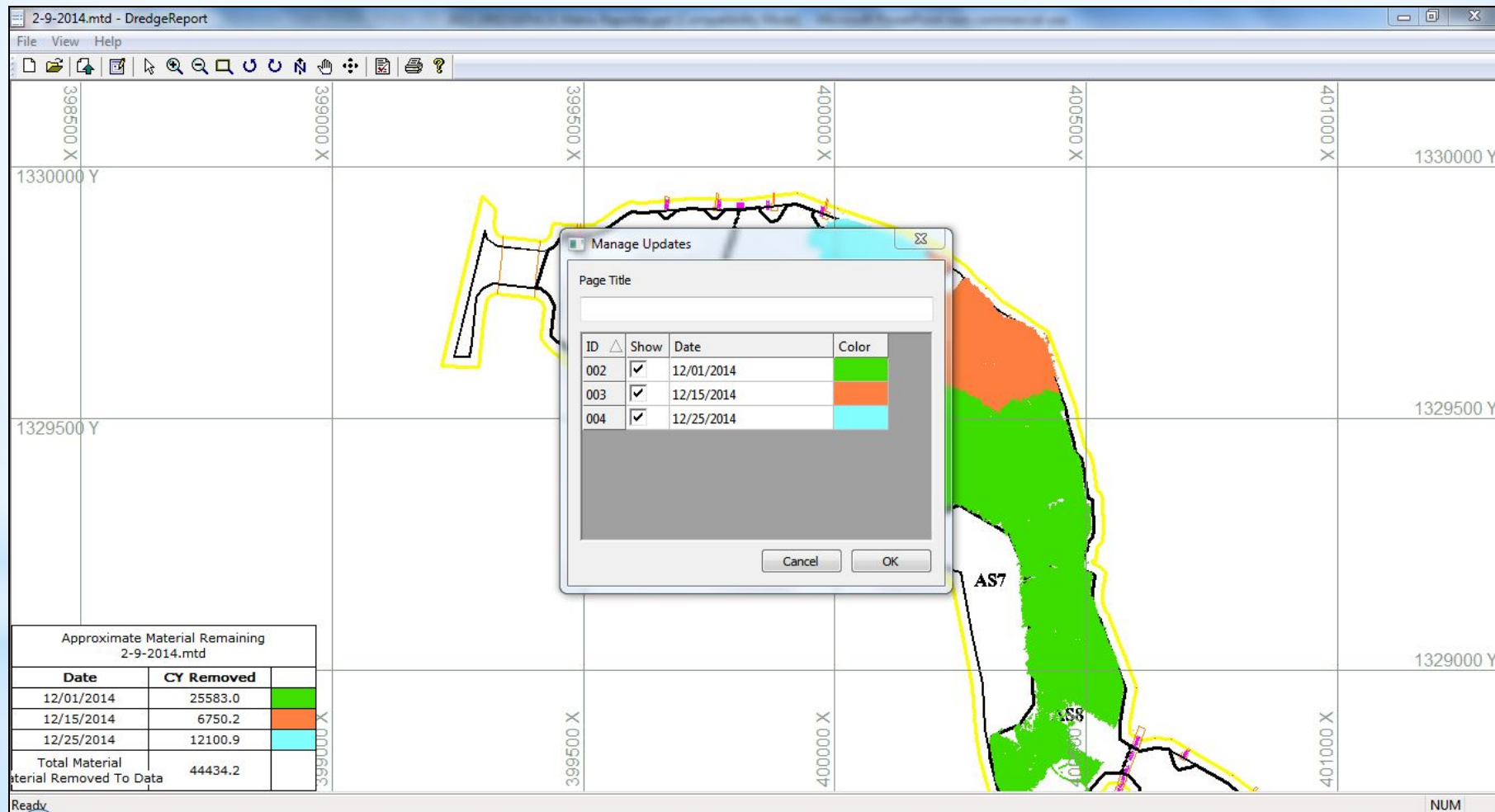
11  
-7  
-26  
-44  
-62



# Dredging digital

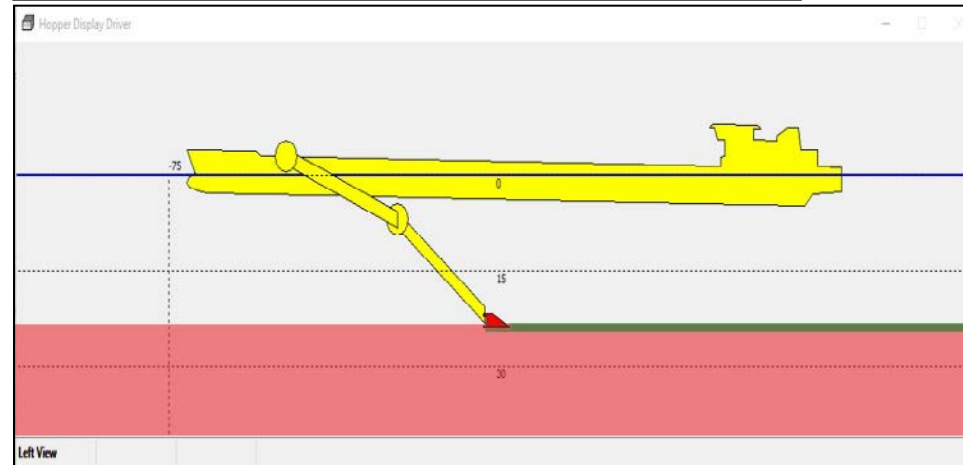
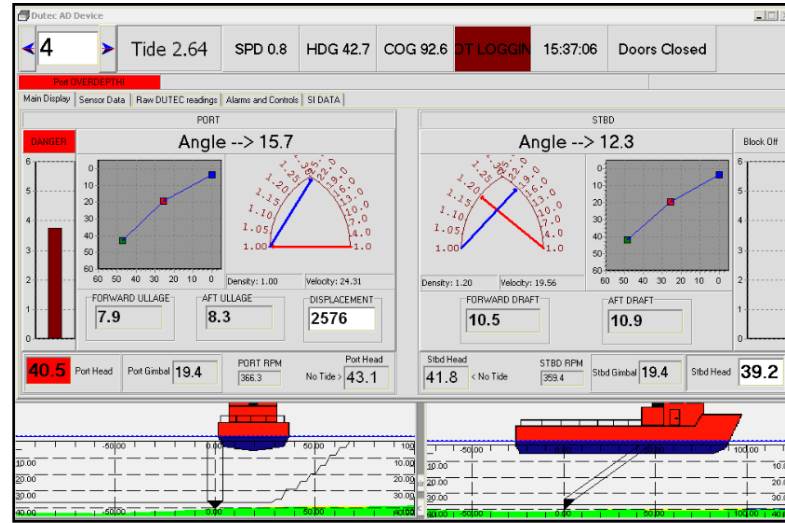
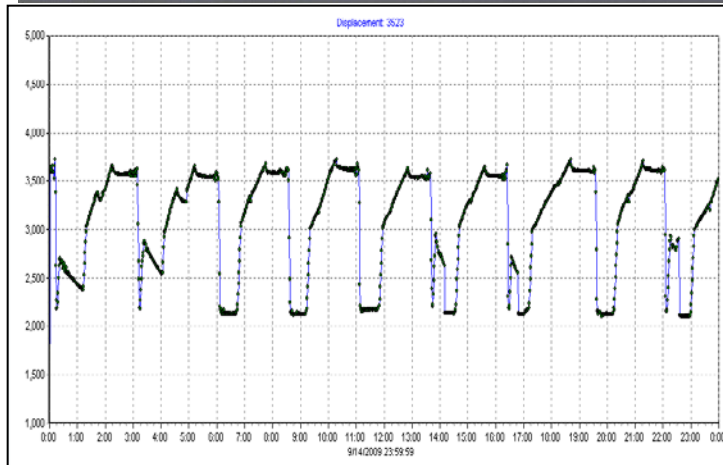
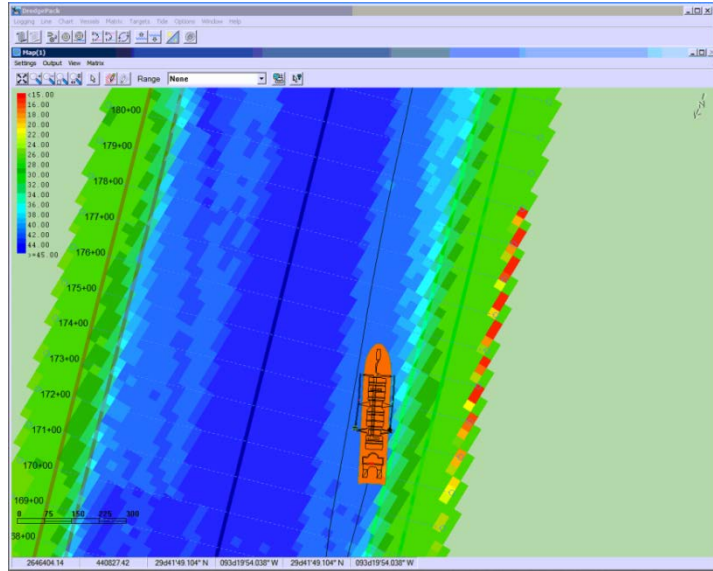


# Dredging & calculate volume



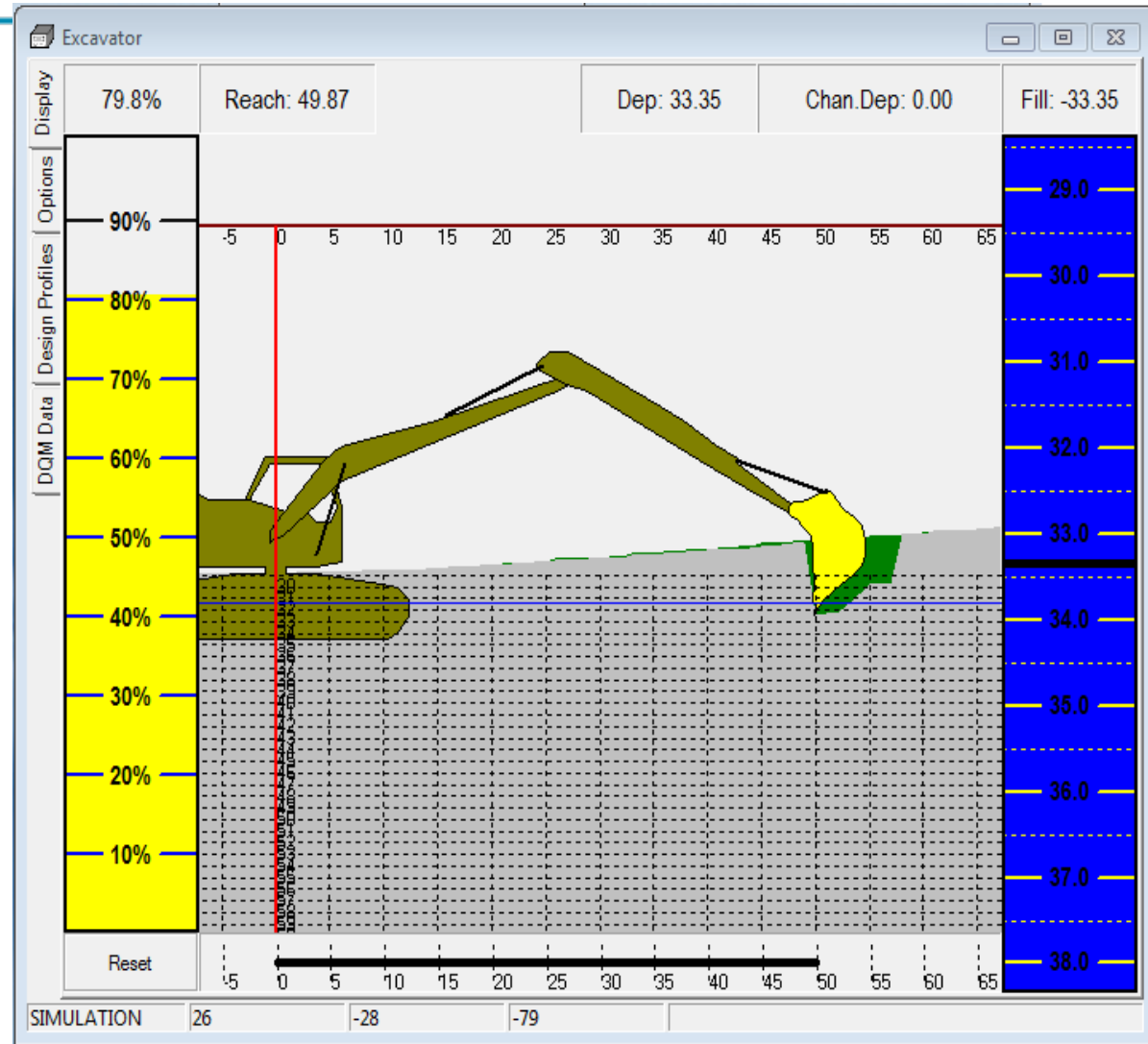


# Windows



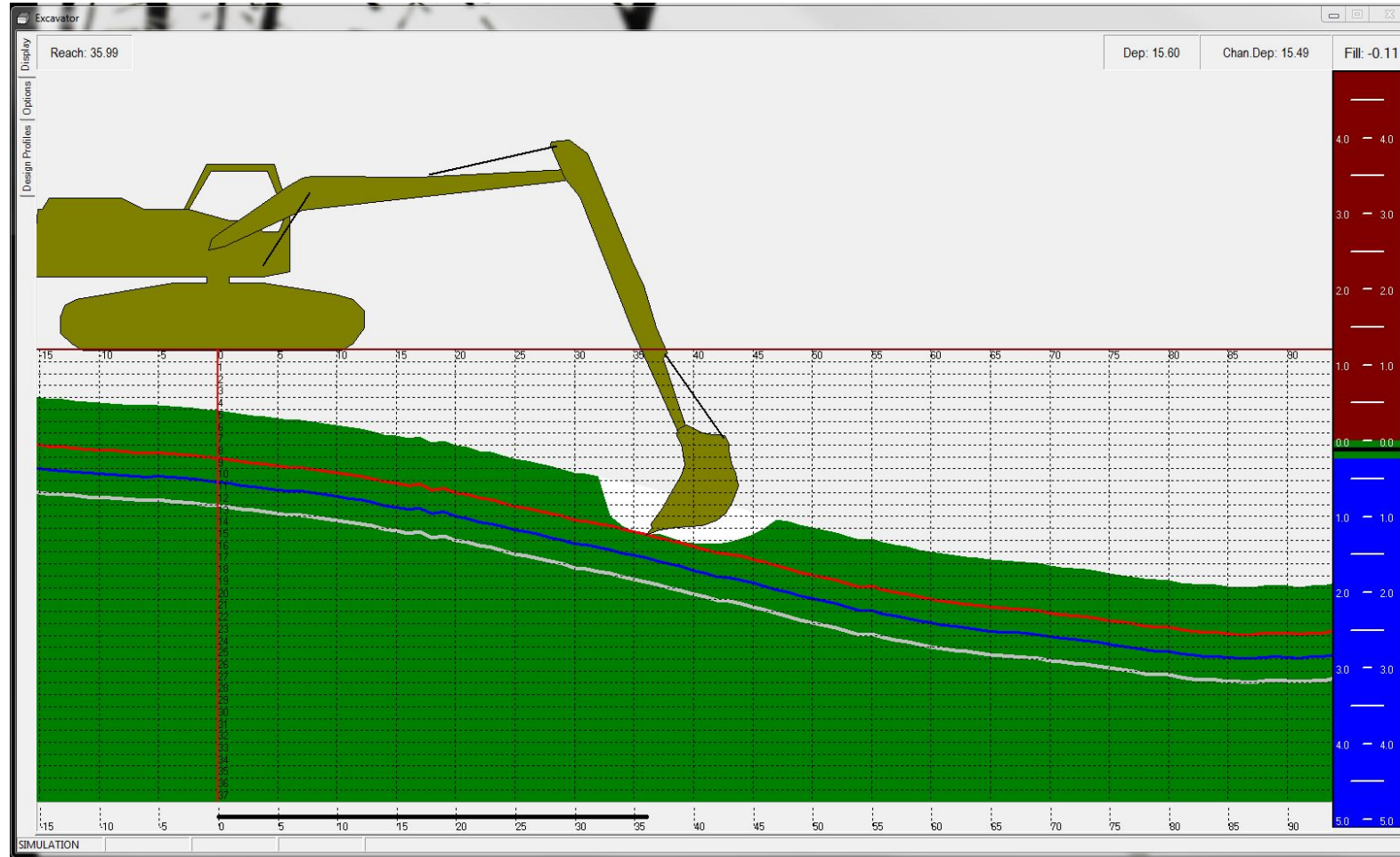
# Excavator.dll Display

Volume calculate  
in time (left)  
Volume calculate  
in rest (right)

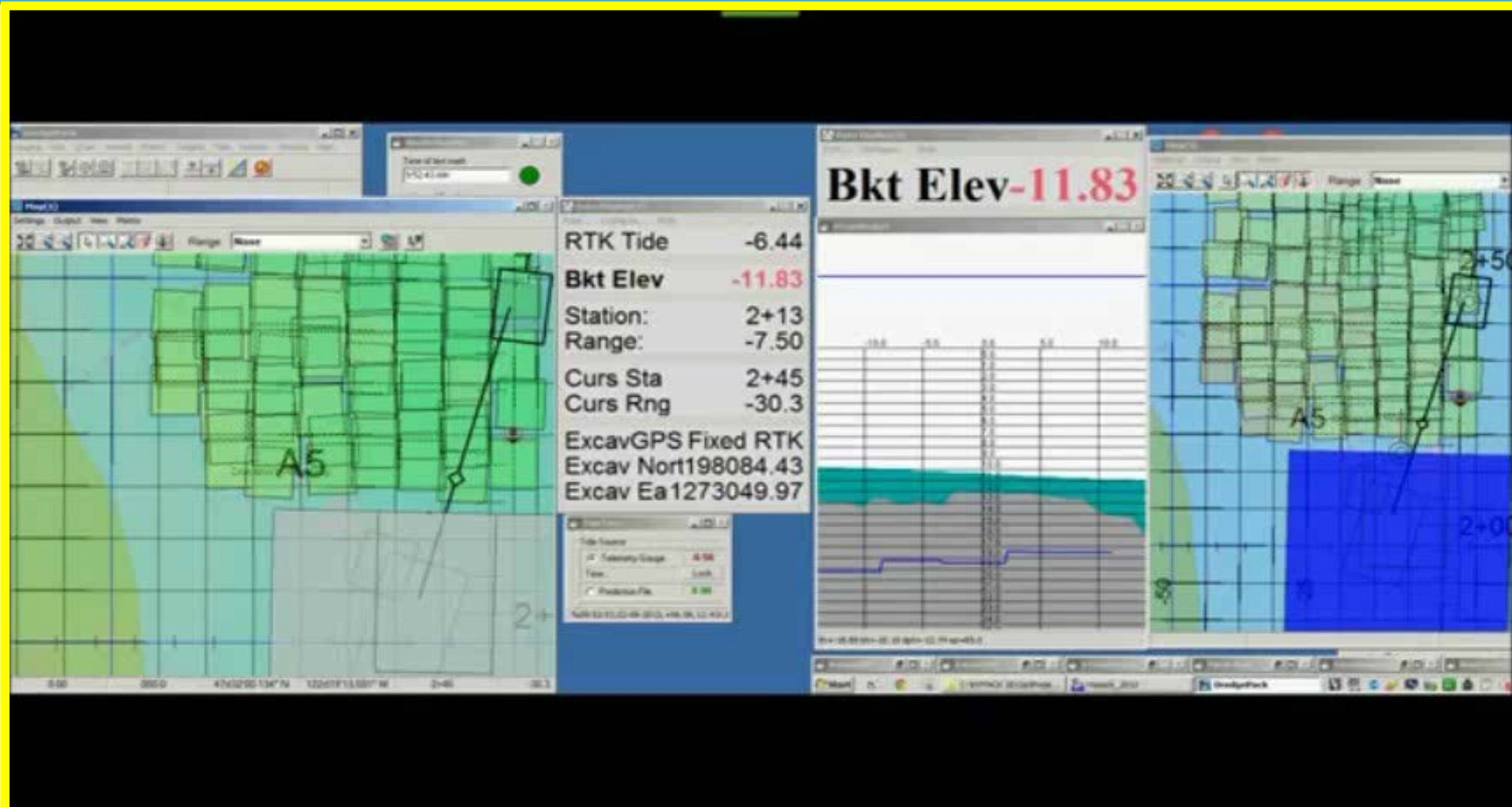


# Excavator.dll

## Display continue...



# Excavator mooving

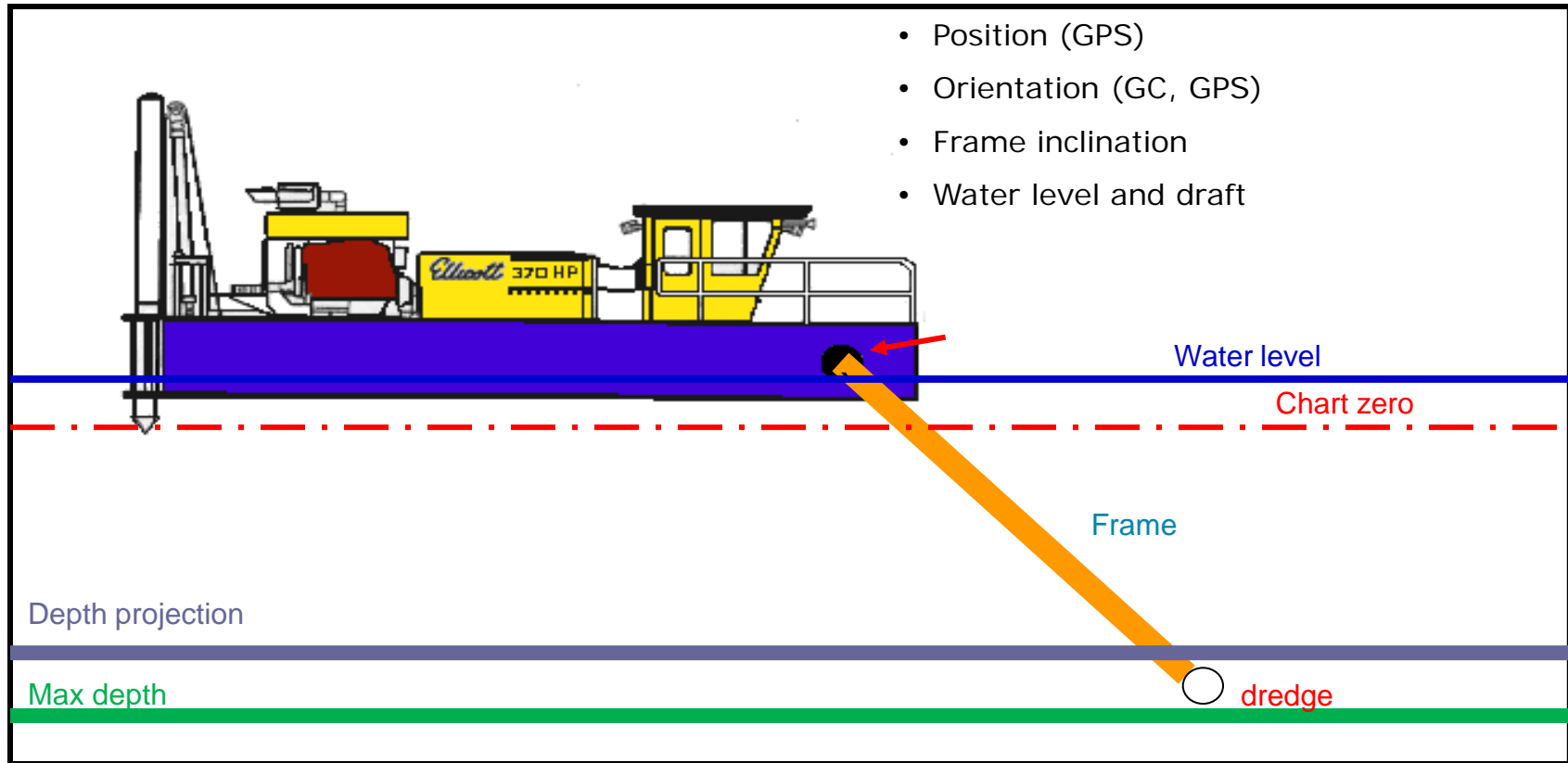


The screenshot displays the HYPACK software interface with several key components:

- Top Panel:** Shows the current bucket elevation: **Bkt Elev 9.38**.
- Left Panel:** A 3D grid-based map showing the bucket's position and orientation. A red dot indicates the bucket's location, with a label **A5** nearby. The grid is color-coded in shades of green and blue.
- Center Panel:** A 3D simulation of the bucket roll. The bucket is shown in a yellowish-green color, suspended by cables. Below it, a blue and green terrain profile is visible. The bucket's current elevation is **Bkt Elev 9.38**.
- Right Panel:** A data panel listing various parameters:
  - RTK Tide: -6.51
  - Bkt Elev: 9.38
  - Station: 2+13
  - Range: -7.71
  - Curs Sta: 2+45
  - Curs Rng: -30.3
  - ExcavGPS Fixed RTK
  - Excav Nort198098.71
  - Excav Ea1273038.06
- Bottom Panel:** A control panel with a play button and other navigation icons.

00:06

# Dredge setting

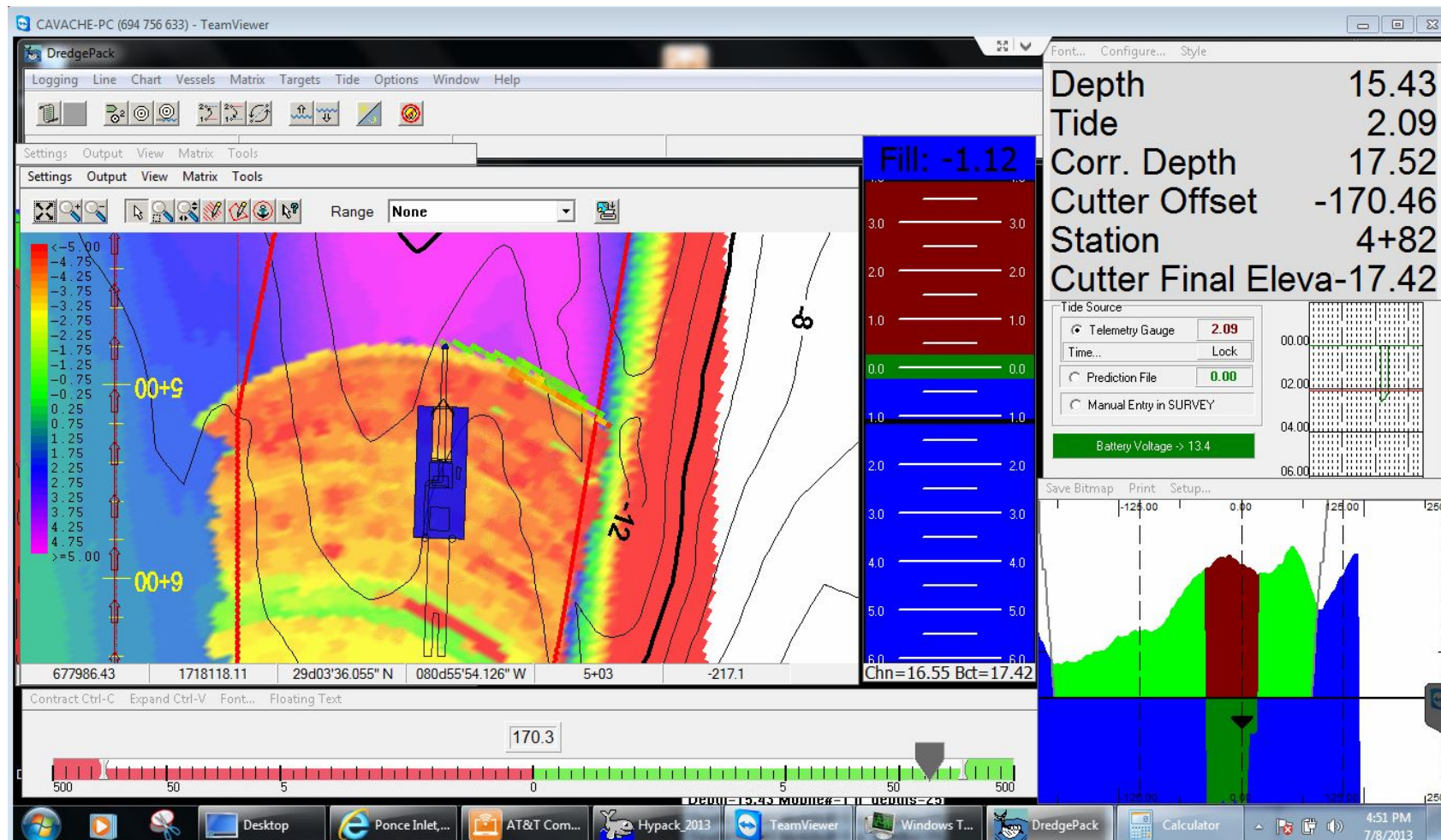


# Configuration example

The screenshot displays the DredgePack software interface with several key components highlighted:

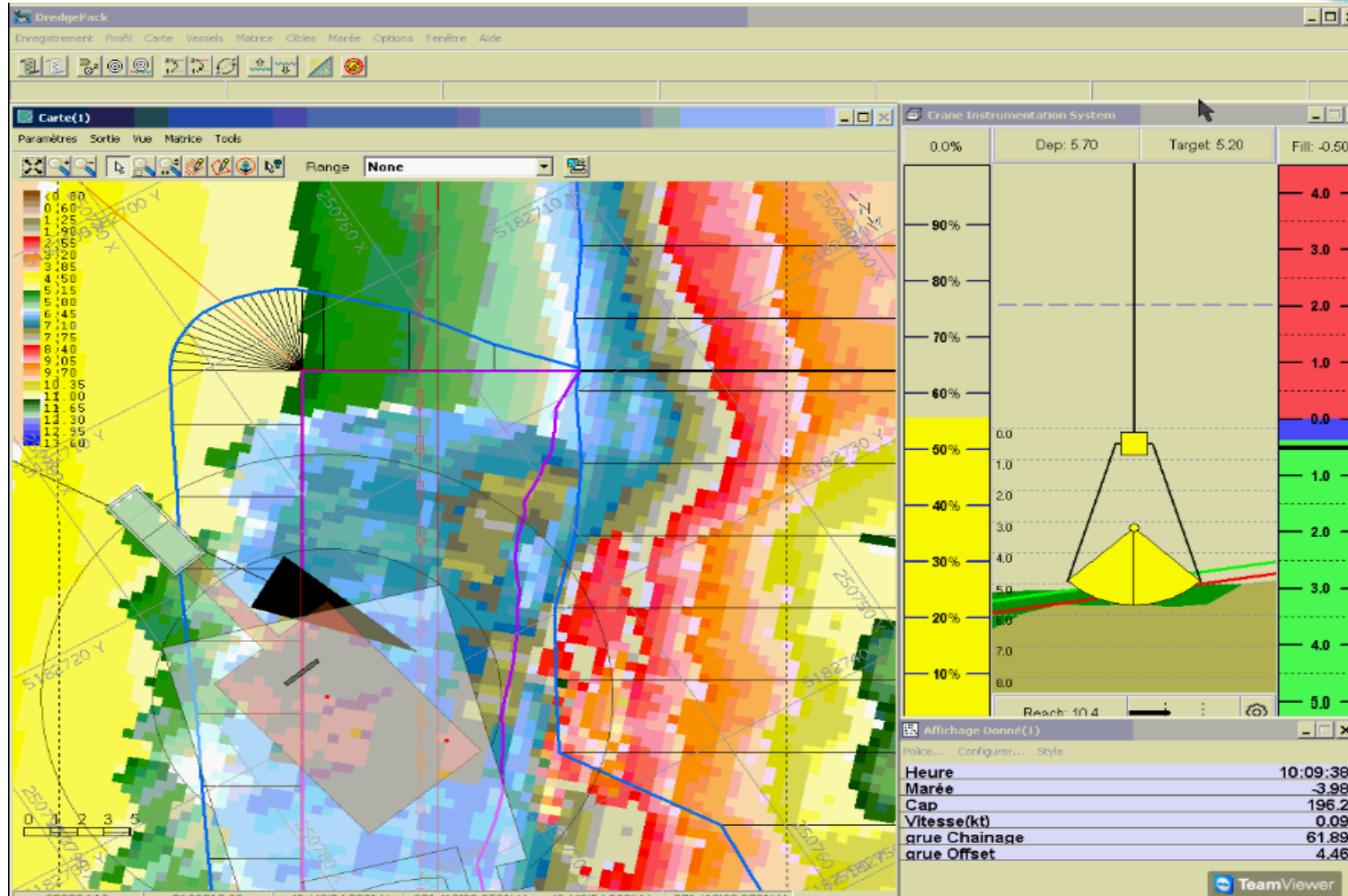
- Cutfill.dll - Cutter Tool - Template:** A floating window showing a vertical scale for cutter tool settings. The 'Fill' value is set to -3.73. The scale ranges from 1.0 to 8.0.
- TideDr.dll - eTrac Option:** A floating window for tide source configuration. It shows 'Tide Source' set to 'Tide Telemetry Gauge' with a value of 0.10. Other options include 'Prediction File' (0.00) and 'Manual Entry in SURVEY'. A 'Battery Voltage' indicator shows 13.2.
- Map 1 - 1 Color to Grade Line:** A map view showing a vessel's position and a color-coded grade line.
- Map 2 - Dredge-Channel:** A map view showing a vessel's position and a color-coded dredge channel.
- Profile #1 - Found in Vessel Menu:** A cross-sectional profile view showing depth and distance data.
- L/R Indication - Tied to Planned Centerline:** A scale bar at the bottom indicating a distance of 317.4.

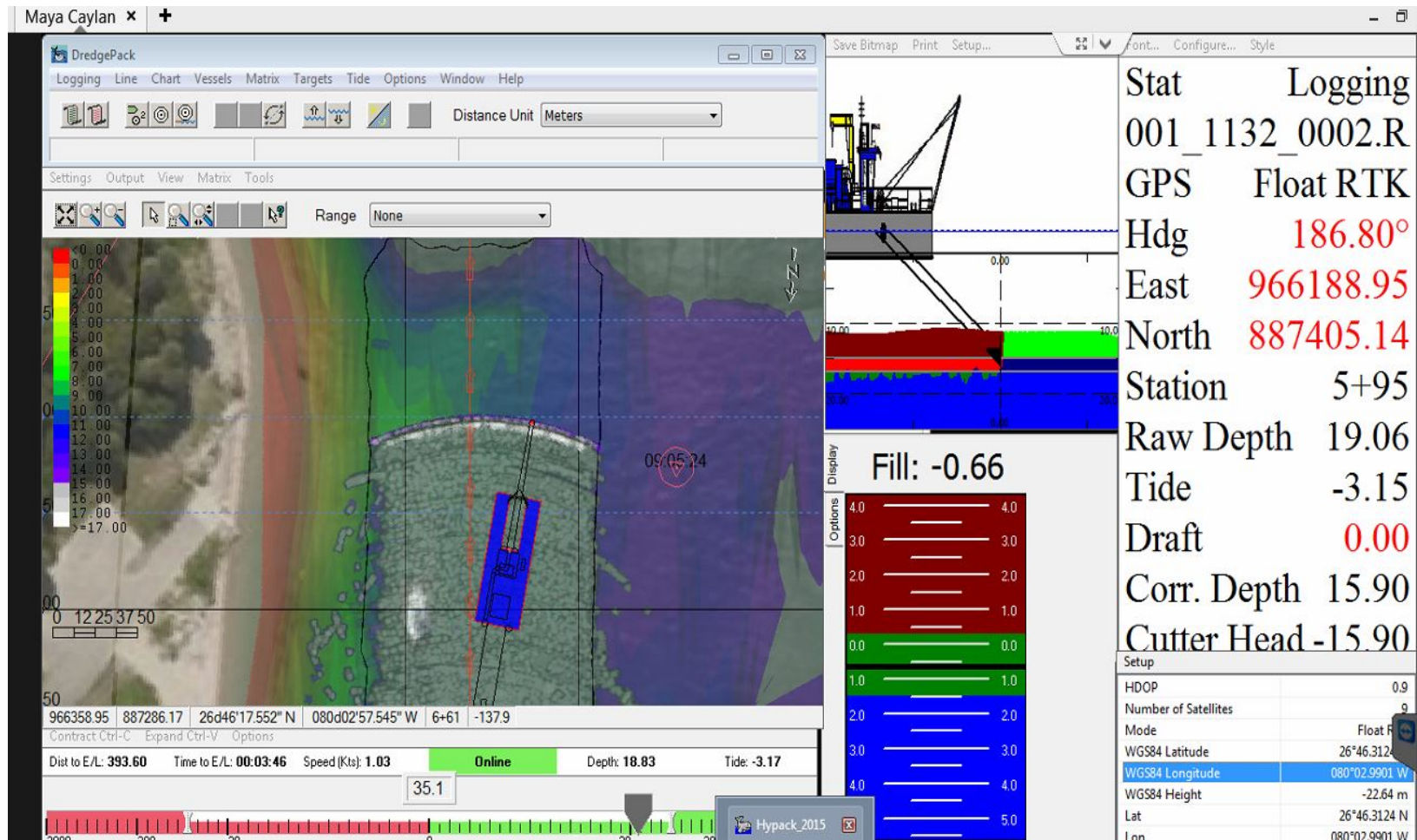
The main interface includes a menu bar (Logging, Line, Chart, Vessels, Matrix, Targets, Tide, Options, Window, Help), a toolbar, and a status bar with coordinates (678134.20, 1718028.07, 29d03'35.163" N, 080d55'52") and channel/bottom data (Chn=16.55 Bct=20.03). The Windows taskbar at the bottom shows the system time as 9:53 AM on 7/8/2013.

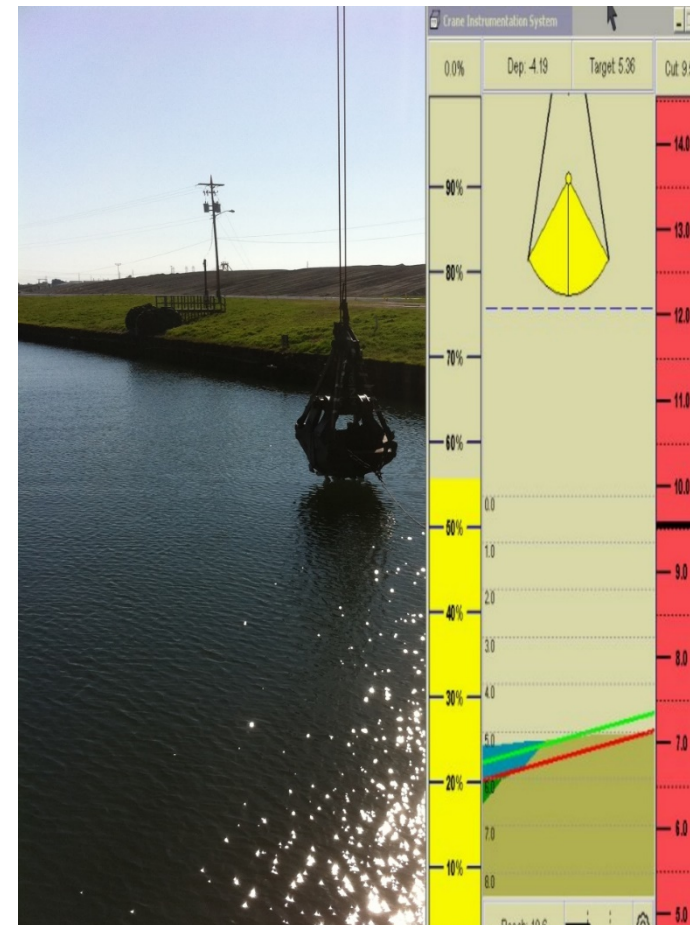
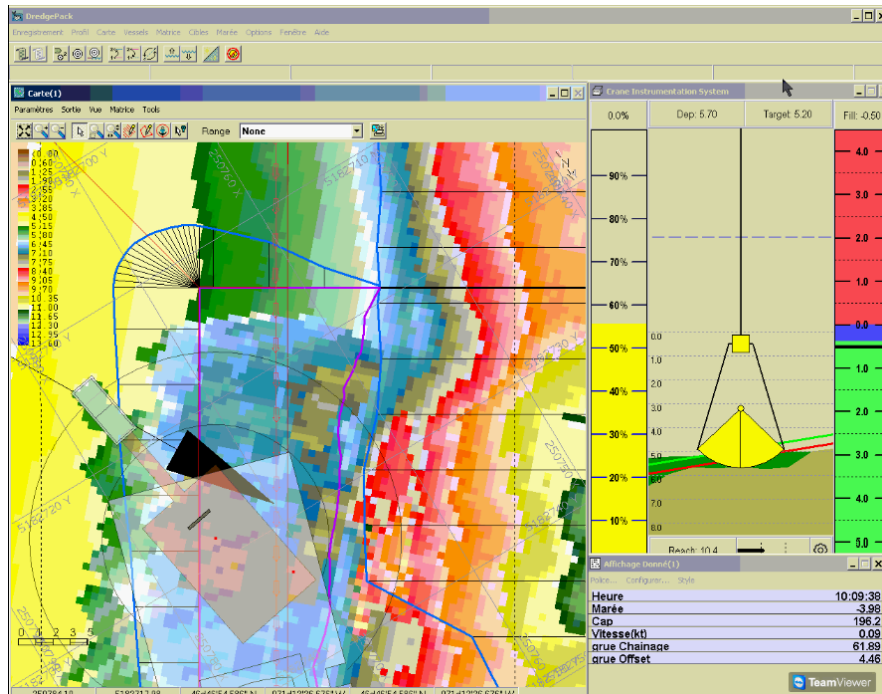


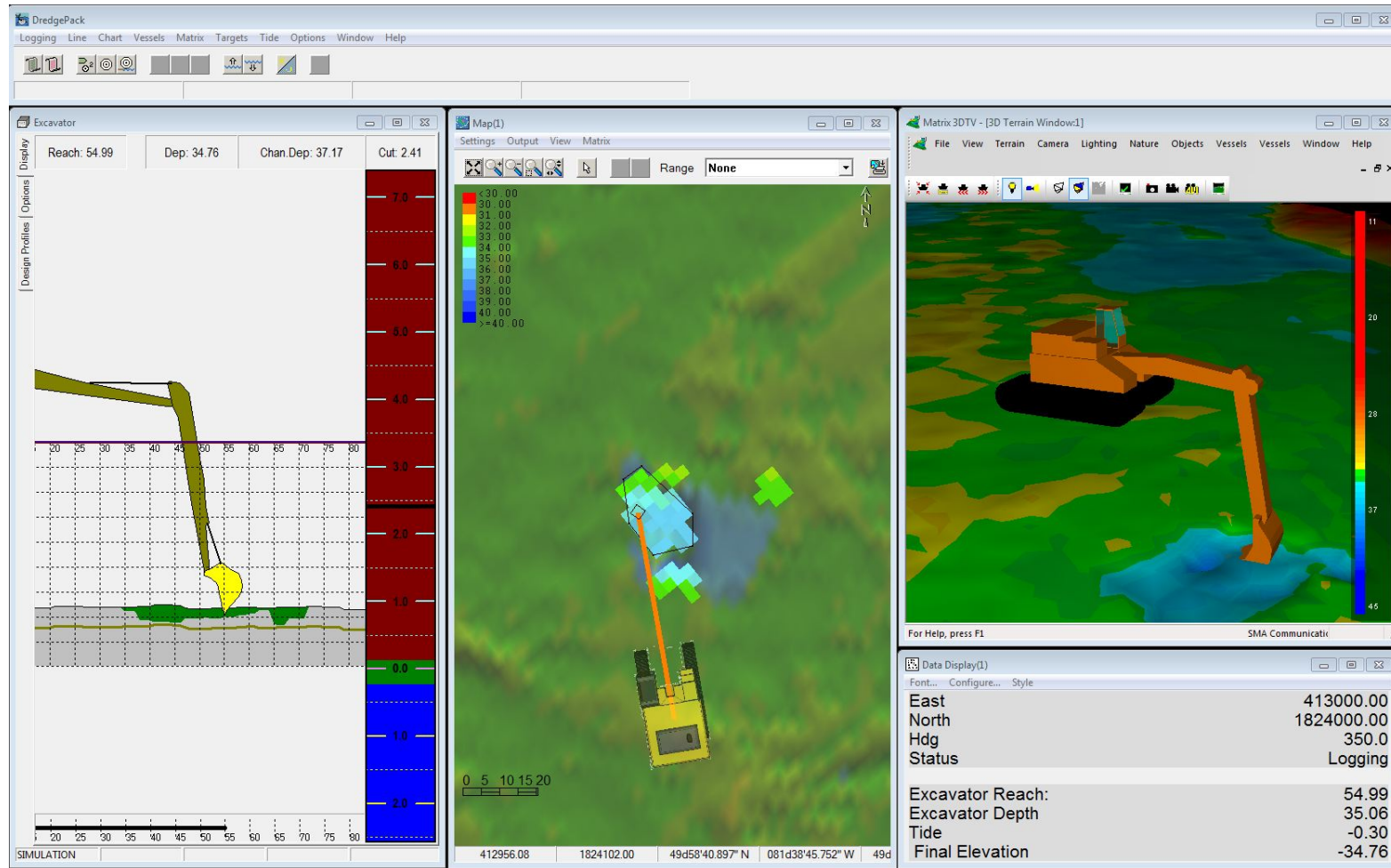


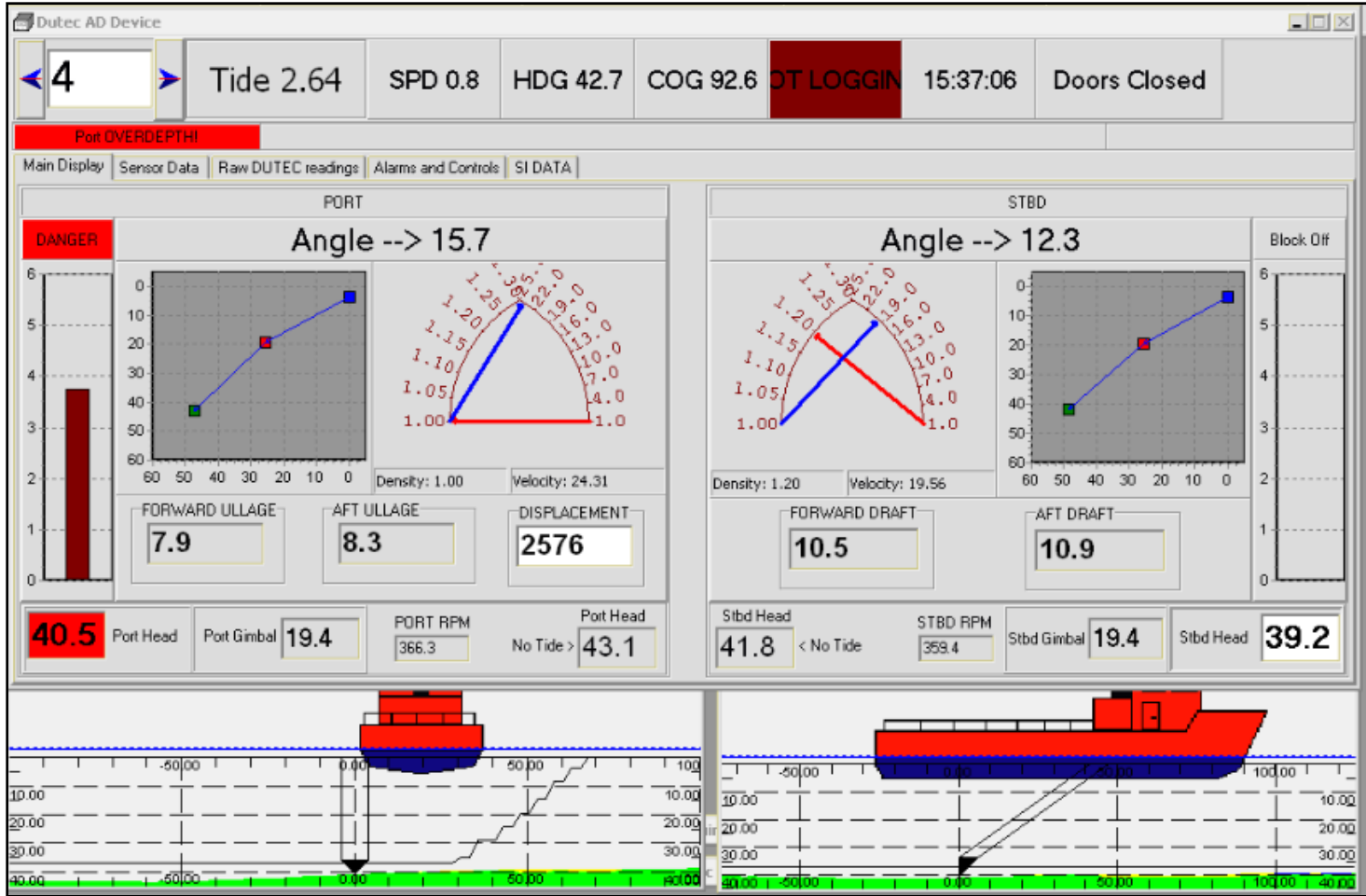
# Crane example



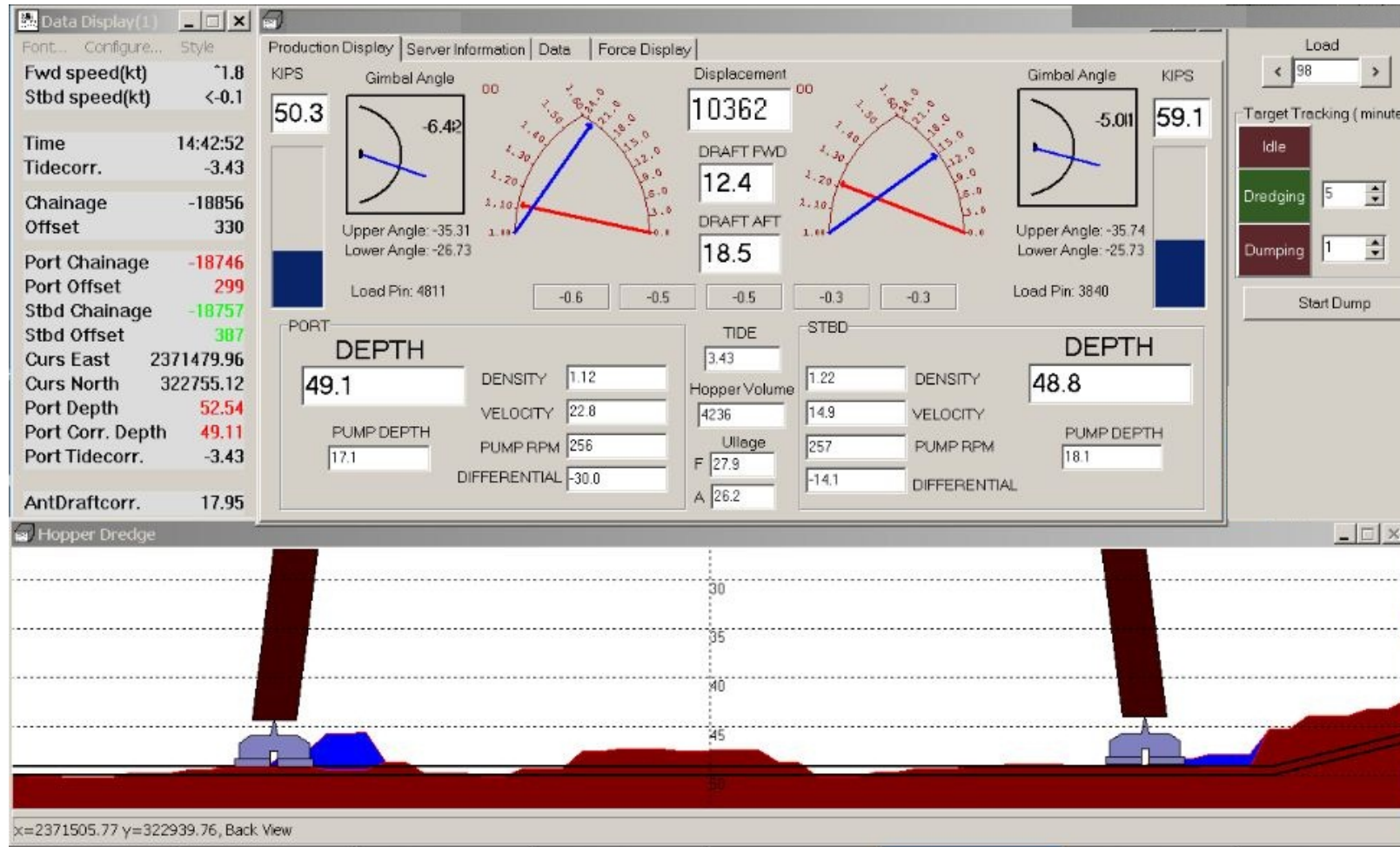








# interface

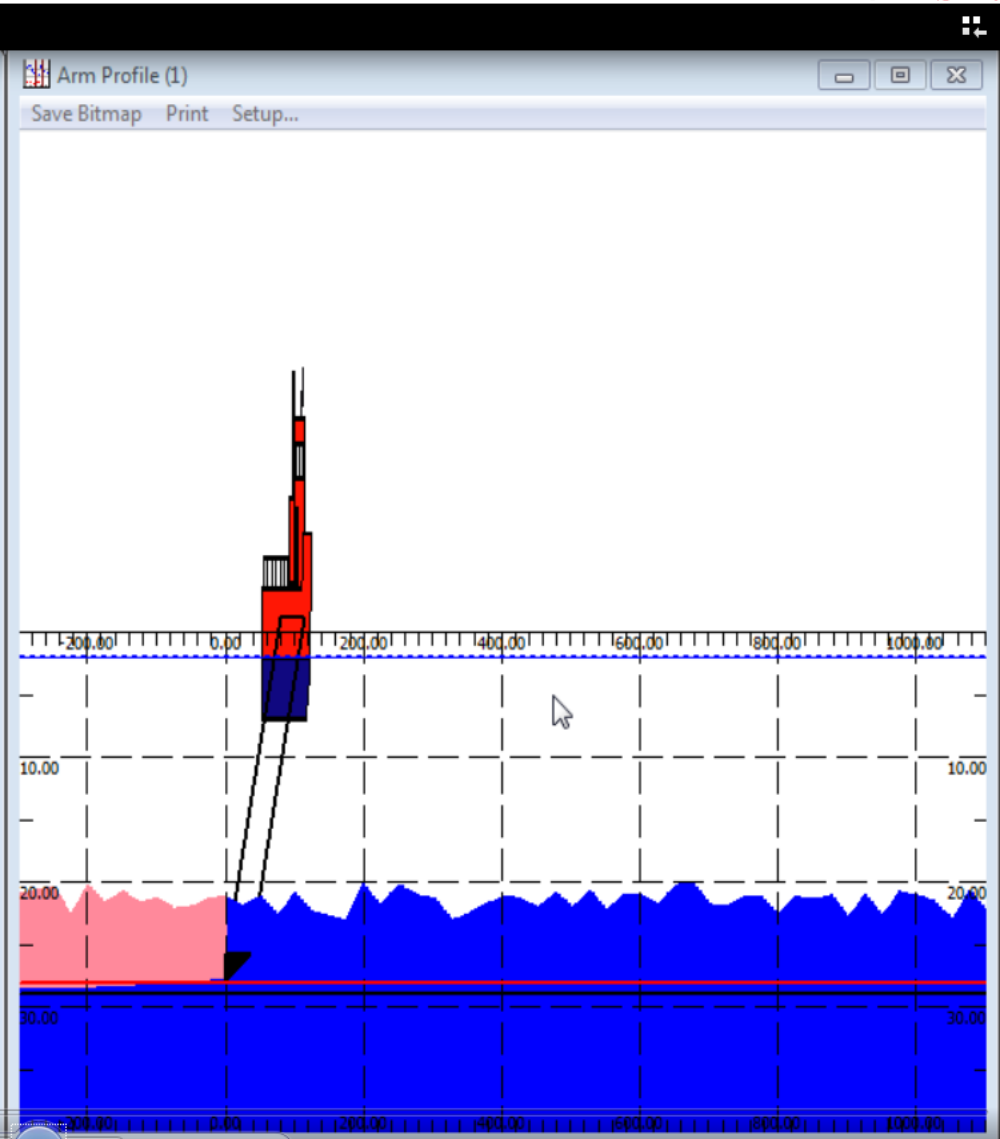
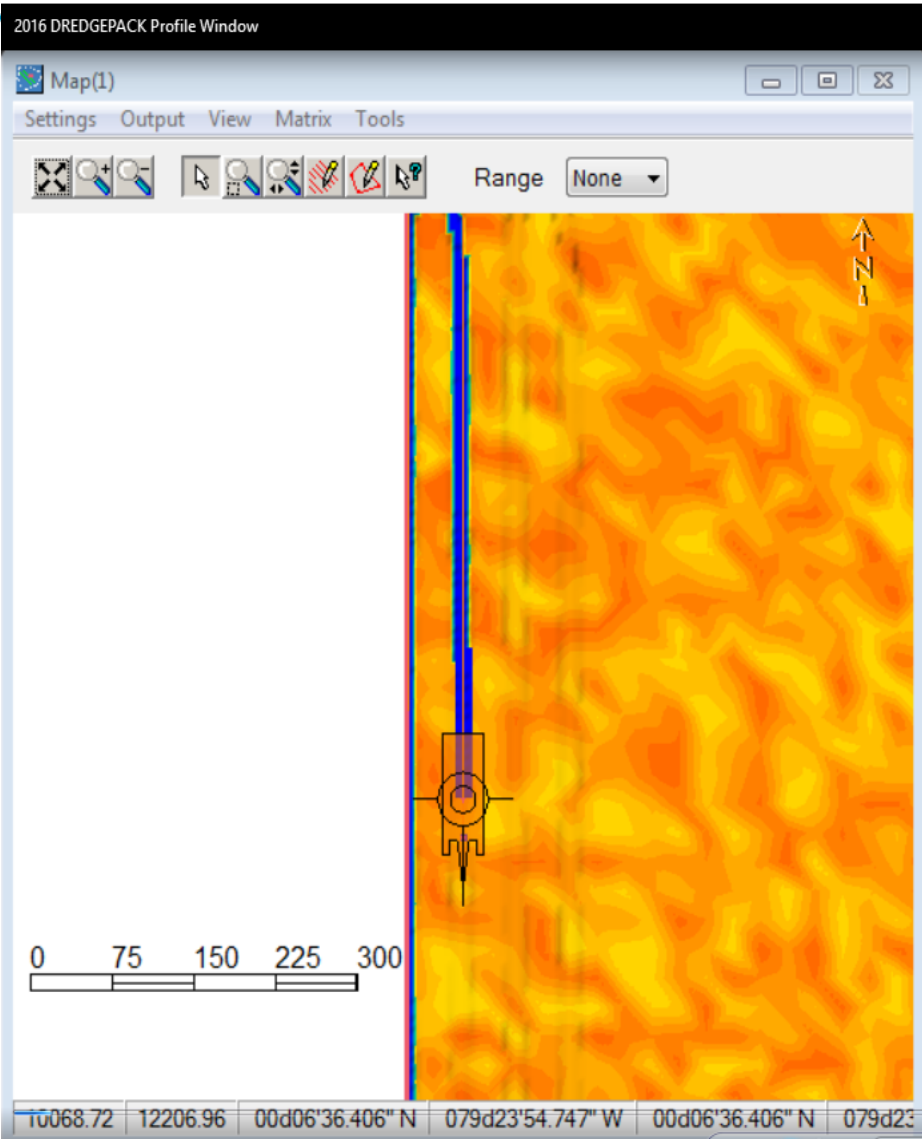


# Display viewer current data of dredging process

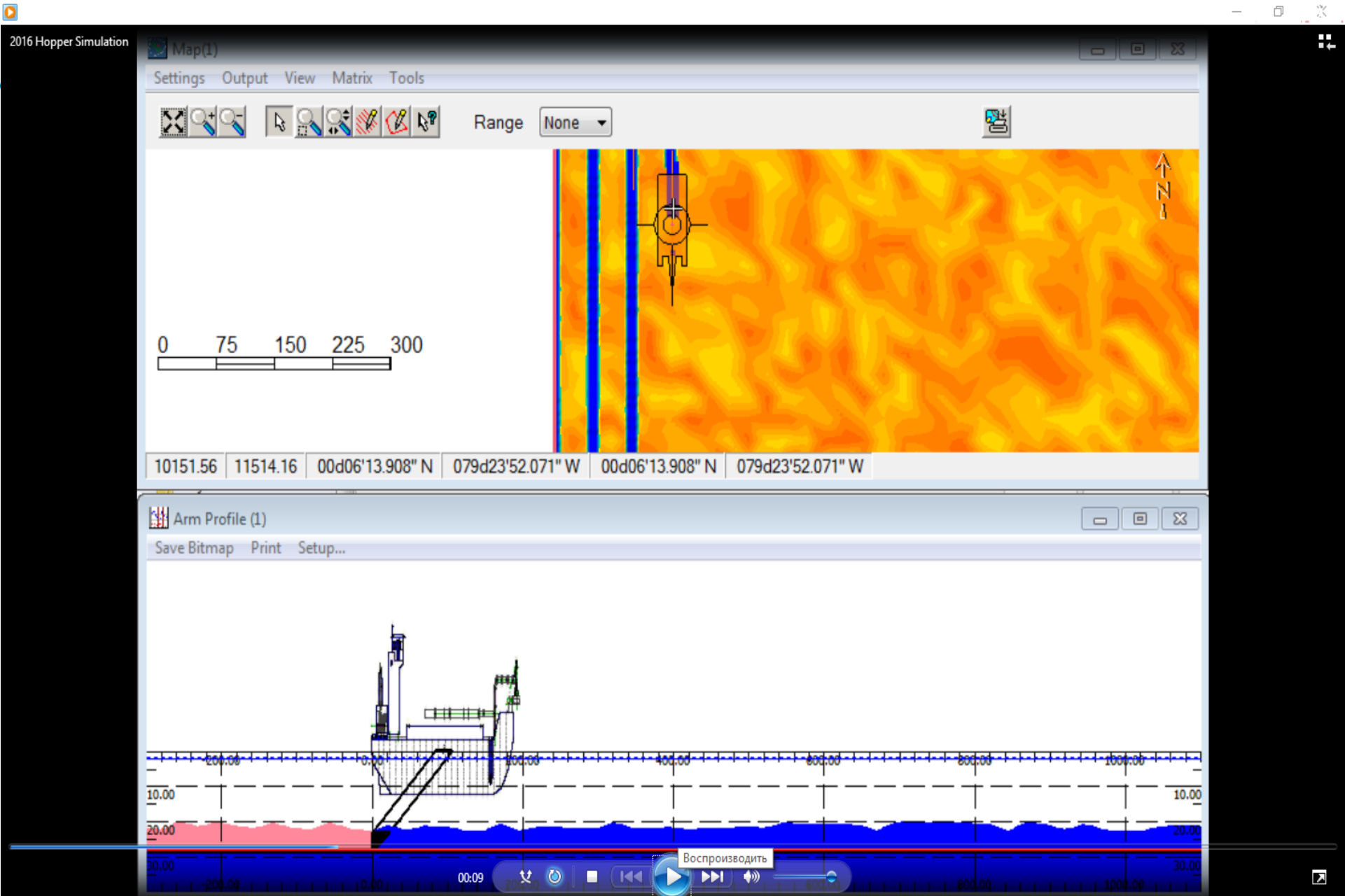
The screenshot displays the '2016 DREDGEPAK Profile Window' software interface. The window is divided into several sections:

- Profile Direction:** Perpendicular (radio button), Parallel (radio button, selected), Arc (radio button).
- Profile Orientation:** Vessel (radio button, selected), Line (radio button), Center Line (radio button).
- Horizontal Labels:** Label Interval (200.00), Major (200.00), Minor Tic (20.00), Profile (1400.00), Vessel Position (300.00).
- Arc - Center and Radius:** Center (dropdown menu), Radius (300.00).
- View:** Dredge (checkbox, checked), Survey (checkbox, checked), Solid Line (radio button), Filled Area (radio button, selected).
- Digging Tool:** Triangle (checkbox, checked), Select Shape... (button).
- Dredge Shape:** A dropdown menu is open, showing options: hopperprofL, None, atchafalaya (highlighted), cutterprof, hoppercrossR, hopperprofC, hopperprofL, hopperprofR, RightProfileCutter, Titanic Right Profile Hopper, and Titanic Right Profile.
- Vertical Labels:** Label Interval (10.00), Major (10.00), Minor Tic (5.00), Minimum Depth (0.00), Maximum Depth (40.00), Mark 1 (28.00), Mark 2 (29.00).

The main display area, titled 'Arm Profile (1)', shows a cross-sectional profile of a dredging arm. The horizontal axis represents distance, with labels from 200.00 to 1000.00. The vertical axis represents depth, with labels from 0.00 to 30.00. The profile shows a red and blue structure representing the dredging arm, positioned over a blue area representing the seabed. A red horizontal line is drawn across the profile at a depth of approximately 28.00. The software interface includes standard Windows window controls (minimize, maximize, close) and a taskbar at the bottom showing the system tray with the date and time (10:37, 12.09.2017) and the HYPACK logo.







Bucket No Sound

Map

0 5 1

00:15

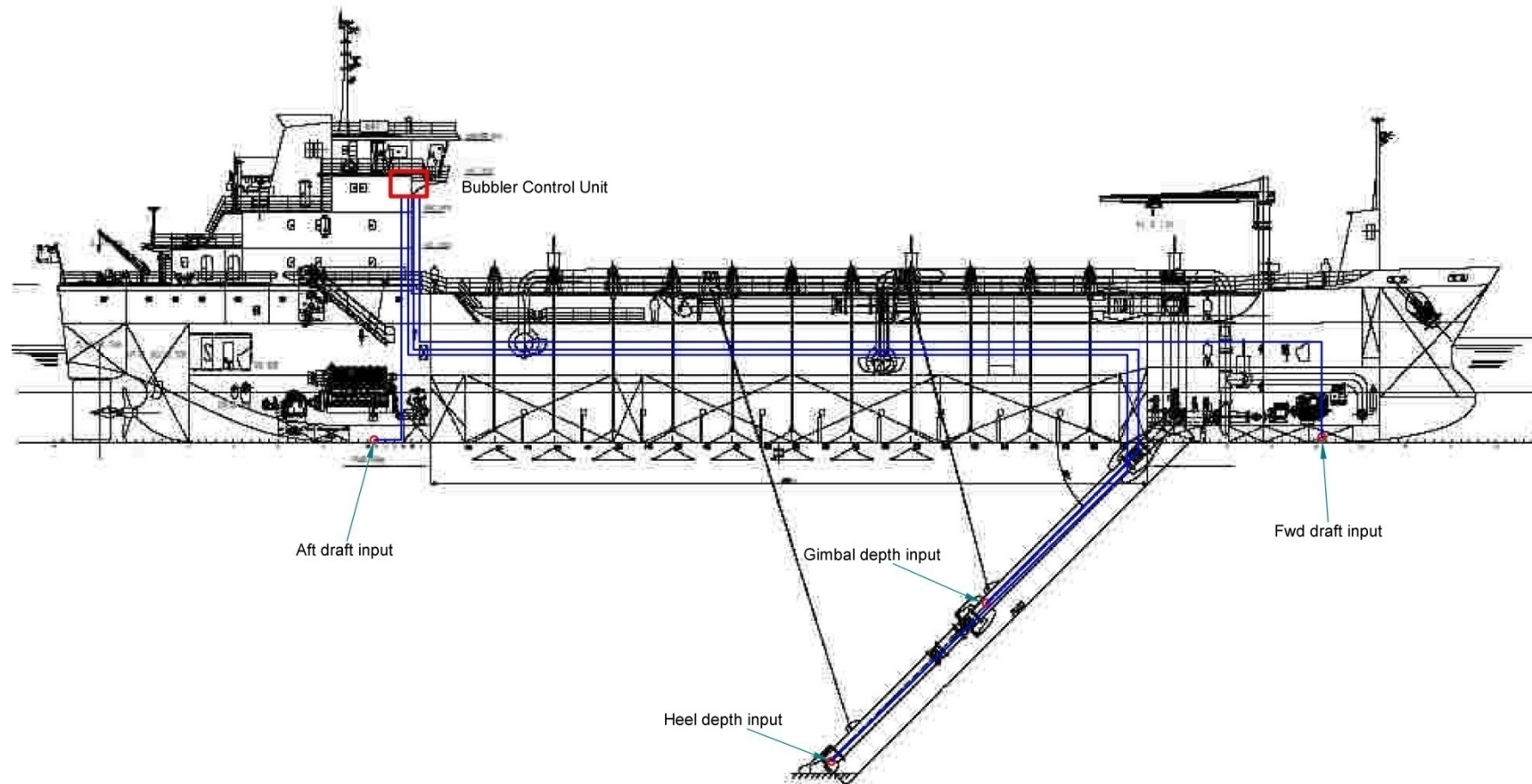
Map window details: The window contains a map with a green rectangular area. Inside this area is a yellow structure with a blue component. A red double-headed vertical arrow is positioned to the left of the green area. To the right of the green area, there are several yellow and blue rectangular blocks. A scale bar at the bottom left of the map shows markings for 0, 5, and 1. A mouse cursor is hovering over a yellow circle at the top center of the map window. The window title bar includes standard minimize, maximize, and close buttons.

# Self-Removing Dredge

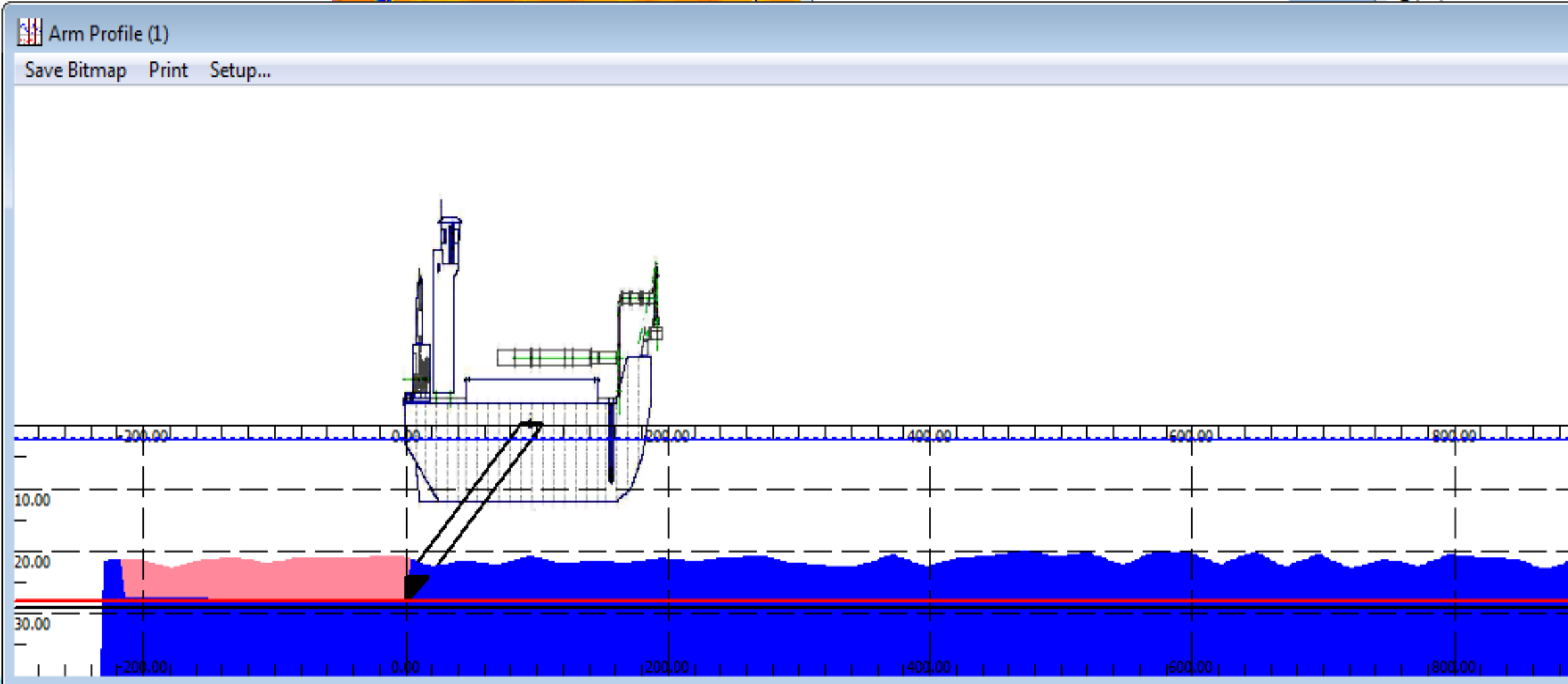


Josef Möbius (Germany)

# “bubler” system



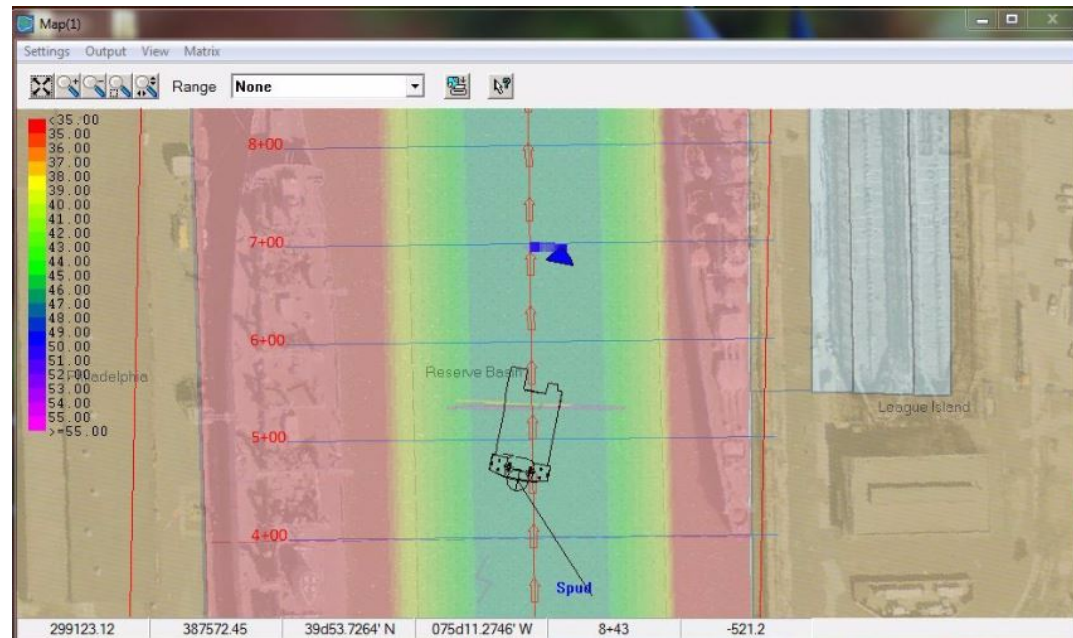
# Dra DQM SENDER



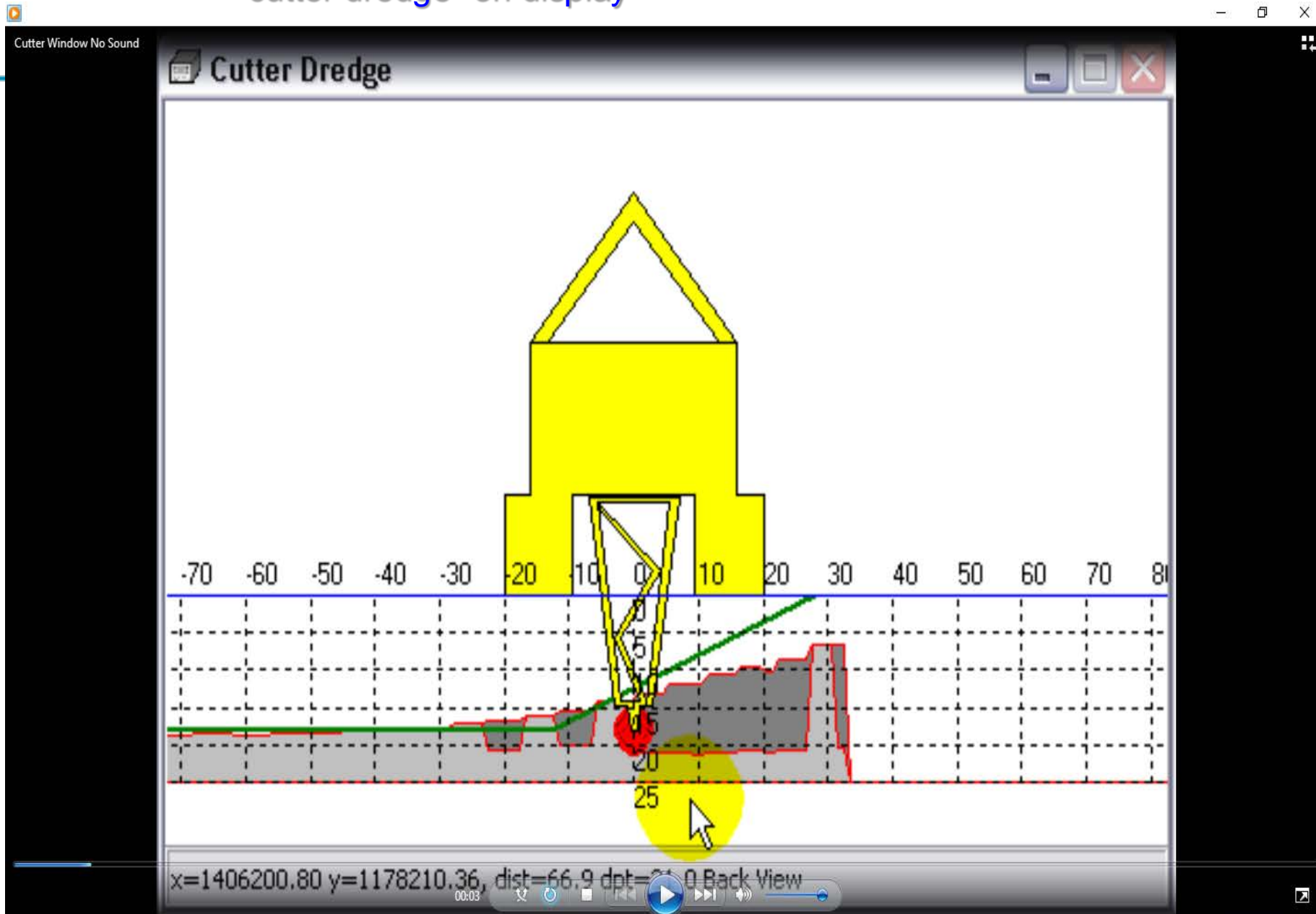
# Genoffset.dll

The screenshot displays the HYPACK configuration window. On the left, a tree view shows the hierarchy: Hypack Configuration > Boat > Spud. The 'Spud' folder is highlighted in yellow. The main area is divided into several sections:

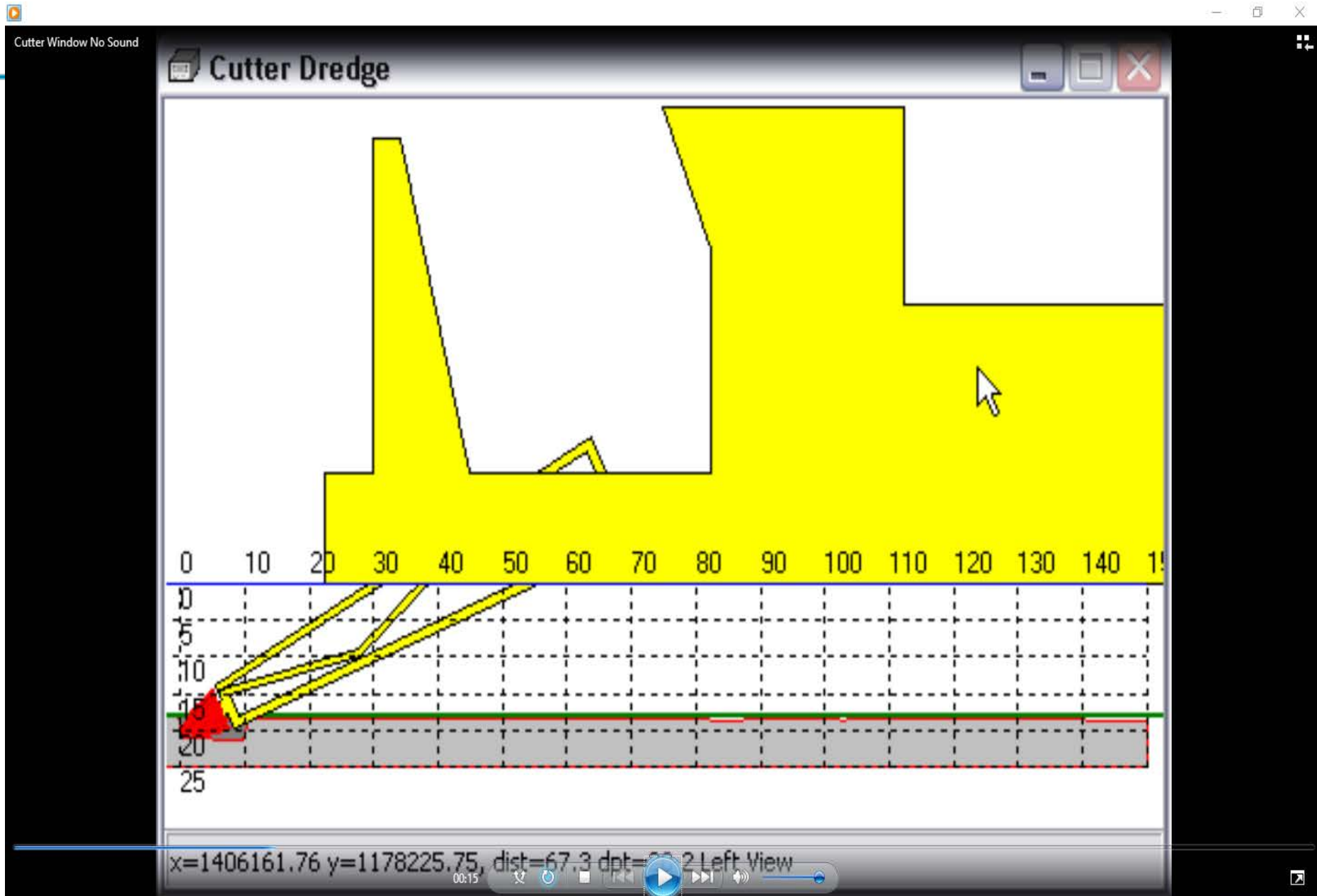
- Functions:** 'Position' and 'Heading' are checked.
- Offsets:** Starboard (0.00 ftUS), Forward (0.00 ftUS), Vertical (0.00 ftUS), Yaw (0.00 deg), Roll (0.00 deg), and Pitch (0.00 deg) are set. A 'Vertical Postive Downward' checkbox is present. Latency is set to 0.000 sec.
- Options:** An empty text area.
- Mobile Assignment:** 'Installed on' is set to 'Spud'.
- Driver:** 'genoffset.dll' is entered in the 'Driver' field.
- Generic Offsets Setup:** A dialog box is open, showing 'X Position Offset' (0.00), 'Y Position Offset' (-90.00), and 'Mobile ID' (0). 'OK' and 'Cancel' buttons are visible.



# "cutter dredge" on display



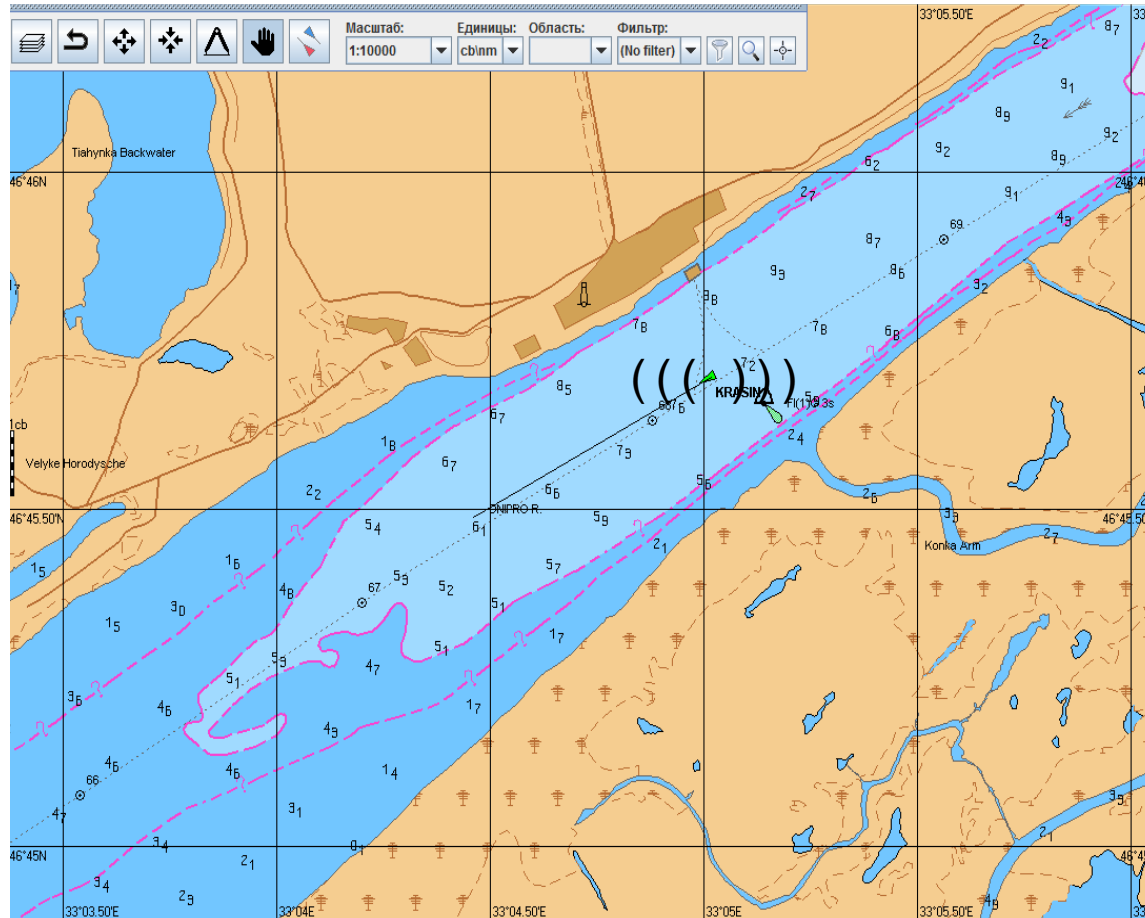
# "cutter dredge"





# Another application of Audio Watermarking: Subtitle for on-line R/Telephony

THIS IS KRASIN I'M HEADING TO THE OLD BERTH



\*Speech recognition is necessary at the transmitting

“It is more and more evident that Traffic Management will shift from safety management to a service that supports the logistic transport chain in a more intensive way, however without compromising the safety”

(RIS Guideline 2018)

# logistic

## Electronic registration of cargo transportation

- Conosament (bill of lading);
  1. Liability - who? - old legislation ! New training course!
  2. Information storage – new requirements?
  3. Safety – new rules? Each stakeholder may received full inform, that they wish, but without compromising the safety, so we have to define for each other, ceparately.

That, what we mention before in this presentation, it is conclusion just from our experiences.

All the important informations we leave in archieve.



**HYPACK**  
a xylem brand

# Autonomous sailing will be safer (we hope) than sailing with a crew

## e-news related to Ukr RIS

News updated within 24 hours.

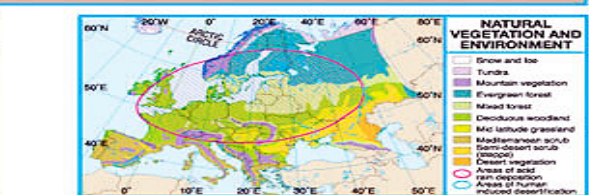
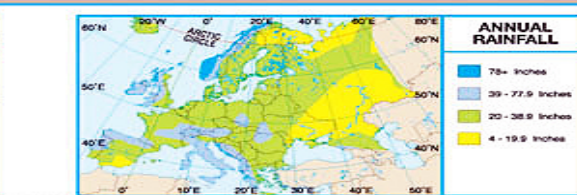
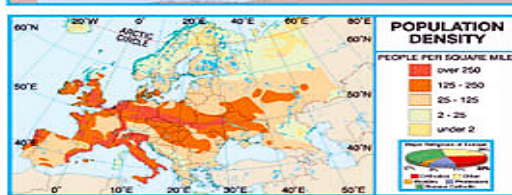
Event calendar maintained accordingly.

Old news organized in Archives

[ukrris@com.ua](mailto:ukrris@com.ua) for submitting the news.

# New training course for RIS operator:

1. Navigation mode;
2. Logistic mode;
3. Safety mode



EUROPE PHYSICAL



View from Odessa RIS center





# THANK YOU FOR YOUR ATTENTION