

Grappling Fixed Gear and RFID Line Marking Research



Grapple Project

Study conducted in Gulf of Maine and Mid-Atlantic

1/3 of project completed

GOM

9 trawls of leadline, no buoy lines

9 trawls of traps with buoy lines

Mid-Atlantic

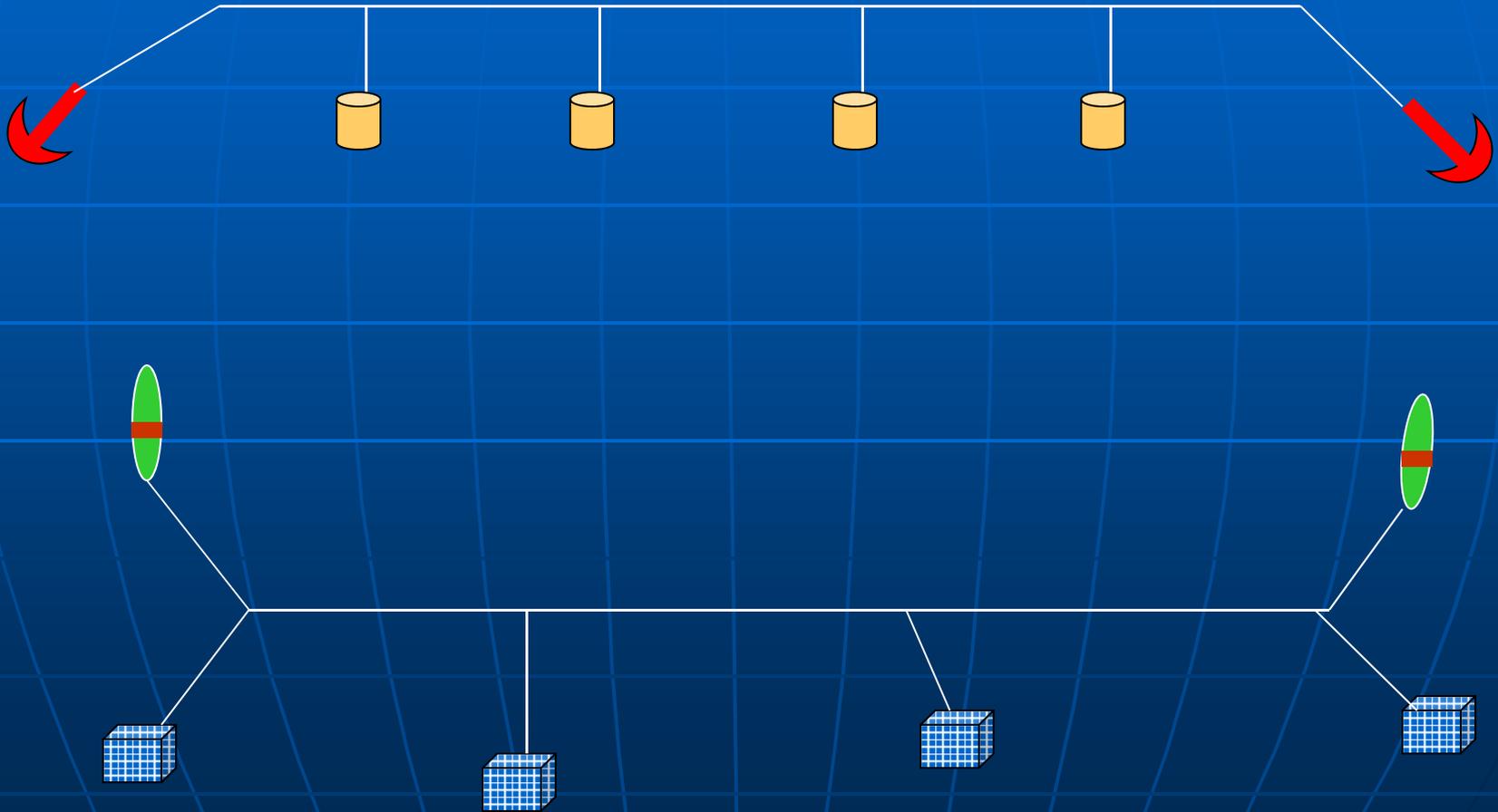
6 trawls of traps, no buoy lines

6 trawls of traps with buoy lines

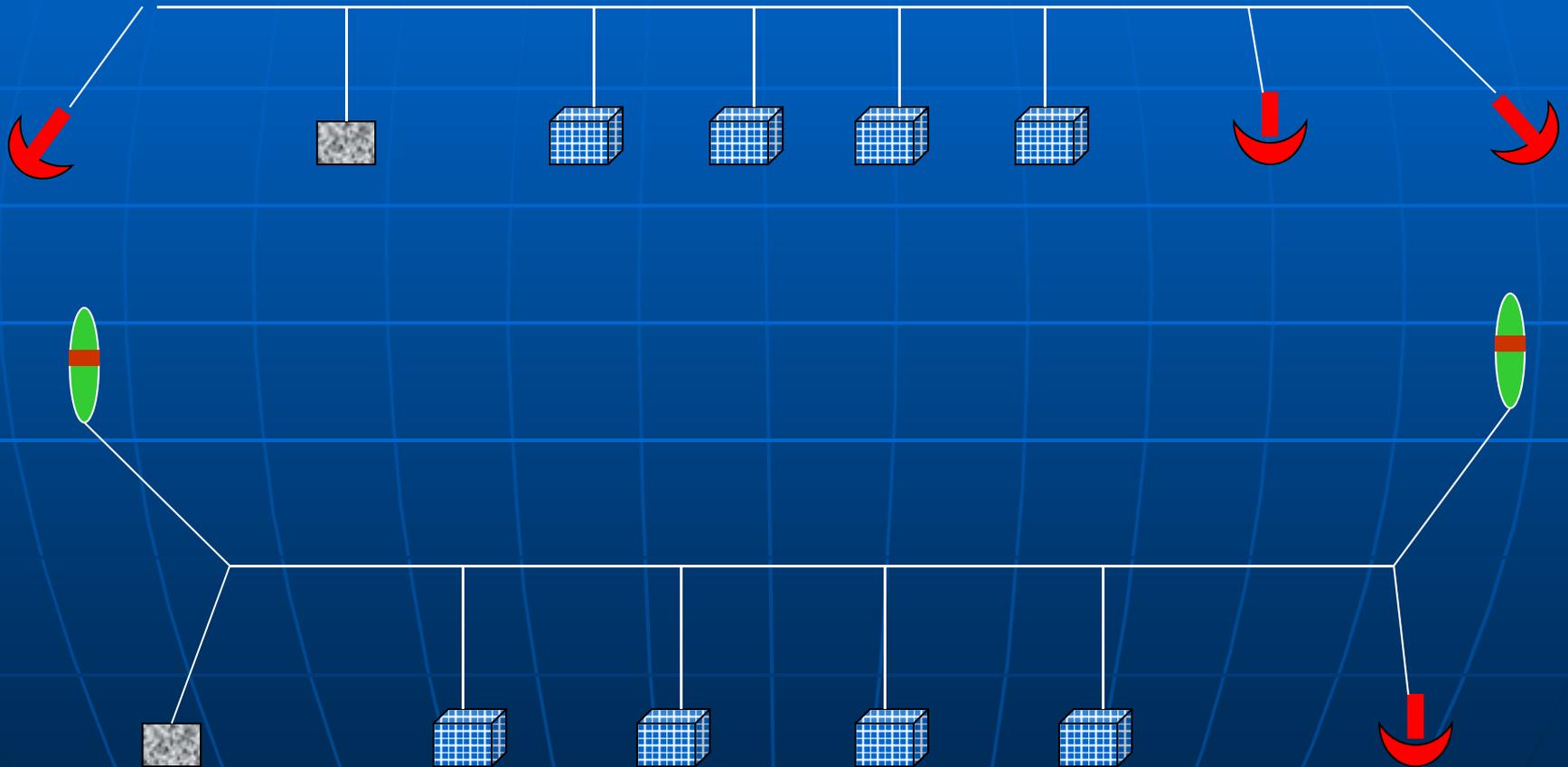
Information Collected:

- Date
- Haul number
- Lat/Long
- Time start – grapple overboard/buoy gaffed
- Time stop – first trap on rail
- Wind direction & speed
- Wave height
- Water depth
- Bottom type
- Comments

Gulf of Maine Gear Set-up



Mid-Atlantic Gear Set-up



Depth of Water Set

- GOM 15 - 40 Fathom
- Mid-Atlantic 20 - 25 Fathom

Bottom Type

- GOM Mud to Rocky
- Mid-Atlantic Sand to Mud



Grapple & Haul Times

GOM

Avg. time to land 1 st coil at rail grappling	17 minutes
Avg. time to land 1 st trap hauling traditional gear	1 minute

Mid-Atlantic

Avg. time to land 1 st trap at rail grappling	27 minutes
Avg. time to land 1 st trap hauling traditional gear	3 minutes

- Does not account for days unable to retrieve gear due to weather
- Does not account for time lining vessel up on Long/Lat
- Does not account for time dealing with set-overs

Issues impacting Grappling

- Safety at block and hauler
- Fed & State Regs
- Tide conditions
- Sea conditions (days aborted d/t weather)
- Wind speed
- Set overs by other gear (19 times in GOM)
- Gear conflict with fixed and mobile gear
- Time lost (time = money)

Radio Frequency Identification (RFID) incorporated into line marking system



Funded Projects to Date

IFAW funded:

- UNH completed
- CCS completed

Both Projects are available on the website created for the TRT materials.

Recently funded project with Randy Stigall, began October-2010.

Current NMFS Testing: RFID tags

Several RFID Tags being evaluated at sea (Frick brand):

- Still operational after 4 months
- Showing signs of fatigue
- Will continue to monitor

Currently working with Randy Stigall & the Univ. of Arkansas to develop additional RFID options.

NMFS Gear Team Investigating combination of RFID technology with visible line marking

Goals:

- visible by the eye and readable by NMFS Gear Team
- easily attachable to wet or dry line
- longevity at sea for at least one year
- economically feasible