GFBioField

Groundfish Trawl Surveys Electronic Data Acquisition System

2011 edition...

Fisheries and Oceans
Canada

Péches et Océans
Canada

GFBioField

- Electronic Data Acquisition System (EDAS)
- Updates
  - NMEA logging
  - Integrated GIS expanded
  - Bridge Log "Wizard"
  - Integrated sample selection protocol
  - Integrated length-frequency weights
  - Webcams for QA
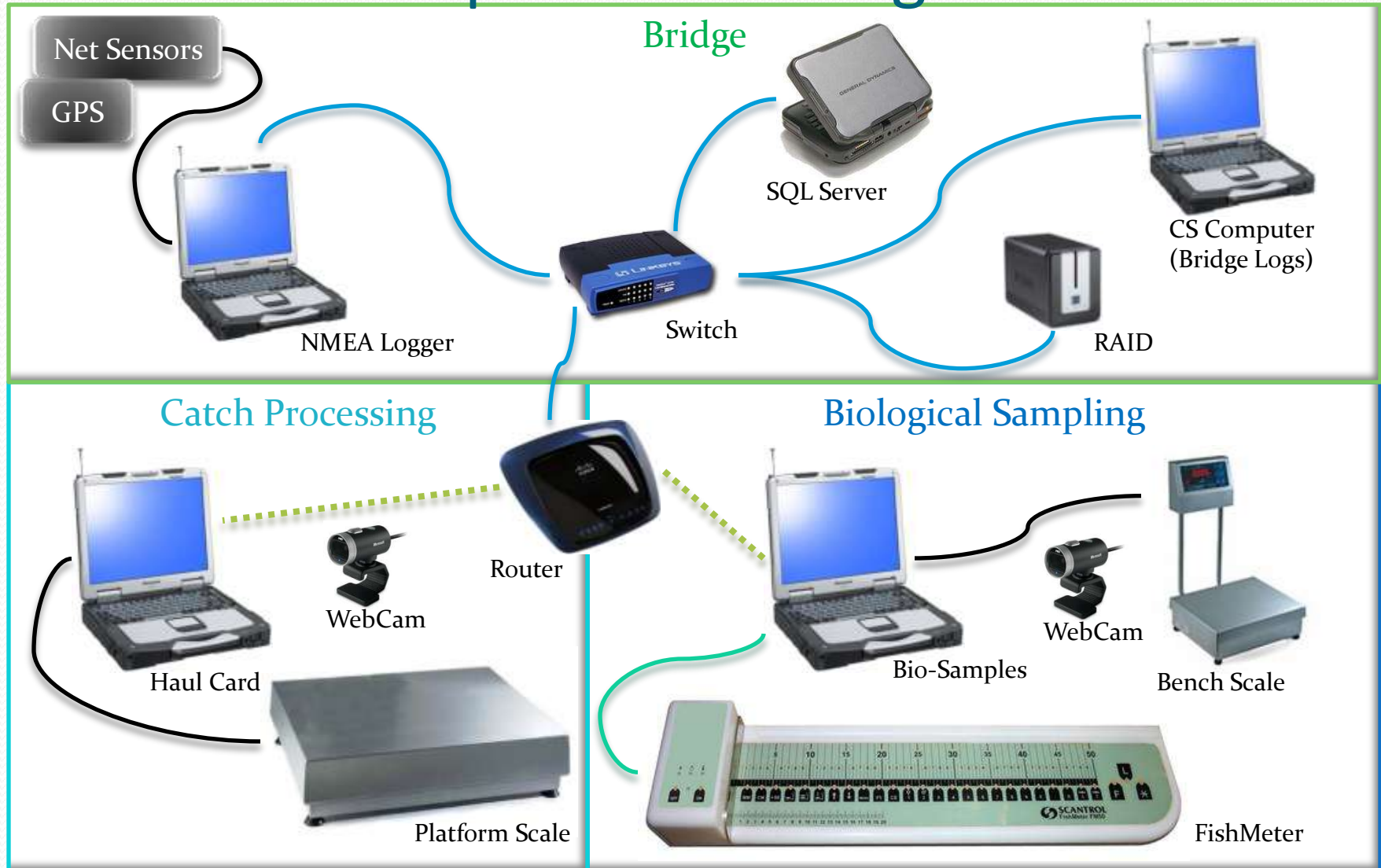 - Bluetooth boards

GFBioField

- Hardware
- Software
- Survey Operations

Hardware Components

- Ruggedized laptops
- Scantrol FishMeter Board
- Marel Scales
- Wireless Router
- Network Switch
- RAID Backup Device
- WebCams
- Bluetooth Headphones
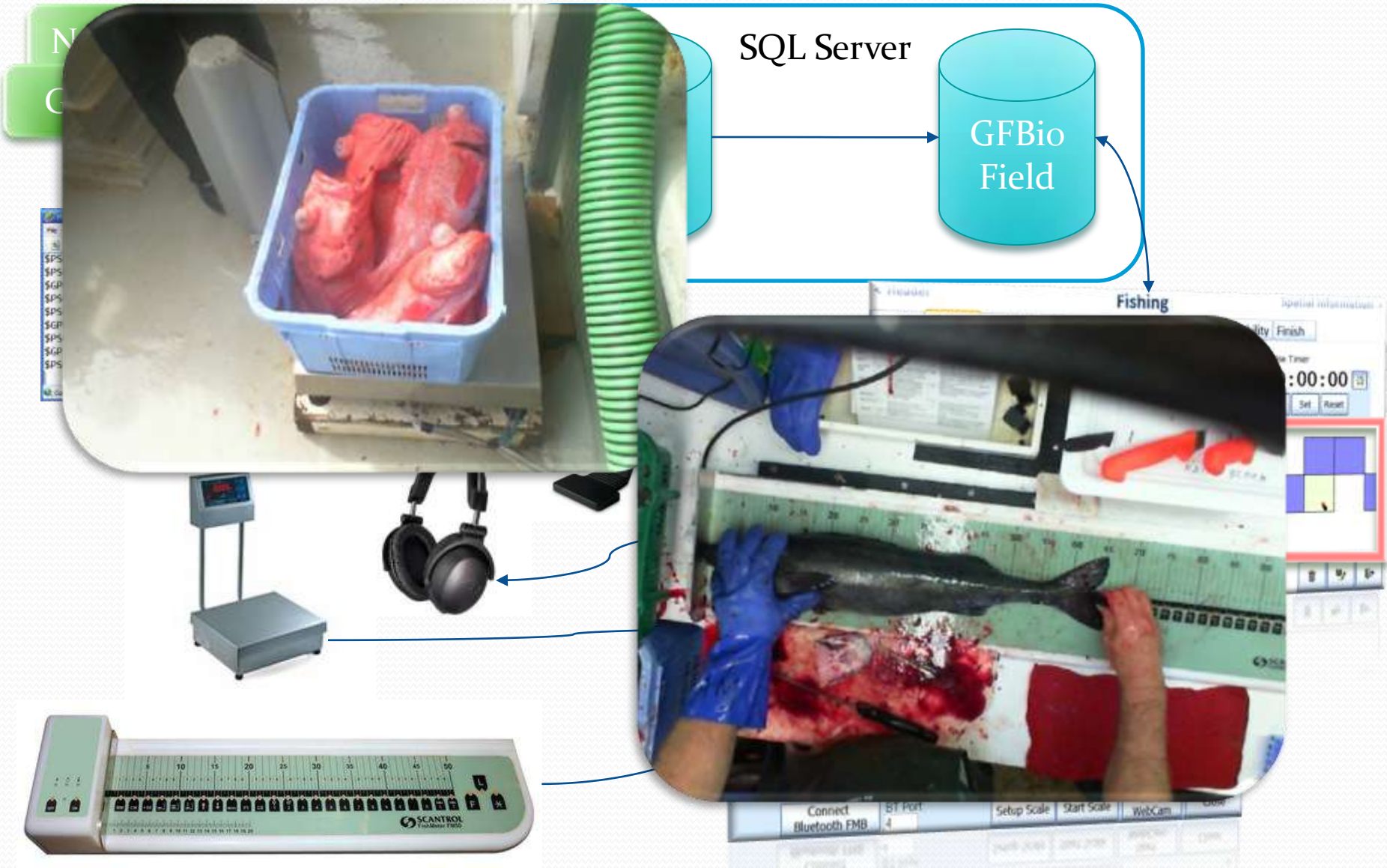
Hardware Components Configuration

Bridge

Net Sensors

GPS

SQL Server

CS Computer
(Bridge Logs)

NMEA Logger

Switch

RAID

Catch Processing

Biological Sampling

Router

WebCam

Haul Card

Bio-Samples

WebCam

Bench Scale

Platform Scale

FishMeter

Software Components

- HyperSlurm Data Logger
- Microsoft SQL Server 2008
- Microsoft Access 2007
  - Add-Ins:
    - Microsoft Text-to-Speech Synthesis
    - Scantrol FishMeter Control
    - MapWindow GIS Control
    - WebCam Control
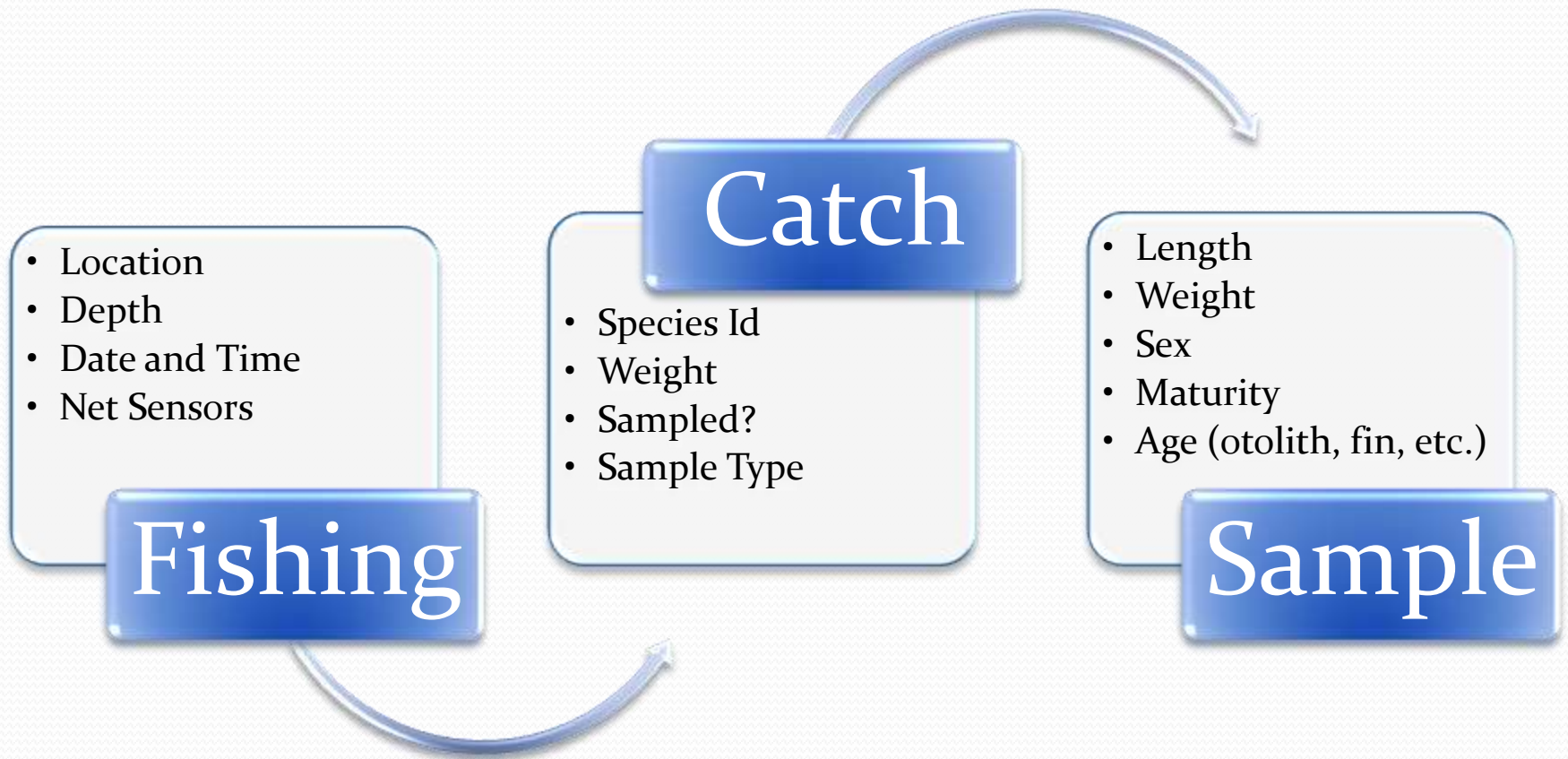   - Serial and TCP Clients

Software Components Configuration

SQL Server

GFBio Field

Survey Operations

- Fishing
- Catch Processing
- Biological Sampling

Data Streams

Fishing

- Location
- Depth
- Date and Time
- Net Sensors

Catch

- Species Id
- Weight
- Sampled?
- Sample Type

Sample

- Length
- Weight
- Sex
- Maturity
- Age (otolith, fin, etc.)

Bridge Log

Trawl Specifications

Warp Length → 250 Fathor

Trawl Speed 4.8 Kmph

Doorspread → 74.7 m

Mouth Height 5.8 m

Mouth Width _____ m

Sweep Length _____ m

Codend Mesh _____ cm

Trawl Type Standard Bottom Tr

Net Type Atlantic Western Iii

Net Sounder Scanmar

Mens. Dev. Scanmar

Door Type Thyboron 107

Door Weight 900 Kg

‹ Previous   Next ›   ? |◄ ◄ 2 ► ►| ►*

Bridge Log

Bridge Log

Bridge Log

Bridge Log

Bridge Log

Bridge Log

Bridge Log

Fishing Results

Was this tow a success? ○ Yes ◉ No

If no, please indicate why from the list below

Other (describe in the comments below). ▾

Snagged a yellow submarine. Paul was dead.

Would you like to reject this block from the survey? ○ Yes ◉ No

◂ Previous | Next ▸ | ? | |◂ ◂ 3 ▸ ▸| ▸* | 🗑 | 💾 | 🚪

Bridge Log

< **Fishing Results**

Previous | **Next** ▸ | ?

PRINT | CLOSE | Tuesday, November 09, 2010 | 2:09:33 PM

Bridge Log

Header
Vessel: Viking Storm   Recorder: Malcolm Wyeth   Date: 11/9/2010   Set Number: 3
Block Designation.: 2577   Stratum: 153   Reason Code: Reason Comment:

Gear Deployment Times
Begin Deploy: 11/9/2010 1:21:31 PM   Begin Retrieve: 11/9/2010 1:33:45 PM
End Deploy: 11/9/2010 1:31:20 PM   End Retrieve: 11/9/2010 1:41:55 PM

Gear
Gear Code: 1   Mouth Opening:
Net Code: 2   Height: 3.8   Sweep Length: Usability: Fail, No Usable
Door Code: 11   Doorspread: 70.5   Codend Mesh Size: Sounder Comment:
Door Weight: 900   Warp Length: 250   Sounder Code: 5

Distance and Direction
Distance Travelled: 0.21   Vessel Speed: 5.6   Direction of Set (degrees): 139
            Units: km   Units: Kmpl

Location
Start Latitude: 53 °   13.374 '   End Latitude: 53 °   13.292 '
Start Longitude: 132 °   48.175 '   End Longitude: 132 °   48.041 '
Fishing Ground: Marble Island   Location Verification Code:

Oceanographic
CTD Reference No:
Water   Surface: 11.5   Depth (m): 2   Surface Water Temp Tech Code: 5
Temp.   Bottom: 4.25   Depth (m): 621
(°C)   Modal:

Depths

	Bottom	Gear	Target	Capture
Start:	615	611		
End:	571	633		
Minimum:	569	611		
Maximum:	615	633		
Modal:	588	621		

Weather and Sea State
Wind Direction: 225   Swell Height: 2   Sun Shining?: Yes
Wind Speed: 7   Cloud Cover: 25   Tide: Flood
Beaufort Scale: 3   Luminescence: Weather Comment:

Print the B

View the C

Survey GIS

- MapWindow GIS ActiveX Component
- Provides GIS Functionality:
  - Zooming and panning display
  - Overlays of previous survey activity
  - Overlays of commercial fishing activity
  - Display and tracking of vessel position
  - Distance measurement
- Modification of survey design
- Export of survey blocks to Nobeltec ONF format

Block Status Legend

- ■ (blue) Not yet fished
- ■ (pale yellow) Rejected prior to visit
- ■ (orange) Rejected after inspection
- ■ (pink/red) Rejected after failure
- ■ (cyan) Not rejected after failure
- ■ (purple) Omitted but not rejected
- ■ (pale green) Success after mutiple tries
- ■ (green) Success after first try

Other Layers

☑ Tracks ☑ Blocks

2006	▲	2006	▲
2007	☰	2007	☰
2008	▼	2008	▼

☑ Fisheries

Dogfish	▲
Groundfish_Trawl	☰
Halibut	▼

☐ CHS Chart

Cursor Location:

Latitude: 53.24953

Longitude: -132.93362

Measurement Length:

Kilometers:

Nautical Miles:

Block Status Report

Survey Design

Export to Nobeltec

Zoom In | Zoom Out | Pan | Full Extent | Previous Extent | Block Info. | Block Labels | XY Vessel Position | Vessel Tracking | Snapshot | Refresh | Measure | Exit

Haul Card

Vessel: Viking Storm   **Haul Number:** 3   **Haul Date:** 11/9/2010   **Haul Time:** 13:33

☐ Partial Sort?   Total Weight   Malcolm
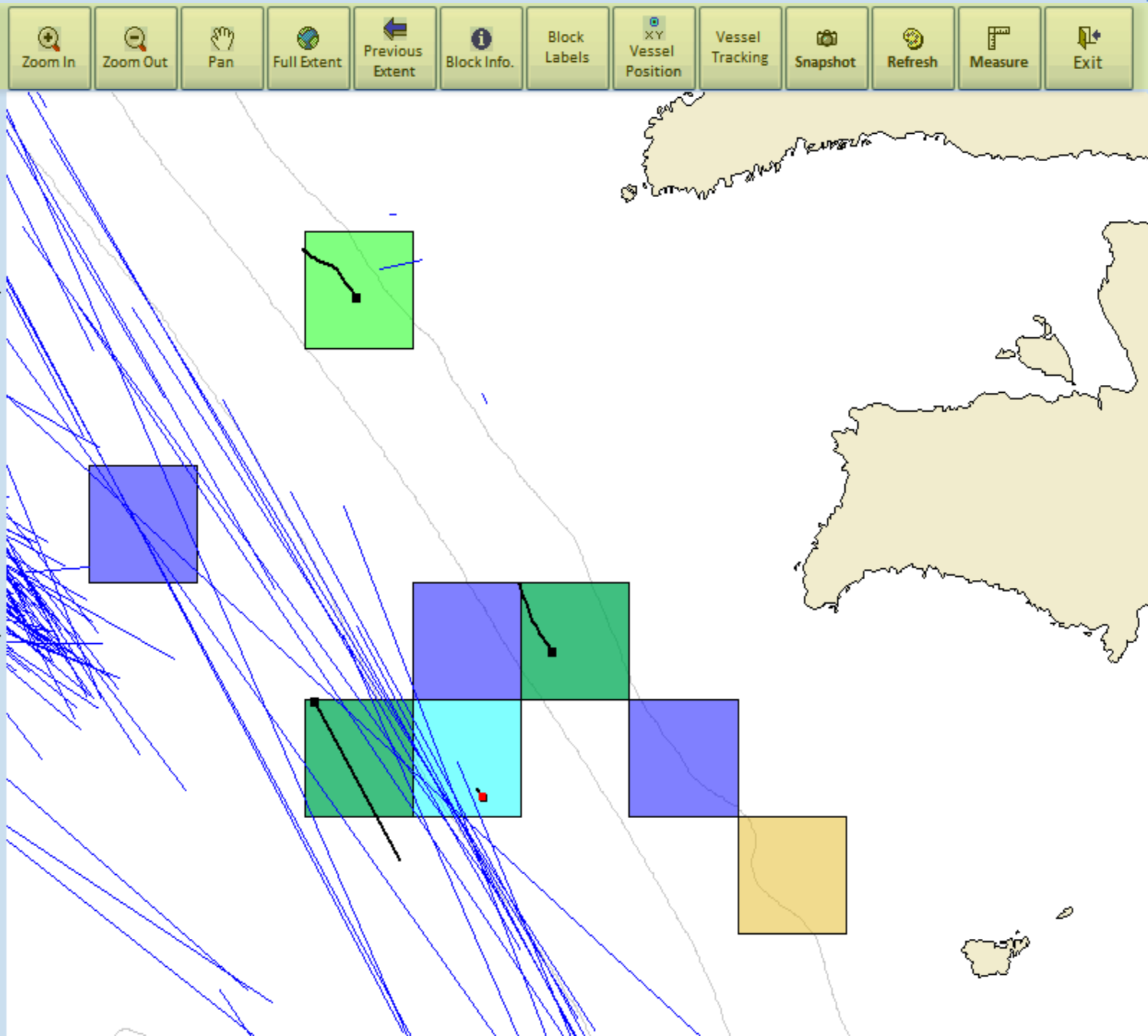
General Comm

Sorting Comm

Code	Spec	R	L	A	Sample?
437	Cana	1	1	5	No
414	Gree	3	5	25	Yes A
396	Pacifi	2	10	25	No
626	Dove				No
628	Engli		5	25	No
222	Pacifi		1	10	No
455	Sable		1	25	No
059	Long		1	0	No
91G	Pacifi				No
*					No

Add Species   Add Multi Species   Lookup Species   Haul Card Report

Start Scale   Setup Scale   Scale Used: 1 - M2000 - 6   Start WebCam

|◄   ◄   3   ►   ►| of 3   HELP   Lab Boss Logbook   Refresh   Change Trip   Save   Exit

Bio-Samples

Bio-Samples

Bio-Samples

Bio-Samples

Bio-Samples

Bio-Samples