Contributions and Concerns of Private Sector Fishing Consulting Services

Mitchell A. Roffer (Ph.D.) President
Roffer’s Ocean Fishing Forecasting Service, Inc.
Miami, FL 33155 (WWW.ROFFS.COM)

Workshop to Explore Private Sector Interests and Roles in the U.S. Integrated Ocean Observing System; Focus on the Southeastern U.S. and Gulf of Mexico
Marathon Oil Co., Houston, TX, 2-4 March 2004
Acknowledgements

Worth Nowlin, Jr.
Ken Schaudt
Gail Baxter
Bob Cohen
Bob Smith
Christopher Mooers
Buzz Martin
Steve Lyons
Paul Kelly
Robert Stickney
Richard W. Spinrad
Paul Moersdorf
Susan Martin
Contributions and Concerns of Private Sector Fishing Consulting Services

Will IOOS Help Us Or Compete With Us?
Or How Do We Help IOOS Help US
So We Can Help Them?
Explore
Private Sector Interests And Roles
In The U.S. Integrated Ocean Observing System:

Focus on
Southeastern U.S. and Gulf of Mexico
What Are Fishing Consulting Services?

- Private Companies
  - Varying Sizes
  - Unites States and Overseas
    - Gulf of Mexico Region
      - ROFFS™ (Commercial & Recreational)
      - ORBIMAGE Inc. (Commercial)
      - Fishman Forecasting Inc. (Recreational)
      - Offshore Satellite Services (Recreational)
      - Ocean Imaging Inc. (Commercial & Recreational)
      - CLS - CatSat™ (Commercial)
    - Other Regions - Other Oceans
      - Many Companies Worldwide
What Do They Provide?

- Infrared & Color Satellite Imagery
- Temperature At Depth
- Altimetry
- SST And Ocean Frontal Analyses
- Ocean Currents
- Winds, Sea Heights, Marine Weather
- Fishing Forecasting Analyses
- Software (Data Manipulation, Navigation)
- Communication Solutions
- Search & Rescue Support
- Aquaculture Solutions
What Can They Provide To IOOS?
Satellite Data

- **Infrared Satellite Data**
  - Polar Orbiting and Geostationary
    - 1-4-6 km Resolution
    - 1-24 Images Per Day

- **Ocean Color Data**
  - Polar Orbiting
    - 1-4 km Resolution
    - 1-5 Images Per Day (SeaStar, Terra, Aqua, Others)

- **Satellite Data Will Be Available For The Long Term**
  - Data Type Orientation VS Platform Orientation
    - IR_SST, VIS_Ocean Color, Altimetry For Climate Data Records
In-Situ Data

- Temperature (Surface and Depth)
- Ocean Color
- Current Velocity, Current Boundaries
- Weather (Wind Velocity, Sea State)
- Biological Observations
  - Fish, Birds, Mammals, Turtles, Etc.
- Water Samples
More

- Ships Of Opportunity
- Ship Time
- Instrument Deployment and Recovery
- Calibration Services
- Product Testing - Validation Of Models
- Research Partners
  - Money, Data, & Equipment
$ Employment $

- Oceanographers and Meteorologists
  - Professionals
  - Recent Graduates
  - Graduate Students
- Programmers
- Software Developers
- Marketing, Accounting, Etc.
Other Items

- Experience
  - In 24 Hour - 7 Day Operations
  - Customer Support
- New Software
- New Technology
- IOOS Governance
- IOOS Planning
Finally

USERS!

ADVOCATES WITH POLITICAL INFLUENCE
Today: Identify the basis for public/private/academic sector interactions in the context of U.S. IOOS

- Modes of cooperation
- Business opportunities
- Potential areas of conflict
“Data And Information Produced At Public Expense Will Be Fully And Openly Shared At No More Than The Cost of Dissemination.”

- Is This Really True?
  - What About Costs Related To Marketing, Staff To Find “Users”?
- Which Data And Information?
What Products?

- Data
  - In Digital Form?
- Maps and Graphics For Web Viewing?
- Products Developed For Public Sector “Users” That Are Already Being Provided By Private Industry?
Areas of Conflict

➢ Providing Tailored, Value Added Products And Services That Are in Competition With Private Industry
Products Aimed At “Users” Already Being Served

- Recreational and Commercial Fishing
- Aquaculture
- Shipping - Transport
- Sailing And Yachting
Concern

About Government Funded Research And Government Agencies Providing The Services For Free Under The Guise Of Freedom of Information

“They Make The Data For In-House Projects And That They Are Only Providing The Data At Minimal Cost”
Examples

- **CoastWatch: SST and Ocean Color**
  - Who Is Really Using This Data?
  - Inefficient NOAA Method To Provide Data That Is Already Being Provided Elsewhere

- **Rutgers University “The Cool Room”**
  - Tailored, Value-Added, Real-Time High Resolution Imagery Products For Fishing and K-12 Education

- **U.S. Naval Research Lab. Image Products**
  - How Far Will They Go?

- **NASA: What Will They Do?**

- **New SEACOOS Products For Fishing**
  - Are Surfing Or Other Competitive Products next?
Fishermen Help

How to Read Sea Surface Temperature Images

Now we’re going to give you all the information you need to know to become an expert at reading these images. There are 3 simple steps:

1. Image Navigation,
2. Is that a cloud?
3. Where are the fish?

1) Navigation - One of the most important things to remember in life is not to believe everything you read. Well, with satellite images, you shouldn't believe everything you see. The satellites are 500 miles up in space and moving at speeds of around 20,000 mph. Because of this excessive speed and some tilt and roll in the satellite, the image isn't exactly in the right spot most of the time. How will you know that? You must look at the image very carefully.

This SST image is not quite right. If you look at arrow A, you will see the coastline in the Cape May area. Now look carefully at the image itself. Notice that the deep red pattern is the same shape as the coast, but doesn't match up. This deep red area (hot temperature) is land. You can see that the coastline near point B should be matched up with the image near point C.

Now let's move the coastline to the correct spot.
Tailored Fishing Areas

Real Time / Archived Satellite Imagery
Click the rectangles on the map to see images of ocean temperature. Click here for a tutorial on these images (clouds & navigation).

Click here for imagery of the entire area
High Resolution Tailored

Cool Room
Rutgers University
Another Example

The Cool Room
Rutgers University
Zoomed Products
 Alabama - Florida

RU COOL NOAA-17 Sea Surface Temperature: February 25, 2004 0329 GMT
Bathymetry, Current, & Sea Surface Height

Static and animated output displaying bottom topography contours, water level, and depth averaged current speed and direction.

Current View Time
03/03/2004 06:16:36

Valid time range
An error occurred.
IOOS “Partnerships”

- Rutgers & SEACOOS “Partners”
- With Friends Like These Who Needs Enemies!
- “We Are Not Providing Such Products”
Guideline For Private Sector

  - NOAA/NWS = Wholesaler
  - Private Sector = Retailer
- See No Reason To Change
- No Tailored (Or Value-Added) Products That Private Industry Is Providing Or Will Be In Competition With Private Industry
- Fair Weather Report Biased
  - How Many Truly Private Sector People On Panels?!
Other Items Of Concern: GOOS Principle D7

- "GOOS Contributors Are Responsible For Full, Open And Timely Sharing And Exchange of GOOS-Relevant Data And Products For Non-Commercial Activities”
- Why Are Commercial Activities Different?
- There Is No Explanation As To How Commercial Data Or Users Shall Be Treated
Access To Data

- Want Access To The Latest And Greatest Technology And Data
- Seek Guarantees That This Information Will Not Be Locked up by Researchers Or Special Deals
  - No Special Data Deals
    - ORBIMAGE Inc.
      - SeaWiFS Data Available For “Research” Not Commercial
  - No Data Embargos
    - Friends Or IOOS Research Partners
Concerns: Changes In Attitude

- Government Agencies And Academic Institutions Have Become Involved In Being Service Providers To the Public That Should Be Left To Private Industry!
- They Are Changing Their Terminology From "the Public" to "Clients."
  - “Client Based User Interface”, Is the Current Terminology
We Are Not Alone

- Some Academics Are Now Afraid That Government Agencies Are Doing The Research And Development That Historically Has Been In the Academic Sector
What Is Not A Concern Now?

- Digital Data Without Enhancement
  - NASA DAAC
  - NOAA Satellite Archive
    - [http://www.saa.noaa.gov/](http://www.saa.noaa.gov/)

- Why Is There A Need To Demonstrate (Show-Off?) The Ability To Show Satellite Imagery Or Other “Pretty” Graphics?
The John Hopkins Univ.
What Are Valued Added - Tailored Products?

- High Resolution, Color Enhanced Imagery/Animations/Graphics
- Zoomed In For Specific Fishing Areas
- Interpretations
- Enhanced Labels
  - Bottom Topography Added
  - Detailed Inlets and Special Topography
  - Probability Of Fish
Where Do We Go From Here?

- How Do We Solve These Issues?

- Solved For Gulf Of Mexico?
  ROFFS™ Became A Signatory After Changes Were Made

- What About Other Regional Associations?

- Who Can We Trust?
We Want To Work Together

I Hope We Will Not Have To Walk Away From This Opportunity

Thank You
The End
Thanks Again
For The Opportunity To
Represent The Private Industry Fishing Consultants