

# **CODAR Ocean Sensors, Ltd.**

## **Spring 2007 Session - HF Radar Training Course**

### **Draft Schedule**

#### **Tuesday - 5/1/2007**

10:00 AM **CODAR Ocean Sensors Office**  
1914 Plymouth Street, Mountain View, CA

10:00-10:30 AM

#### **Introductions and Course Overview**

Brief self-introductions by attendees  
Brief introductions of COS staff - Office/Production facility tour  
Course Overview and logistics  
Questions/Problems: How to get answers from Support

10:30-11:00 AM

#### **SeaSonde System Overview - "What is Measured"**

Overview and Operation of a SeaSonde HF Radar Network

#### **SeaSonde Hardware Overview- "What We Make"**

HF Radar and SeaSonde Terminology  
Differences Between Systems (Hardware and Software)  
System Hardware Show and Tell

11:00-11:45 AM

#### **Introduction to the SeaSonde Macintosh**

Standard COS Macintosh Installation  
CODAR Software and File Directory - Setting Up Shortcuts

11:45-12:00 AM

#### **Creating a Site File for a Radial Site**

Exercise: Using SDSetup and RadialConfigs

#### **Lunch** (Hosted by COS)

13:30-14:00 PM

#### **Site Selection: How to Optimize Performance and Data Quality**

14:00-14:30 PM

#### **SeaSonde10 Release 5 Universal Software Overview**

Overview  
Documentation - where to Find the Answers  
Sentinel  
SeaSondeController (Monitor & Standard Controller Menus)  
SeaSondeAcquisition  
CSPro  
Terminal Shell Programs (SpectraAnalysis Suite)  
Archivalist

14:30-15:00 PM      Break

15:00-15:30 PM

### **System Startup and Checks for Proper Operation**

Exercise: Simulated startup of a 12MHz SeaSonde  
SeaSondeController (Transmit Monitor & Advanced Controller Menu)  
Sentinel (Status Window Checks)  
Terminal Window (Error Message Checks)  
Automated Start-up with Sentinel login

15:30-16:00 PM

### **Evaluating Cross Spectra : The Basic Unit of SeaSonde Data**

Definition  
Description  
Characteristic features and differences between systems  
Unusual spectra features  
Identifying "problem" features  
Exercises: Using SpectraPlotterMap, SpectraPlotter, SpectraPlotter3D, SpectraSlicer,  
SpectraShortener and DiagDisplay to Evaluate Spectra Data

16:00-16:30 PM

### **Simulated Processing and Radial Site Setup Modifications**

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### **Cocktail Hour Gathering**

Dinner Out Hosted by COS  
Downtown Mountain View, CA (~ 6 PM)

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## **Wednesday - 5/2/2007**

09:00-10:30 AM

### **System Setup** (1.5 hrs) -

Exercises: Field Setup of 12MHz and 5MHz Checks for Proper Operation

10:30-11:00 AM

### **The Importance of Phases in Bearing Determination**

Setting Phases From Sea Echo and Re-Processed CSS Files  
Setting Phases From Pattern Measurements  
Exercises: Estimating phases and Re-processing Cross Spectra

11:00-11:30 AM

### **Introduction to First Order Lines**

Exercise: Using SpectraPlotterMap to Evaluate/Set First Order Lines

11:30-12:00 AM

### **Antenna Pattern Measurement Techniques**

SeaSondeController (Transponder Controller Menu)  
Antenna Pattern Measurement Setup  
Exercise:

**Lunch** (Hosted by COS)

13:30-14:00 PM

### **Processing Pattern Files**

14:00-14:45 PM

### **Re-Processing to Create Measured Pattern Radials**

RadialSiteSetup

14:45-15:15 PM

### **Overview of SeaSonde Software Utilities**

Combine Site Software Installation

CombineSiteSetup

15:15 -15:30 PM            Break

15:30-16:00 PM

### **Combine Site Software Overview**

Sentinel

FileExchange

Terminal Shell

Archivalist

Combine Site File Transfers

Communications Hardware

Configuring File Transfers

Using rsync for command-line transfers

Exercise: Configuring file transfers with FileExchange and rsync

16:00-17:00 PM

### **Creating Grid Files**

SeaDisplay

SDSetup

16:30-17:00 PM

### **Re-Processing Radials to Totals With Alternative Parameters**

CombineSiteSetup

Exercise: Creating Grid Files for Total Vectors

17:00-17:30 PM

### **Troubleshooting Total Vectors to the Problem Source**

Exercise: Troubleshooting "Bogus" Totals to the Problem Radial(s) and Troubleshooting Problem

Radials to problem Cross Spectra (CSS)

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## **Thursday - 5/3/2007**

09:00-09:30 AM

### **Evaluating Cross Spectra : For Wave Processing**

Configuring Wave Software for Wave Processing

Theory of Operation

Evaluating Site for Appropriateness of Wave Measurements

Configuring the Wave Parameters with RadialSiteSetup

Using Wave Display

**Lunch** (Hosted by COS)

10:30 AM - 17:30 PM

### **Field Site Visit - Fort Funston, Crissy Field, BML and/or Santa Cruz**

Exercises: Field Setup (Team #3) of a 12Mhz SeaSonde, system startup and checks for proper operation, Problem Solving Exercise

## **Dinner in San Francisco** (Hosted by COS)

### **Friday - 5/4/2007**

09:00-09:45 AM

#### **Field Repairs**

Tool Kits

Techniques: Tips and Tricks

Exercises: Cable repairs, Diagnosing Transmitter Power Problems, Diagnosing Receive Antenna Noise Problems, Field Replacement of Transmitter, Receiver and Antenna Components.

09:45-10:15 AM

#### **SeaSonde Processing Software** (Advanced):

How SHARES (GPS Timing Works)

Considerations for Setting Up a Synchronized Network

10:15-10:30 AM

#### **Demonstration of MultiSync**

Identifying and Troubleshooting SHARES Synchronization Problems

Exercise: GPS System Startup and Setup, Setting GPS Timing Offsets With SeaSondeController and Troubleshooting GPS

10:30-10:45 AM

Break

10:45-11:30 AM

#### **Meta-data and Archiving**

How to contact "Support" and what's required

- Screen shots
- Diagnostic files
- Sample data files (compressed)

The Importance of Desktop Log Files

Configuring Archivalist to Optimize Disk Space (Bill's new version has new defaults)

Re-processing Data From Archives

11:30- 12:00 PM

#### **Course Wrap-up** (NOON)