

# EventLogger

EventLogger is a computer system for logging oceanographic events.

# This Presentation

## Goals:

- Get your feedback
- Share metadata design research
- Spark ideas for improving metadata
- Find out how your ship operates

## This is how we're going to do it:

1. Talk about the EventLogger design process
2. Go through the prototype
3. Talk about the future
4. Feedback/Questions
5. Try it out/Questionnaire

Hi, I'm Flor O'Meter,  
technician extraordinaire!



# 1. EventLogger Design Process



# Design Data

We assembled design data to help us engineer and evaluate prototypes.

Design data are answers to questions like these:

- Which people are involved in event logs?
- What are their environments like?
- How do they think about event logs?
- How do they work with event logs?

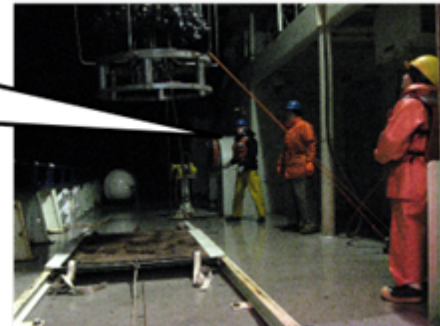
Design data came from observing users and from experiences of the community.

## Technician Flor works on the CTD...

Gah! Bottle 21 is leaking! Didn't it leak last time? I really need to keep a log...



...but I've been so busy with CTD ops that I've hardly had time...



...I'm practically falling asleep— zzz...zzz...—asleep on my feet!



## Scientist Sal Innty prepares logsheets



Phew! Just enough time to get these bottles prepared!

I'd better log our position for this cast. Nuts, my log sheet uses decimal degrees, I'll have to convert my positions later to degrees-minutes...



I'd better be careful, sometimes I mix up the numbers when I write them out by hand.

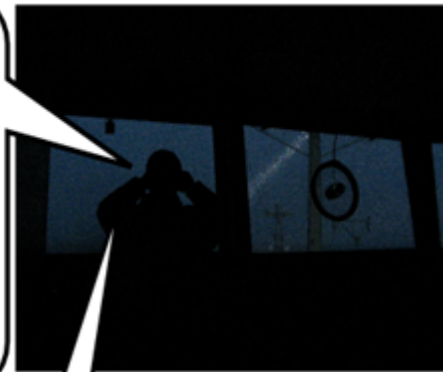


## Mate Otto Pilate searches for stations in Canadian waters

The Chief Sci is asking about how many stations we did in Canadian waters. Flor & I will have to look at the chart...



It would be nice to log things like that in the computer but I'm too busy keeping watch to figure out a fancy new program.

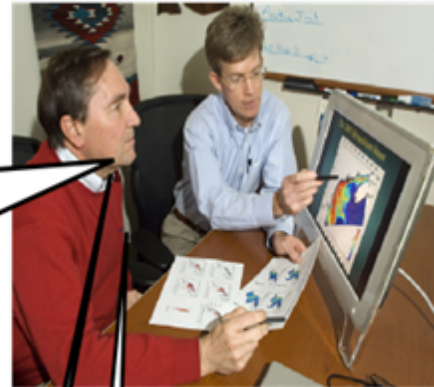


Besides, we already log everything in the bridge log. The science party can just copy that.

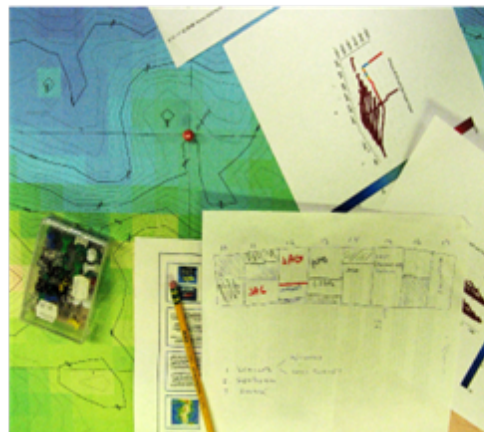
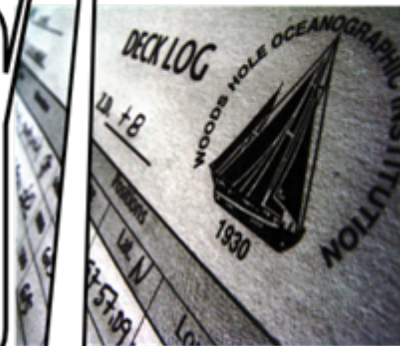


# Data Librarian Cat Alogger makes a station map

I'm trying to make a station map for Sal's cruise but there's a strange outlier. I wonder if it's real...



I'll have to search the bridge log copies. I wish they were digitized so that I could search them electronically.



I guess I'd better start digging through the cruise paperwork...

## Biological sample Corey the Shrimp plans a daring escape

Right, here's howz its going down, Chum. Swears ya won't breath a word to no ones, right Chum? First I rattles around in me jar and pretends I'm all sick-like, right? Then when I've gots 'em off guard I knocks over the chemicals and slips away in the confusion. What d'ya think Chum?









# Event Log Users

- Roles: technician, crew, scientist/engineer, data librarian
- Wide range of needs, skills, tools, and environments.

# Common Event Log Tasks

- Creating log sheets
- Filling out logs
- Checking data quality
- Calculating logistics stats (e.g. time on station)
- Digitizing
- Archiving

# Design Requirements

## General:

- Intuitive
- Fast
- Flexible
- Portable
- Robust

## Specific:

- Allow people to create and manage standardized digital event logs
- Create unique event IDs
- Pull data from external data sources

# Design Questions?

## 2. EventLogger Prototype

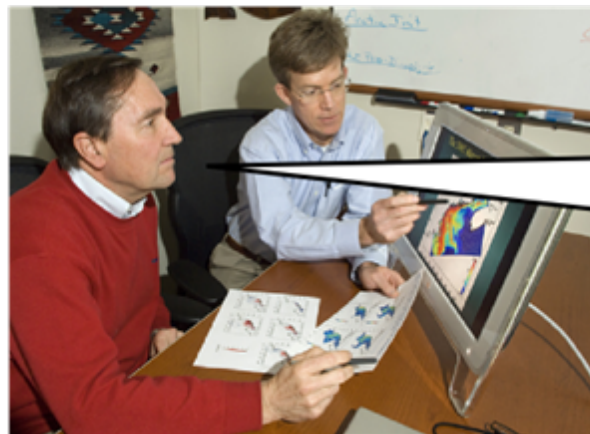
# EventLogger Prototype: Development

- We developed and refined a series of prototypes based on the design data.
- Ideas also came from:
  - community suggestions
  - existing logging systems like ELOG
- We tested prototypes with users.

It seems like it takes so long to copy numbers down by hand for log entries. What if there was a way to fill them in automatically?



I want making log entries to be to be easy and fast. Maybe I could use templates...

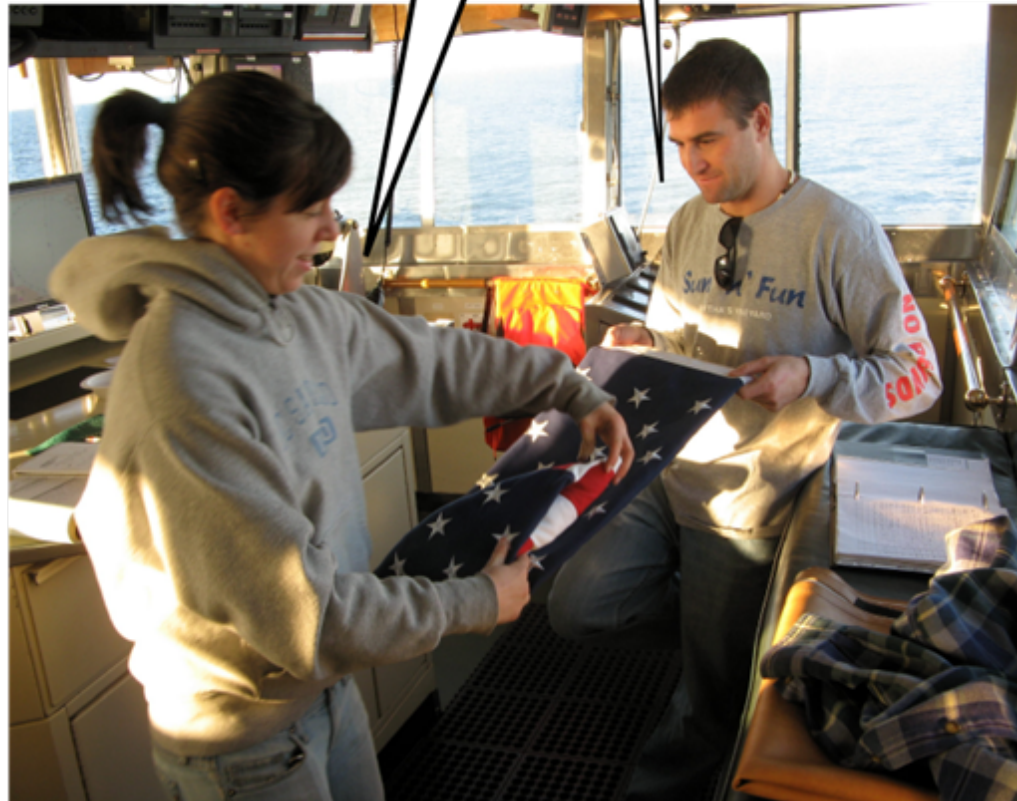


Hey, I like that idea! Templates would help standardize logs.



Hey, how about something that lets me make entries from the bridge?

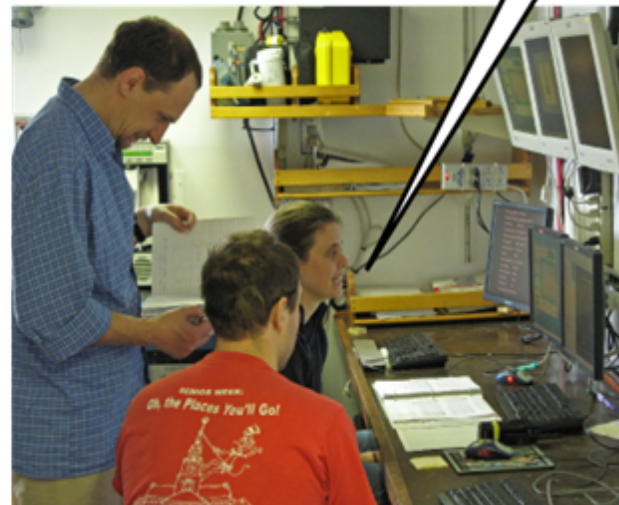
We could make it web-based, like ELOG!



And it's got to be easy  
to configure...I don't have  
time to do that much  
programming.



Me too!



## Shrimp plans a daring escape

If ya asks me, I says it's gots to have a bit for hidin' equipment, knows what I means Chum? TNT and hacksaws and what, specials to helps me puts the slip on 'em, right Chum?



Let's see what we can  
come up with...





# EventLogger Prototype: Glossary

- Entry: a collection of metadata values for one event. An entry is like one row in a spreadsheet.
- Field: a type of data, for example, depth, or latitude, or time. A field is like a column in a spreadsheet.
- Template: a template is a standardized form for creating an entry. For example, a 'CTD Cast' template represents a form with fields like depth, cast number, etc.
- LogBook: a collection of entries and templates.
- Log: a collection of LogBooks.
- Data Source: a definition for how to get data. For example, the url of a web page, or which COM port is used for a GPS feed

# EventLogger Prototype: Current Features

- Create log books for organizing events
- Create templates
- Create entries
- Automatically fill-in entry fields with data from external sources
- Export logs in a digital format suitable for a cruise data package
- Browse and sort entries

# LogBook Entry List Page

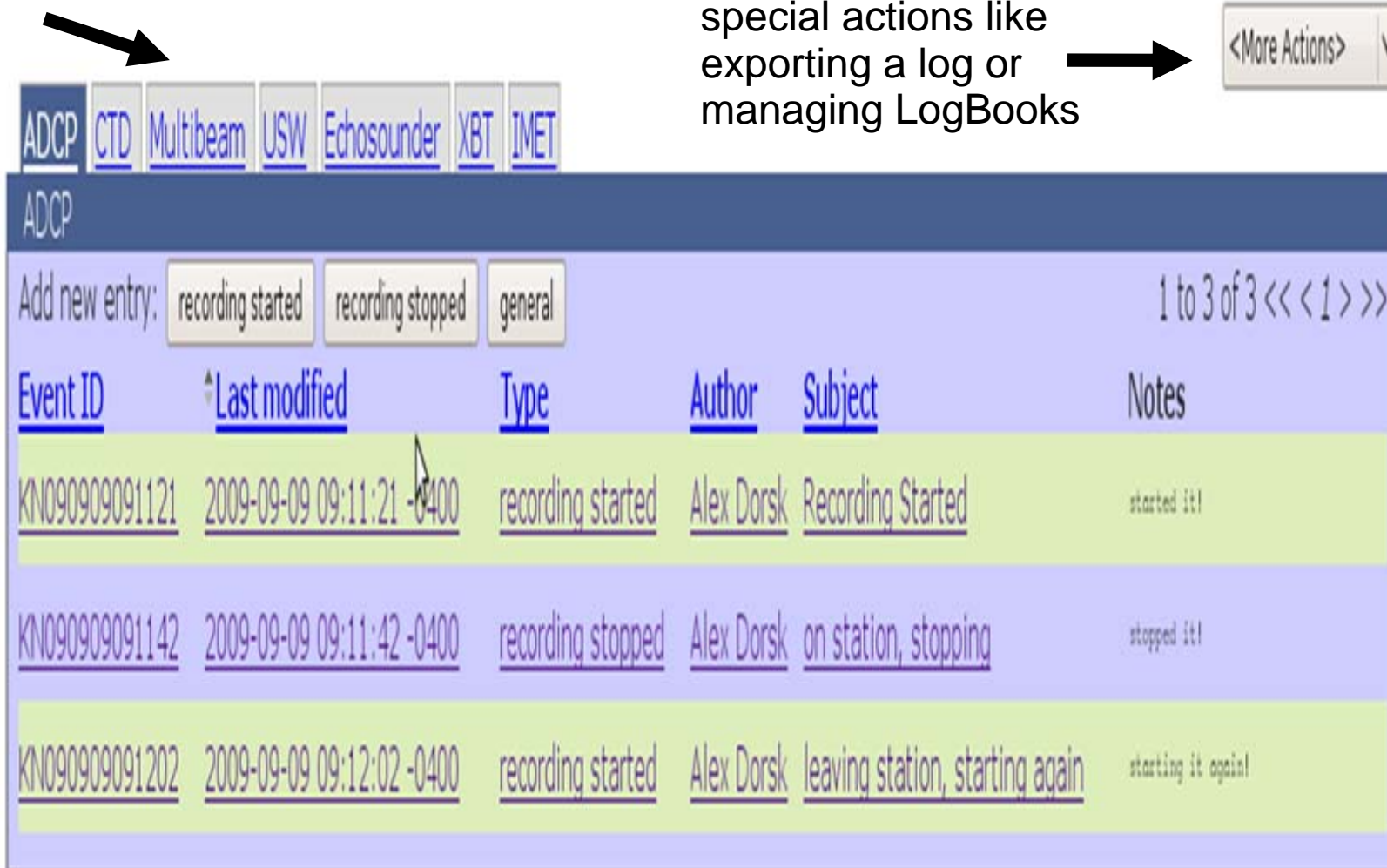
Tabs for  
switching  
between  
LogBooks

Action launcher for  
special actions like  
exporting a log or  
managing LogBooks



Buttons for  
creating  
new entries

Sortable  
entry list  
table



The screenshot shows the LogBook Entry List Page. At the top, there are tabs for switching between LogBooks: ADCP, CTD, Multibeam, USW, Echosounder, XBT, and IMET. Below the tabs, there are buttons for creating new entries: "Add new entry:", "recording started", "recording stopped", and "general". To the right of these buttons is a pagination control showing "1 to 3 of 3" and navigation arrows. Below the buttons is a table with the following columns: Event ID, Last modified, Type, Author, Subject, and Notes. The table contains three entries:

Event ID	Last modified	Type	Author	Subject	Notes
<a href="#">KN090909091121</a>	<a href="#">2009-09-09 09:11:21 -0400</a>	<a href="#">recording started</a>	<a href="#">Alex Dorsk</a>	<a href="#">Recording Started</a>	started it!
<a href="#">KN090909091142</a>	<a href="#">2009-09-09 09:11:42 -0400</a>	<a href="#">recording stopped</a>	<a href="#">Alex Dorsk</a>	<a href="#">on station, stopping</a>	stopped it!
<a href="#">KN090909091202</a>	<a href="#">2009-09-09 09:12:02 -0400</a>	<a href="#">recording started</a>	<a href="#">Alex Dorsk</a>	<a href="#">leaving station, starting again</a>	starting it again!

# Create Entry Page

<More Actions> ▼


ADCP CTD Multibeam USW Echosounder XBT IMET

ADCP


Submit Cancel

UTC Date	2009-09-09 01:15:11 +0000	
Latitude	21d 55.11130m N	
Longitude	159d 43.99038m W	
Author		
Subject		

Label/input  
for each  
field



Some fields are  
filled in  
automatically by  
datasources





# View Entry Page

<More Actions> ▼

[ADCP](#) [CTD](#) [Multibeam](#) [USW](#) [Echosounder](#) [XBT](#) [IMET](#)

ADCP

Add new entry: [recording started](#) [recording stopped](#) [general](#)

[Back to list](#) [Edit](#) [Delete](#)

Entry ID: 42 Event ID: KN090909091121 Last modified: 2009-09-09 09:11:21 -0400

UTC Date	2009-09-09 01:11:06 +0000
Latitude	21d 55.11130m N
Longitude	159d 43.99038m W
Author	Alex Dorsk
Subject	Recording Started

started it!

# Edit Entry Page

Similar to create entry page, but shows entry ID, event ID, and last modified time

<More Actions> ▼

[ADCP](#) [CTD](#) [Multibeam](#) [USW](#) [Echosounder](#) [XBT](#) [IMET](#)

ADCP

Entry ID: 42 Event ID: KN090909091121 Last modified: 2009-09-09 09:11:21 -0400

UTC Date	<input type="text" value="2009-09-09 01:11:06 +0000"/>
Latitude	<input type="text" value="21d 55.11130m N"/>
Longitude	<input type="text" value="159d 43.99038m W"/>
Author	<input type="text" value="Alex Dorsk"/>
Subject	<input type="text" value="Recording Started"/>

started it!

# Manage LogBooks Page

The screenshot shows a web interface for managing logbooks. At the top right is a button labeled "<More Actions>" with a dropdown arrow. Below this is a horizontal menu with tabs for different logbook types: ADCP, CTD, Multibeam, USW, Echosounder, XBT, and IMET. The main content area has a light blue background and contains a list of these logbook types. Each type has two buttons: "Edit" and "Remove". An arrow points from the text "Edit or delete existing LogBooks" to the "Edit" and "Remove" buttons for the "CTD" logbook type. At the bottom left of the main area is a button labeled "Add new LogBook...". An arrow points from the text "Add new LogBooks" to this button.

<More Actions> ▾

[ADCP](#) [CTD](#) [Multibeam](#) [USW](#) [Echosounder](#) [XBT](#) [IMET](#)

ADCP	Edit	Remove
CTD	Edit	Remove
Multibeam	Edit	Remove
USW	Edit	Remove
Echosounder	Edit	Remove
XBT	Edit	Remove
IMET	Edit	Remove

Add new LogBook...

Edit or delete existing LogBooks

Add new LogBooks

# Edit LogBook Page

The screenshot shows the 'ADCP LogBook' edit interface. At the top, there are tabs for different data types: ADCP, CTD, Multibeam, USW, Echosounder, XBT, and IMET. The 'ADCP' tab is selected. Below the tabs, there are 'Save' and 'Cancel' buttons. The main content area is divided into two sections: 'General' and 'Templates'.

**General Section:**

- Name:** A text input field containing 'ADCP'. An arrow points to this field with the text 'Change LogBook name & description'.
- Description:** A text input field containing 'ADCP LogBook'.

**Templates Section:**

- Drag and drop to re-order templates:** A heading for the template list.
- Template List:** A list of three templates, each with a 'down' arrow, an 'up' arrow, the template name, and 'Edit' and 'Remove' buttons.
  - Template 1: 'recording started' (with 'down' and 'up' arrows). Buttons: 'Edit', 'Remove'.
  - Template 2: 'recording stopped' (with 'down' and 'up' arrows). Buttons: 'Edit', 'Remove'.
  - Template 3: 'general' (with 'down' and 'up' arrows). Buttons: 'Edit', 'Remove'.An arrow points to the 'Edit' and 'Remove' buttons of the first template with the text 'Edit, remove, and re-order templates'.
- Add template...** A button at the bottom of the list. An arrow points to it with the text 'Add new template'.

# Edit Template Dialog (on Edit LogBook Page)

The screenshot shows a software window titled "Editing Template 'recording started'". It has a "Save" button and a "Cancel" button. The window is divided into two main sections: "General" and "Fields".

**General Section:** Contains a text field labeled "Template name:" with the value "recording started".

**Fields Section:** Contains the instruction "Drag and drop to re-order fields." followed by a list of fields. Each field has a "down" arrow, an "up" arrow, the field name, an "Edit" button, and a "Remove" button.

Field	Edit	Remove
UTC Date	Edit	Remove
Latitude	Edit	Remove
Longitude	Edit	Remove
Author	Edit	Remove
Subject	Edit	Remove

At the bottom of the "Fields" section, there is a text field and an "Add field" button. The instruction "Add a new field from scratch or start from an existing field." is located above this section.

**Annotations:**

- A black arrow points from the text "Edit or remove existing templates" to the "Edit" and "Remove" buttons of the "UTC Date" field.
- A black arrow points from the text "Add a new field" to the "Add field" button.

# Edit Field Dialog (on Edit Template Page)

The screenshot shows a dialog box titled "Editing Field 'Latitude'" with "Save" and "Cancel" buttons. It contains two sections: "General" and "DataSource".

**General Section:**

- Field name: Latitude
- Type: Text (with a dropdown arrow and a [what's this?](#) link)
- Units: (empty text box)

**DataSource Section:**

- DataSource Type: WebService (with a dropdown arrow and a [what's this?](#) link)
- WebService URL: /EventLoggerDev/hardcodedW

Annotations with arrows point to the "Type" dropdown in the General section and the "DataSource Type" dropdown in the DataSource section, both labeled "Edit Field's properties" and "Edit field's DataSource" respectively.

# Export Log Page (on Edit Template Page)



The screenshot shows a web interface for exporting log data. At the top, there is a navigation bar with tabs for ADCP, CTD, Multibeam, USW, Echosounder, XBT, and IMET. To the right of these tabs is a button labeled "<More Actions>" with a downward arrow. Below the navigation bar, a light blue box contains the text "Export the entire log, including all LogBooks, using one of the formats listed below." Below this text is a "Select export format:" label and a vertical dropdown menu. The dropdown menu is currently open, showing "XML" as the selected option. To the right of the dropdown menu, a black arrow points to the text "Export log in various formats". At the bottom left of the light blue box is a button labeled "Export Log".

ADCP CTD Multibeam USW Echosounder XBT IMET

<More Actions> ▼

Export the entire log, including all LogBooks, using one of the formats listed below.

Select export format:

XML

Export log in various formats

Export Log

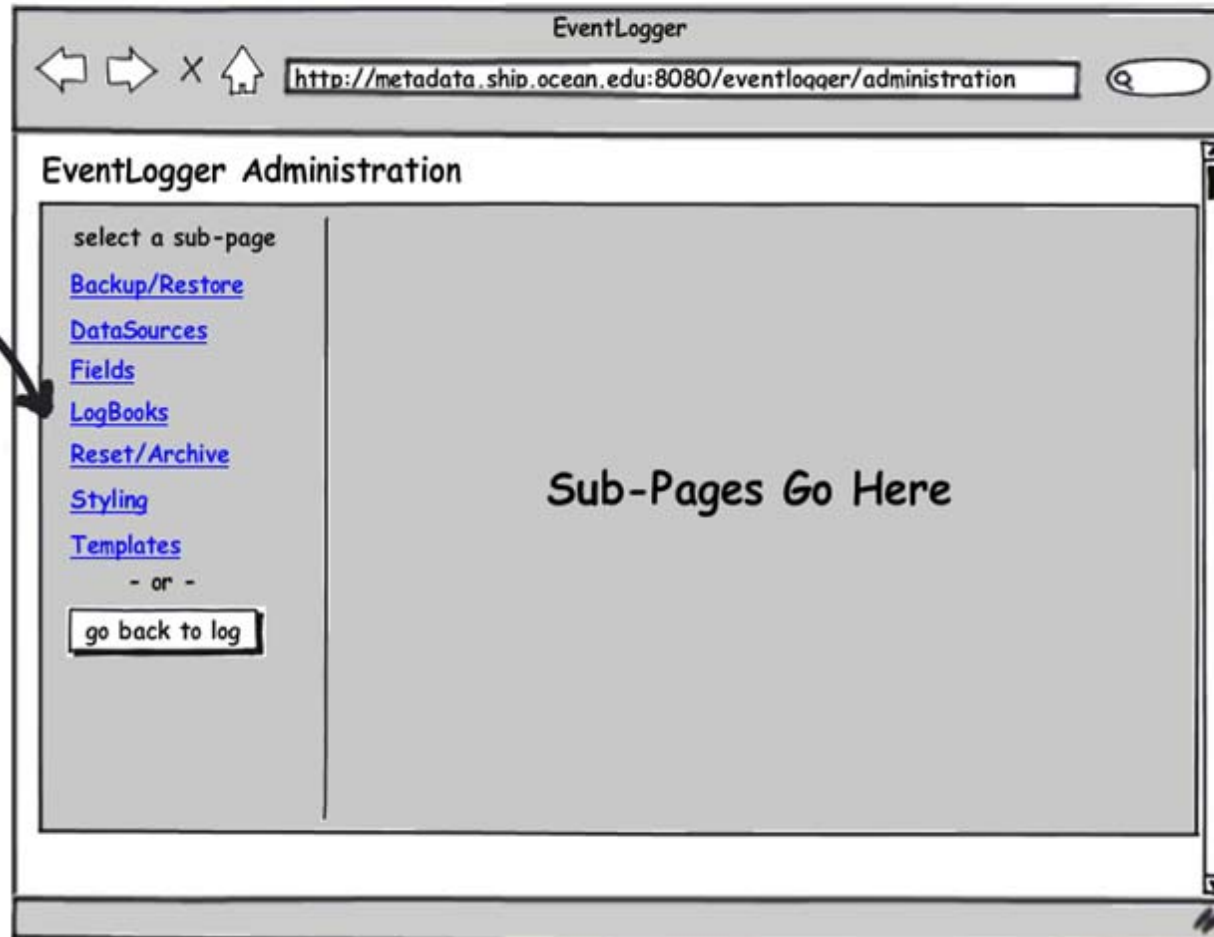
# EventLogger Prototype:

## Features to be Implemented

- Import/Export for LogBooks, Templates, & Fields
- API for integrating with other systems
- Administration page for management tasks like:
  - Resetting/Archiving Logs
  - Default Settings
  - Connecting to the ship's data infrastructure
    - Network/Serial data feeds
    - Web services



## Administration Page



Administration sub-page  
links for specific  
administration tasks

Note: you may want to have  
users authenticate to access  
the administration page.

## Templates Administration

### Templates [how do I use this page?](#)

#### New Templates

##### Default Fields [what are these?](#)

↕↕	Event Datetime	Edit...	Remove...
↕↕	Event Longitude	Edit...	Remove...
↕↕	Event Latitude	Edit...	Remove...
↕↕	Author	Edit...	Remove...
↕↕	Notes	Edit...	Remove...

<Add Field> ▼ >

When new templates are created they will include these fields. Users can choose to make default fields immutable or required.

# 3. Future Plans

EventLogger might sound like a nice system, but it's not quite ready yet...



We need to write more  
code...





And we need to think about  
how to deploy it...



And I still needs to puts the slip on  
'em, right Chum?



- Further Development
- Deployment Strategies
- Creating libraries of log books & templates
- Integrating with other systems



# 4. General Feedback & Questions

so, what do you think?



## 5. Try it out!

<http://dmoserv2.who.edu:8080/EventLoggerDev/eventlogger/test/>

