

How To: SAMOS in SCS

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Background:

SAMOS is a **S**hipboard **A**utomated **M**eteorological and **O**ceanographic **S**ystem that can pair with NOAA's SCS software to log continuous recordings of navigational (ship's position, course, speed, and heading), meteorological (winds, air temperature, pressure, moisture, rainfall, and radiation), and near-surface oceanographic (sea temperature, and salinity) parameters while the vessel is at sea.

Measurements are recorded at high-temporal sampling rates, typically 1 minute or less, which allows for more accurate estimates of the turbulent air-sea fluxes to be determined and make SAMOS data ideal for validating flux fields from numerical weather prediction models, oceanic models, and remotely observed satellite data.

Research vessels operating in remote areas, in comparison to normal shipping lanes, increases the value of these data for validation studies.

SAMOS
Shipboard Automated Meteorological and Oceanographic System



Pre-Requisites:

This training assumes that you already have devices set up and are just adding the SAMOS derived sensors

For our example, we are using a Vaisala WXT-510



Sentence Label	Values
\$WIXDR	Temperature Pressure Relative Humidity
\$WIMWV	Wind Direction Wind Speed



Overview:

- Setting up SCS Configuration File
- Setting up Sensor Configuration File
- Setting up SAMOS Event Template File
- Setting up SAMOS Mailer Configuration Values
- Running the SAMOS Event
- Running the SAMOS Mailer
- Maintaining SAMOS Metadata
- Transforming ELG Files into \$SAMOS Format



Credit: WHOI



Credit: Rik Wanninkhof/AOML



Setting up SCS Configuration File:

The SAMOS Mailer uses the mail server configuration variables in the SCS Configuration File (*SCS Menu* → → *Acquisition* → *Data Acquisition* → *SCS Configuration File Editor*) to contact the mail server and do all mailer applications included in the SCS system.

SMTP_SERVER
SMTP_PORT
SMTP_USE_SSL
SMTP_IGNORE_CERT_ERRORS
SMTP_AUTH_CREDENTIALS

SHIP_NAME	SCS	The ship's name (used when sending Ship Tracker messages).
SMTP_AUTH_CREDENTIALS		User credentials for authenticating to the ship's SMTP ser.
SMTP_IGNORE_CERT_ERRORS	1	0: Check server certificate when sending mail (standard be.
SMTP_PORT	25	The port used to access the SMTP server for sending message
SMTP_SERVER		The SMTP server onboard which will send email messages (i..
SMTP_USE_SSL	0	1: Use SSL when sending email. 0: Do not use SSL.
VESSELCODE	SD	Two-letter vessel code to identify source of data in databa

See: Page 20, Section 1.4, SCS User's Guide (v4.9) for more info



Setting up Sensor Configuration File (Overview):

Using the CFE-DB (Configuration File Editor - Database) you must define a set of derived average sensors to compute the average for the previous 60 seconds.

Message Definition

Message Type: **Derived Average**

Name: SAMOS-RELH

Comment:

Logging Rate: 60

Log Sub Folder: SAMOS

Termination Char: ASCII 10 (LF) Timeout (sec): 60

Delimiters:

Name	ASCII	Multiple Occurrence
Comma	44	False

Add
Remove

Sentence Label: \$WIXDR

Base Data Field Def: WXT-510-RH

Average Type: Arithmetic Average Interval: 1 Number of Samples:

See: Page 330, Section 12.3, SCS User's Guide (v4.9) for more info



Setting up Sensor Configuration File (Overview):

Using the CFE-DB (Configuration File Editor - Database) you must define a set of derived average sensors to compute the average for the previous 60 seconds.

The name of the SAMOS average sensors should start with the word SAMOS to distinguish them easily from other sensors.

Message Definition

Message Type:

Name:

Comment:

Logging Rate:

Log Sub Folder:

Termination Char: Timeout (sec):

Delimiters:

Name	ASCII	Multiple Occurrence
Comma	44	False

Sentence Label:

Base Data Field Def:

Average Type: Average Interval: Number of Samples:



Setting up Sensor Configuration File (Overview):

Using the CFE-DB (Configuration File Editor - Database) you must define a set of derived average sensors to compute the average for the previous 60 seconds.

The name of the SAMOS average sensors should start with the word SAMOS to distinguish them easily from other sensors.

The Log Rate for the SAMOS average sensors must be set to 60 seconds, and the Timeout Sensor Parameter must be set to not less than 60 seconds (this is enforced by CFE-DB).

Message Definition

Message Type:

Name:

Comment:

Logging Rate:

Log Sub Folder:

Termination Char:

Timeout (sec):

Delimiters:

Name	ASCII	Multiple Occurrence
Comma	44	False

Sentence Label:

Base Data Field Def:

Average Type: Average Interval: Number of Samples:



Setting up Sensor Configuration File (Overview):

Using the CFE-DB (Configuration File Editor - Database) you must define a set of derived average sensors to compute the average for the previous 60 seconds.

The name of the SAMOS average sensors should start with the word SAMOS to distinguish them easily from other sensors.

The Log Rate for the SAMOS average sensors must be set to 60 seconds, and the Timeout Sensor Parameter must be set to not less than 60 seconds (this is enforced by CFE-DB).

****NOTE: The Average Interval is in seconds and should be set to 60 and not 1, in minutes, like previously thought.****

Message Definition

Message Type:

Name:

Comment:

Logging Rate:

Log Sub Folder:


Termination Char: Timeout (sec):

Delimiters:

Name	ASCII	Multiple Occurrence
Comma	44	False

Sentence Label:

Base Data Field Def:

Average Type: Average Interval:  Number of Samples:



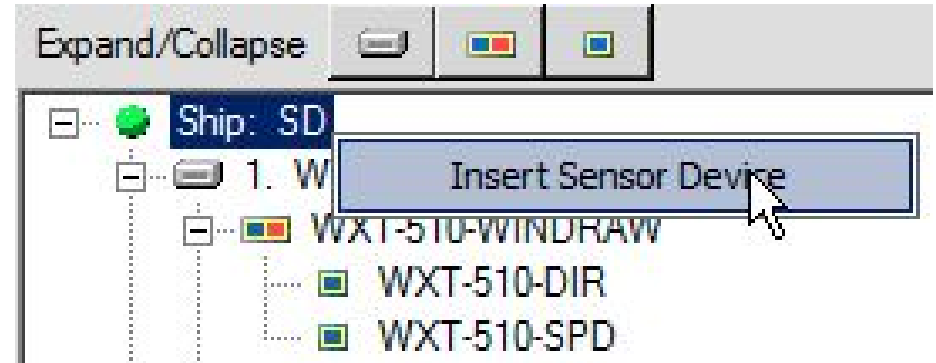
Setting up Sensor Configuration File (Steps):

- From the main SCS Menu, select:
Acquisition → *Data Acquisition* →
Sensor Config Edit (Database)



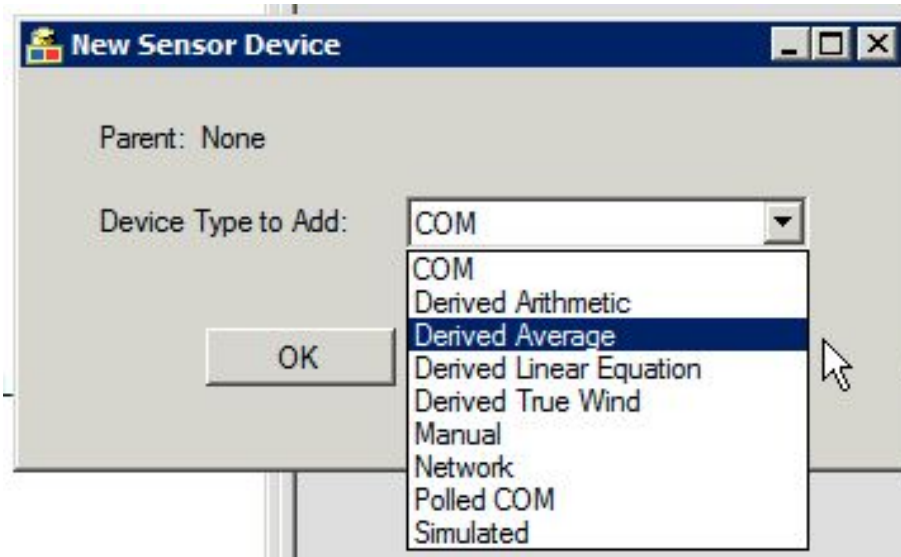
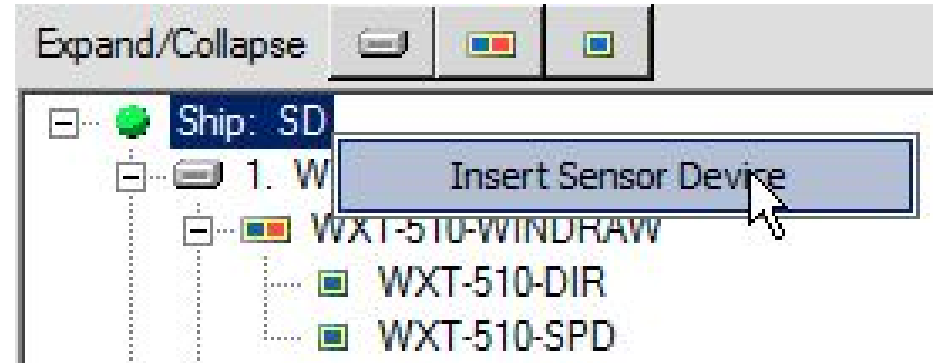
Setting up Sensor Configuration File (Steps):

- From the main SCS Menu, select:
Acquisition → *Data Acquisition* → *Sensor Config Edit (Database)*
- Right-click the ship name and click *Insert Sensor Device* (right)



Setting up Sensor Configuration File (Steps):

- From the main SCS Menu, select:
Acquisition → *Data Acquisition* → *Sensor Config Edit (Database)*
- Right-click the ship name and click *Insert Sensor Device* (right)
- Pick the appropriate *Derived* device type (*Derived Average* in this case)



Setting up Sensor Configuration File (Steps):

- Give the sensor device a name, remembering to start with SAMOS- (*right*)

Sensor Device

Device Type: Device Order: Enabled

Name:

Comment:

Installation

Install Date:

Install To:

Average Type: By Interval By No. of Samples

Average Interval (s): Number of Samples:



Setting up Sensor Configuration File (Steps):

- Give the sensor device a name, remembering to start with SAMOS- (*right*)
- Select the Average Type (*right*)
 - Polar - Used for sensors whose output is in the range of 0 to 360, such as gyros and COG, and Wind Direction
 - Arithmetic - Used for all other sensors

Sensor Device

Device Type: Device Order: Enabled

Name:

Comment:

Installation

Install Date:

Install To:

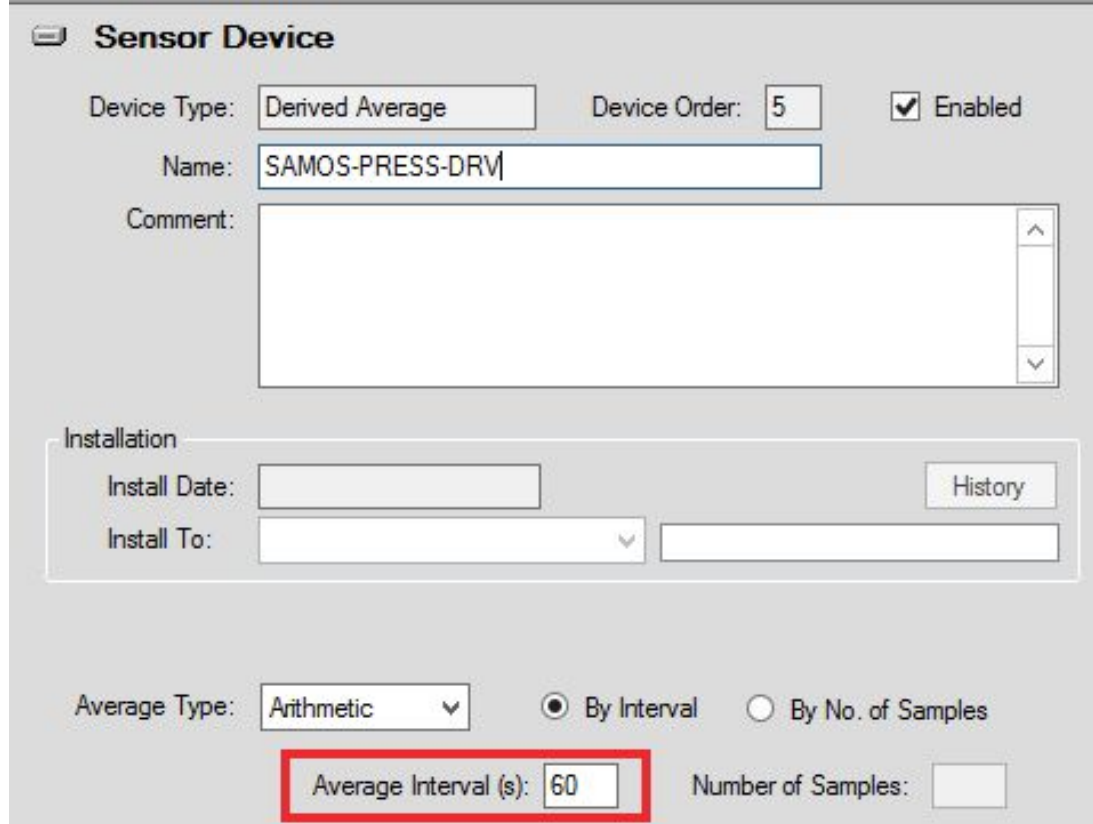
Average Type: By Interval By No. of Samples

Average Interval (s): Number of Samples:



Setting up Sensor Configuration File (Steps):

- Give the sensor device a name, remembering to start with SAMOS- *(right)*
- Select the Average Type *(right)*
 - Polar - Used for sensors whose output is in the range of 0 to 360, such as gyros and COG, and Wind Direction
 - Arithmetic - Used for all other sensors
- Fill in the Average Interval(s) (in **seconds**) *(right)*



The screenshot shows a configuration window titled "Sensor Device". It contains the following fields and options:

- Device Type:** A dropdown menu set to "Derived Average".
- Device Order:** A text input field containing the number "5".
- Enabled:** A checked checkbox.
- Name:** A text input field containing "SAMOS-PRESS-DRV".
- Comment:** A large empty text area.
- Installation:** A section containing:
 - Install Date:** An empty text input field.
 - Install To:** A dropdown menu and an empty text input field.
 - History:** A button.
- Average Type:** A dropdown menu set to "Arithmetic".
- By Interval:** A selected radio button.
- By No. of Samples:** An unselected radio button.
- Average Interval (s):** A text input field containing "60", which is highlighted with a red box.
- Number of Samples:** An empty text input field.



Setting up Sensor Configuration File (Steps):

- Right-click the new Sensor Device and select *Insert Message Definition* (below)

The screenshot shows a software interface with two main panels. On the left is a tree view under the heading "Ship: SD". It contains a list of five sensor devices: 1. WXT-510, 2. SAMOS-RWSPD-DRV, 3. SAMOS-TEMP-DRV, 4. SAMOS-RELH-DRV, and 5. SAMOS-PRESS-DRV. The fifth device, SAMOS-PRESS-DRV, is highlighted in blue. A context menu is open over this device, listing several actions: "Insert Sensor Device", "Insert Message Definition" (which is highlighted), "Delete", "Move Up", "Move Down", "Display Installed Physical Device", "Copy Object", "Cut Object", and "Paste Object". On the right is a configuration panel titled "Sensor Device". It includes fields for "Device Type" (set to "Derived Average"), "Device Order" (set to "5"), and an "Enabled" checkbox (checked). The "Name" field contains "SAMOS-PRESS-DRV" and the "Comment" field is empty. Below these are "Installation" fields for "Install Date" and "Install To", with a "History" button. At the bottom, there are "Average Type" (set to "Arithmetic"), radio buttons for "By Interval" (selected) and "By No. of Samples", and input fields for "Average Interval (s)" (set to "60") and "Number of Samples".



Setting up Sensor Configuration File (Steps):

- Give the *Message Definition* a name, remembering to start with SAMOS-

Message Definition

Message Type:

Name:

Comment:

Logging Rate:

Log Sub Folder:

Termination Char: Timeout (sec):

Delimiters:

Name	ASCII	Multiple Occurrence
Comma	44	False

Sentence Label:

Base Data Field Def:

Average Type: Average Interval: Number of Samples:



Setting up Sensor Configuration File (Steps):

- Give the *Message Definition* a name, remembering to start with SAMOS-
- Set the *Logging Rate* and *Timeout* to 60 (sec)

Message Definition

Message Type:

Name:

Comment:

Logging Rate:

Log Sub Folder:

Termination Char:

Timeout (sec):

Delimiters:

Name	ASCII	Multiple Occurrence
Comma	44	False

Sentence Label:

Base Data Field Def:

Average Type: Average Interval: Number of Samples:



Setting up Sensor Configuration File (Steps):

- Give the *Message Definition* a name, remembering to start with SAMOS-
- Set the *Logging Rate* and *Timeout* to 60 (sec)
- Set the *Log Sub Folder* to SAMOS

Message Definition

Message Type:

Name:

Comment:

Logging Rate:

Log Sub Folder:

Termination Char: Timeout (sec):

Delimiters:

Name	ASCII	Multiple Occurrence
Comma	44	False

Sentence Label:

Base Data Field Def:

Average Type: Average Interval: Number of Samples:



Setting up Sensor Configuration File (Steps):

- Give the *Message Definition* a name, remembering to start with SAMOS-
- Set the *Logging Rate* and *Timeout* to 60 (sec)
- Set the *Log Sub Folder* to SAMOS
- Select the *Base Data Field Def* that you are pulling your derived value from

Message Definition

Message Type:

Name:

Comment:

Logging Rate:

Log Sub Folder:

Termination Char: Timeout (sec):

Delimiters:

Name	ASCII	Multiple Occurrence
Comma	44	False

Sentence Label:

Base Data Field Def:

Average Type: Average Interval: Number of Samples:



Setting up Sensor Configuration File (Steps):

- Give the *Message Definition* a name, remembering to start with SAMOS-
- Set the *Logging Rate* and *Timeout* to 60 (sec)
- Set the *Log Sub Folder* to SAMOS
- Select the *Base Data Field Def* that you are pulling your derived value from
- Use the same *Sentence Label* as the base field

Message Definition

Message Type:

Name:

Comment:

Logging Rate:

Log Sub Folder:

Termination Char: Timeout (sec):

Delimiters:

Name	ASCII	Multiple Occurrence
Comma	44	False

Sentence Label:

Base Data Field Def:

Average Type: Average Interval: Number of Samples:

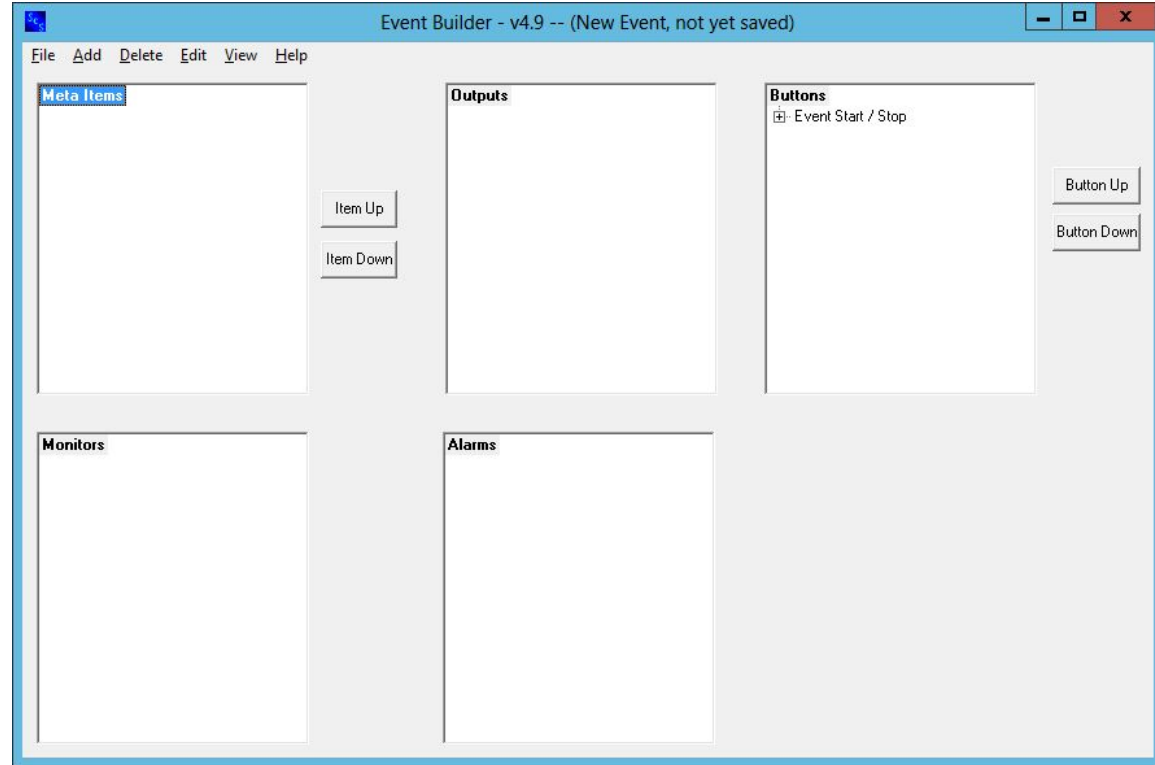


Questions about Sensor Config?



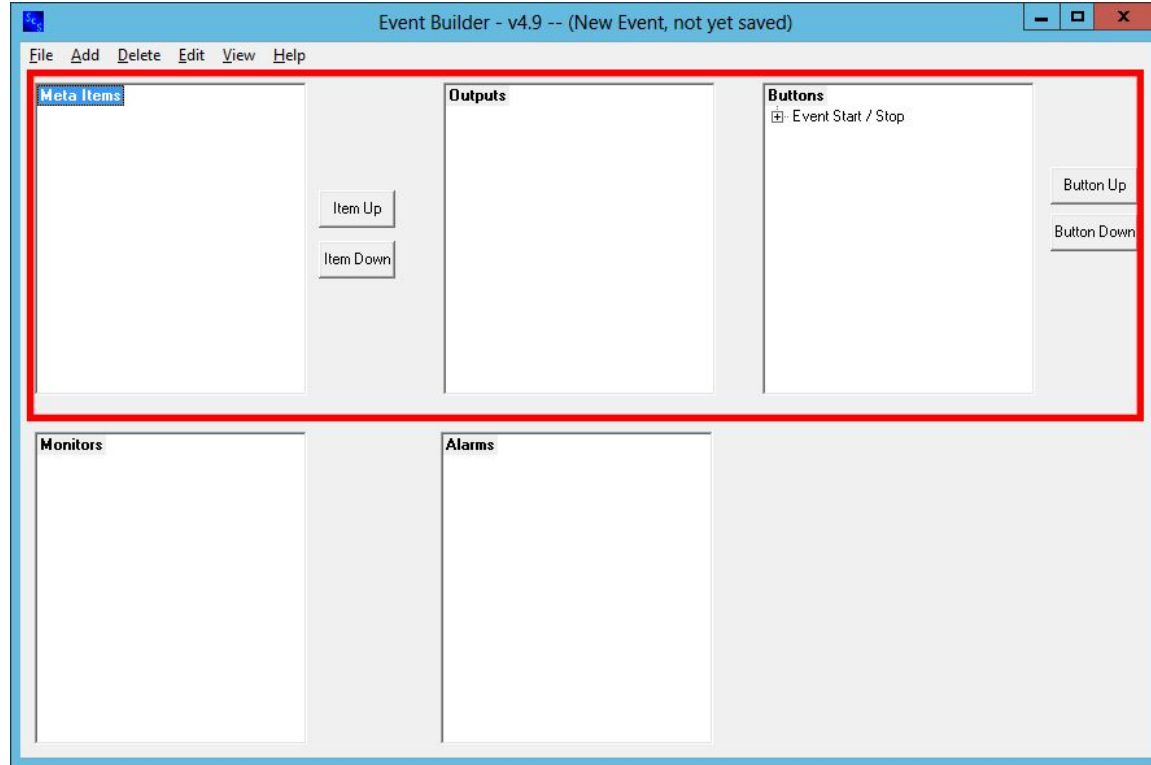
Setting up SAMOS Event Template File:

- From the main SCS Menu, select:
Acquisition → *Events* →
Event Builder Classic



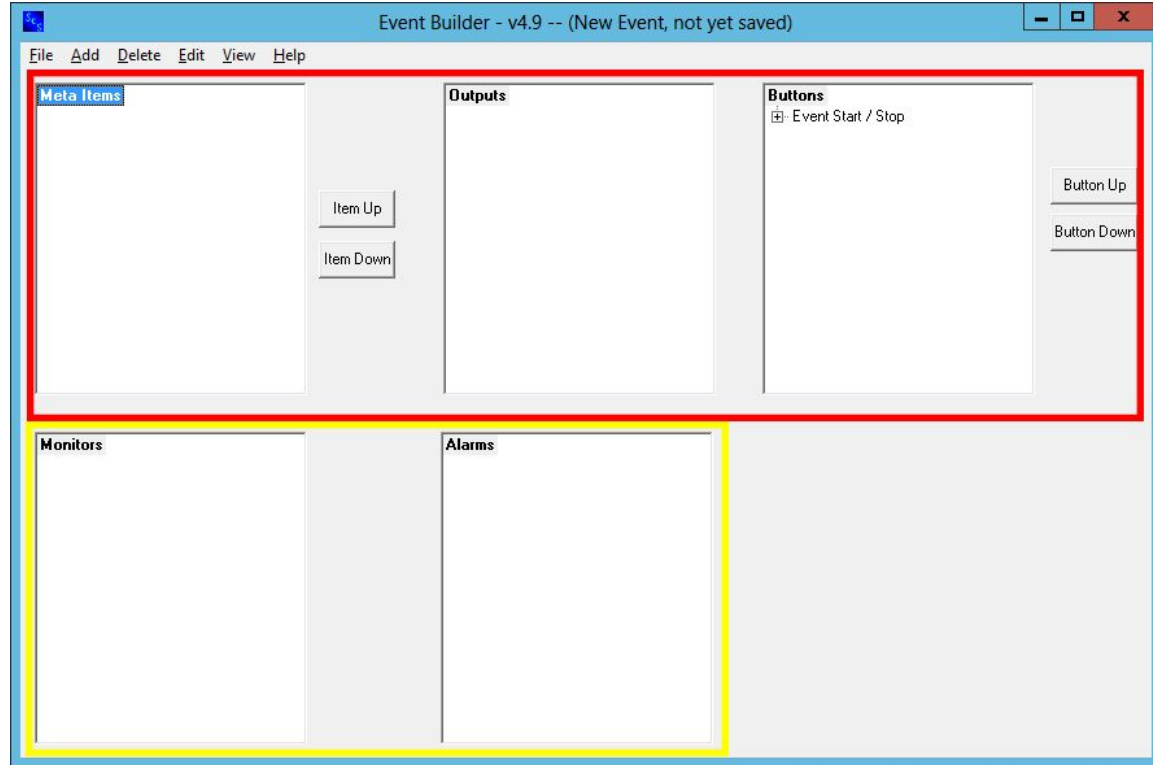
Setting up SAMOS Event Template File:

- From the main SCS Menu, select:
Acquisition → *Events* →
Event Builder Classic
- For the SAMOS Event, we are mainly concerned with the three boxes on the top of the window, *Meta Items*, *Outputs*, & *Buttons*



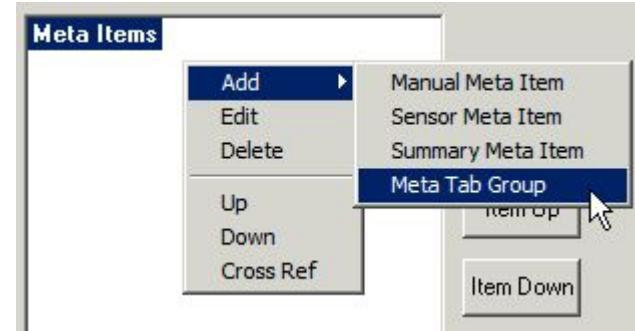
Setting up SAMOS Event Template File:

- From the main SCS Menu, select:
Acquisition → *Events* →
Event Builder Classic
- For the SAMOS Event, we are mainly concerned with the three boxes on the top of the window, *Meta Items*, *Outputs*, & *Buttons*
- You can set *Monitors* and *Alarms* to warn you of things going on if you want, but they are not needed



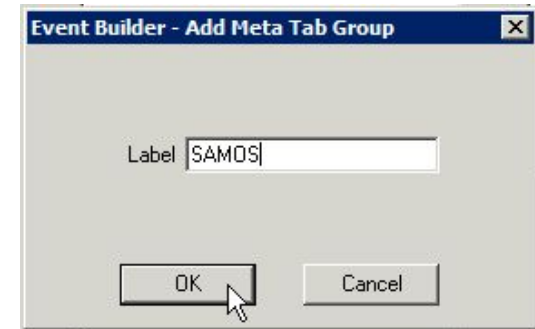
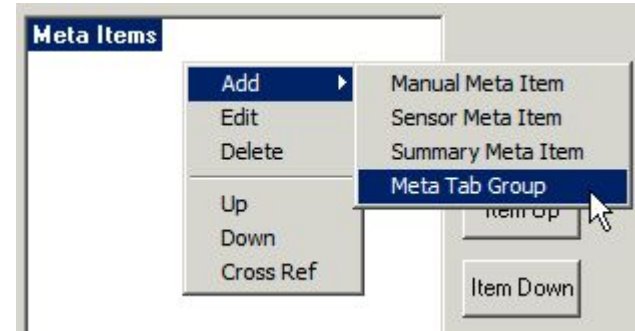
Setting up SAMOS Event Template File:

- *Meta Items*
 - Right-click *Meta Items*, then *Add* → *Meta Tab Group* (right, top)



Setting up SAMOS Event Template File:

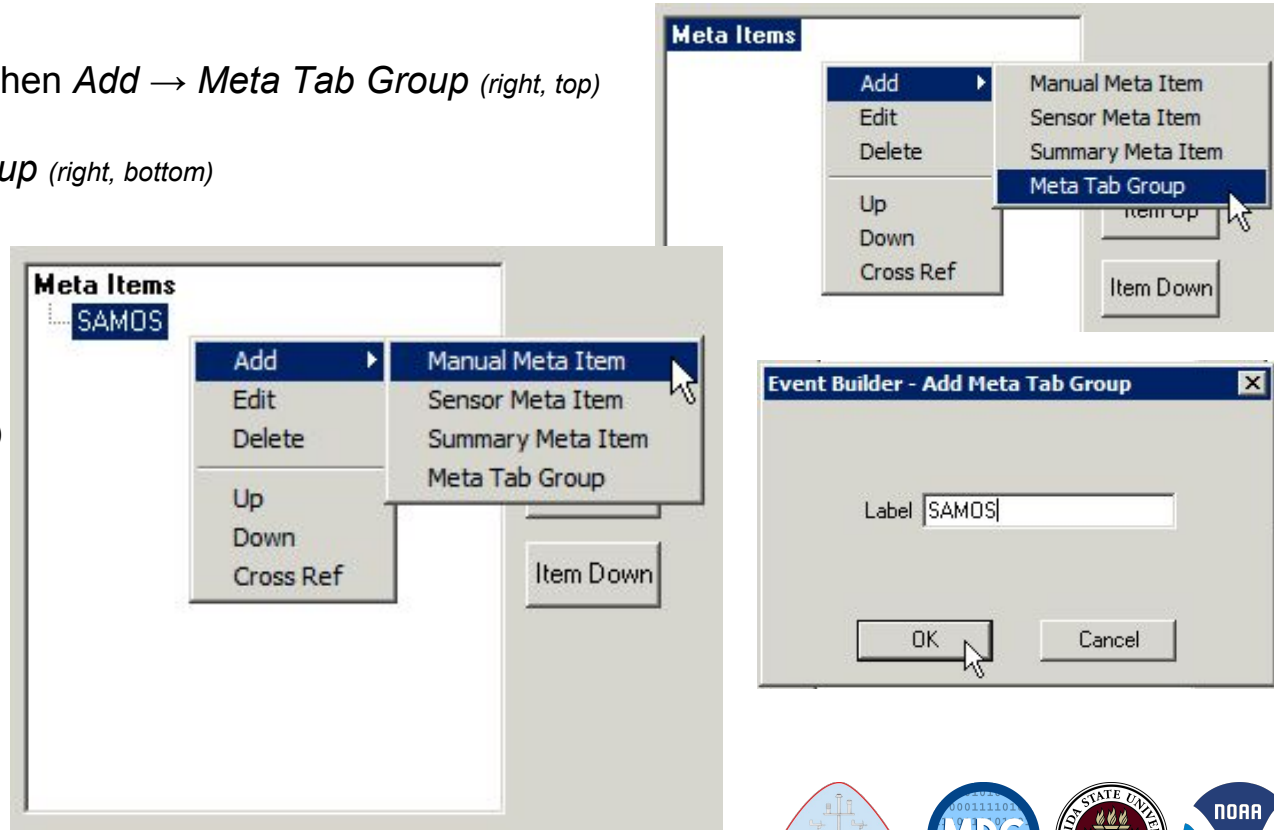
- *Meta Items*
 - Right-click *Meta Items*, then *Add* → *Meta Tab Group* (right, top)
 - Label the *Meta Tab Group* (right, bottom)



Setting up SAMOS Event Template File:

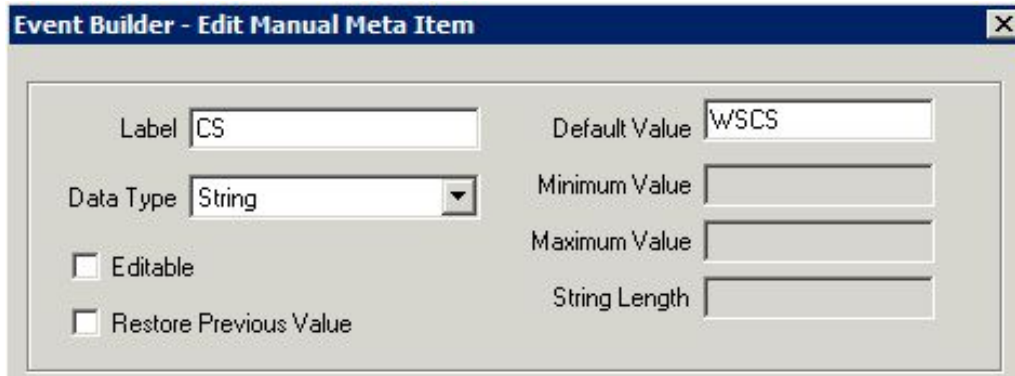
- *Meta Items*

- Right-click *Meta Items*, then *Add* → *Meta Tab Group* (right, top)
- Label the *Meta Tab Group* (right, bottom)
- To add your ship's call sign, right-click the *Meta Tab Group* and choose *Add* → *Manual Meta Item* (center)



Setting up SAMOS Event Template File:

- On the *Manual Meta Item* pop-up, enter: *(below)*
 - “CS” (call sign) for the *Label*
 - *String* for the *Data Type*
 - Your ship’s call sign for the *Default Value*



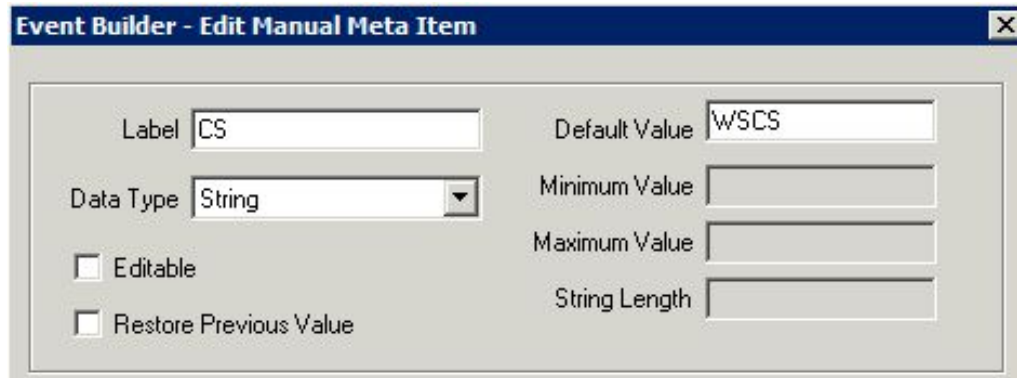
The screenshot shows a dialog box titled "Event Builder - Edit Manual Meta Item". It contains the following fields and options:

- Label:** Text input field containing "CS".
- Data Type:** Dropdown menu set to "String".
- Default Value:** Text input field containing "WSCS".
- Minimum Value:** Empty text input field.
- Maximum Value:** Empty text input field.
- String Length:** Empty text input field.
- Editable:** Unchecked checkbox.
- Restore Previous Value:** Unchecked checkbox.



Setting up SAMOS Event Template File:

- On the *Manual Meta Item* pop-up, enter: (below)
 - “CS” (call sign) for the *Label*
 - *String* for the *Data Type*
 - Your ship’s call sign for the *Default Value*



Event Builder - Edit Manual Meta Item

Label: CS Default Value: WSCS

Data Type: String

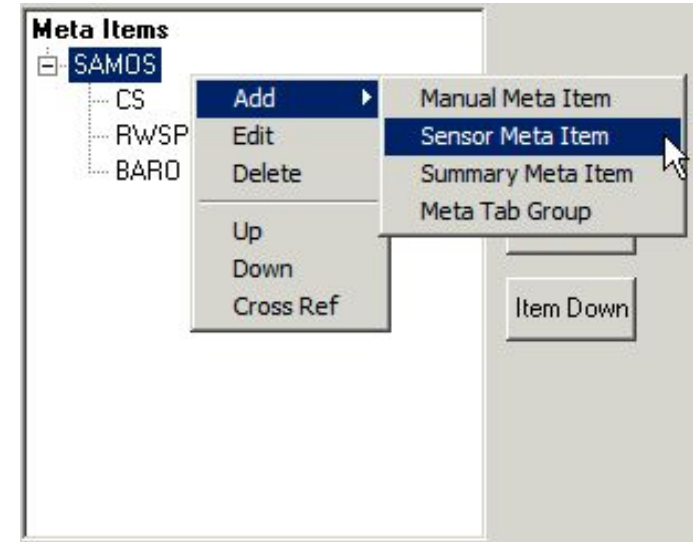
Editable

Restore Previous Value

Minimum Value: _____

Maximum Value: _____

String Length: _____

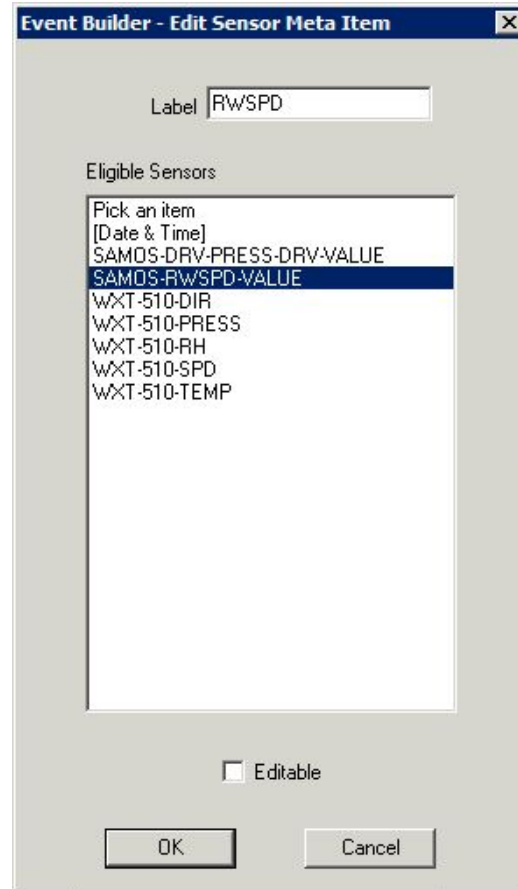


- Next, you will add your SAMOS derived sensors
 - Right-click the Meta Tab Group and select *Add* → *Sensor Meta Item* (right)



Setting up SAMOS Event Template File:

- Select one of the SAMOS derived sensors from the list (*right*)
- Repeat the process until all SAMOS derived sensors have been added to the *Meta Items* section



See: Page 330, Section 12.2, SCS User's Guide (v4.9) for more info



Setting up SAMOS Event Template File:

- For the *Label*, refer to page 330 of the v4.9 SCS User's Guide for the full suggested designator list (*right*)
- **The designators in the manual are not a Full list and are just suggestions.**
- As long as the designator is known by SAMOS, it can be used in the event and process by SAMOS software.

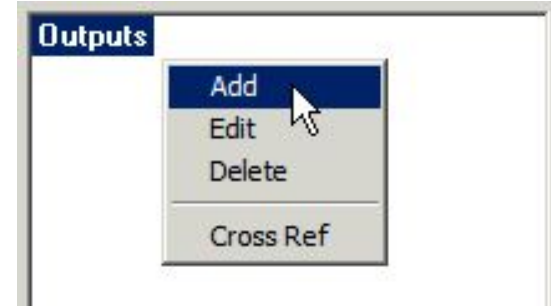
Designators	Data Type
CS	Ship's Call Sign
LAT	Latitude
LON	Longitude
GYRO	Ship Heading
SOG	Speed Over Ground
COG	Course Over Ground
ATEMP	Air Temperature
BARO	Barometric Pressure
RELH	Relative Humidity
RWSPD	Relative Wind Speed
RWDIR	Relative Wind Direction

See: Page 330, Section 12.2, SCS User's Guide (v4.9) for more info



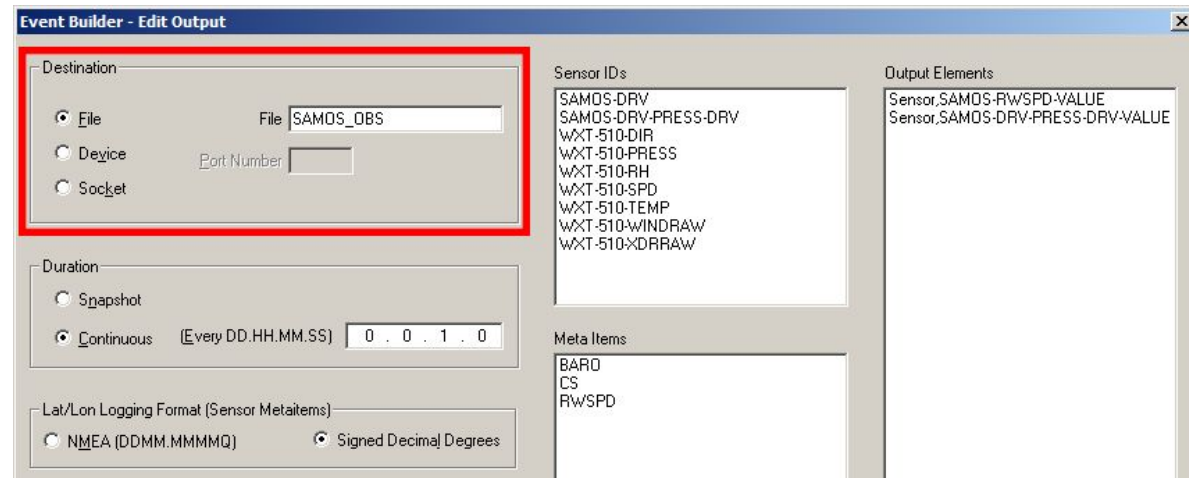
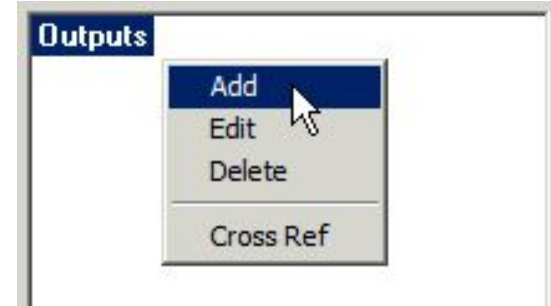
Setting up SAMOS Event Template File:

- Right-click on the *Outputs* heading and click *Add* (right, top)



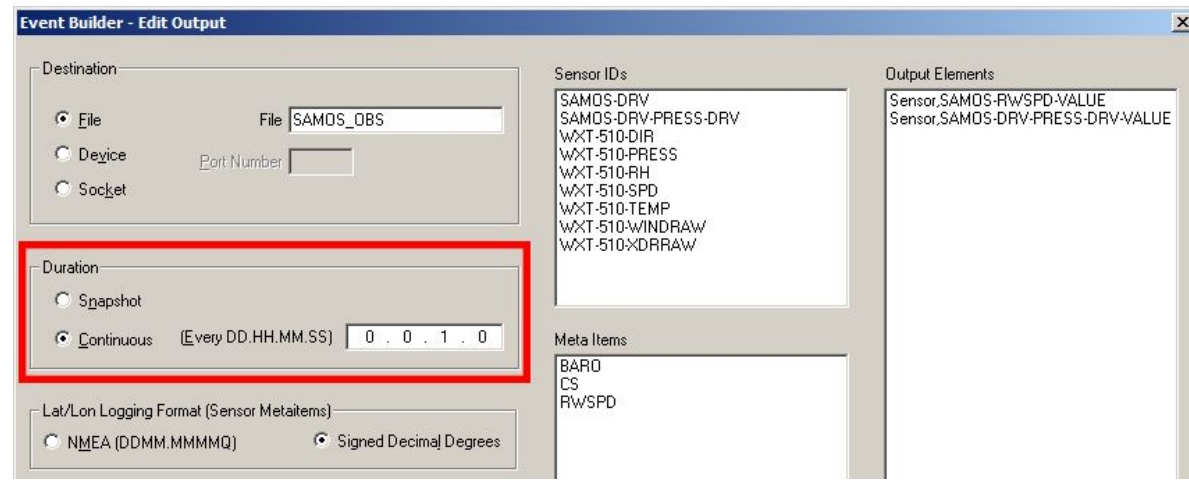
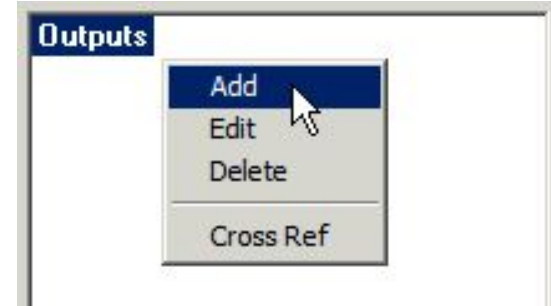
Setting up SAMOS Event Template File:

- Right-click on the *Outputs* heading and click *Add* (right, top)
- You must define a continuous output as follows: (right, bottom)
 - *Destination/File* is SAMOS_OBS



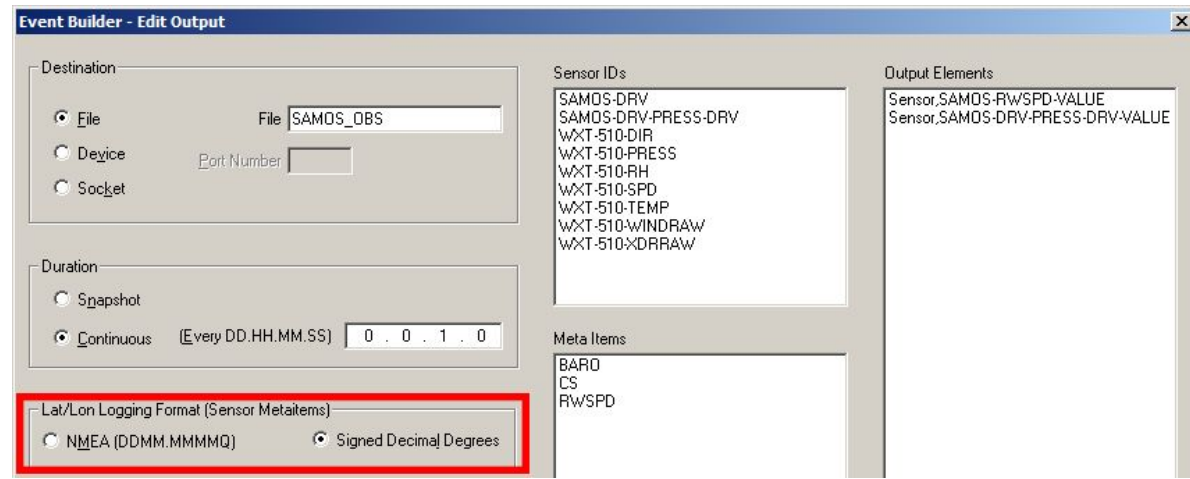
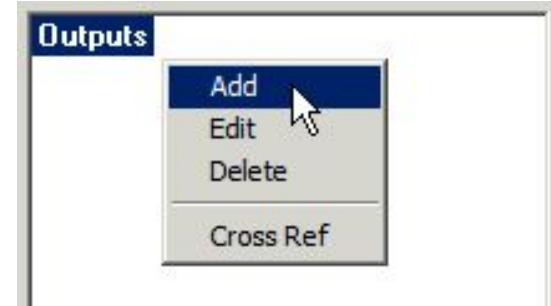
Setting up SAMOS Event Template File:

- Right-click on the *Outputs* heading and click *Add* (right, top)
- You must define a continuous output as follows: (right, bottom)
 - *Destination/File* is SAMOS_OBS
 - *Duration* type is continuous
 - DD (day) = 0
 - HH (hour) = 0
 - MM (minute) = 1
 - SS (second) = 0



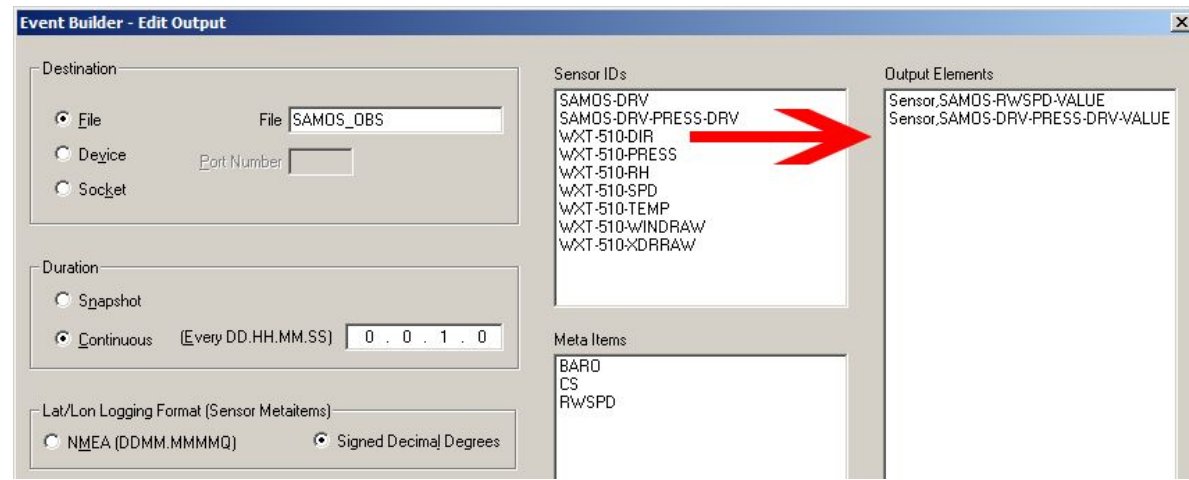
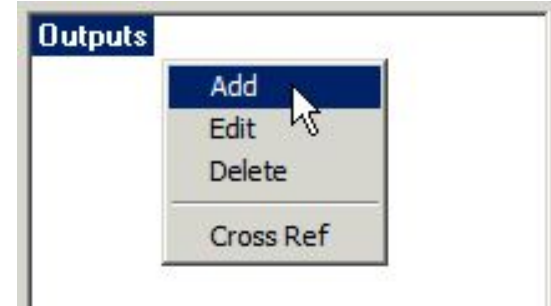
Setting up SAMOS Event Template File:

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- You must define a continuous output as follows: (right, bottom)
 - *Destination/File* is SAMOS_OBS
 - *Duration* type is continuous
 - DD (day) = 0
 - HH (hour) = 0
 - MM (minute) = 1
 - SS (second) = 0
 - For *Lat/Lon Logging Format* select the *Signed Decimal Degrees* radio button



Setting up SAMOS Event Template File:

- Right-click on the *Outputs* heading and click *Add* (right, top)
- You must define a continuous output as follows: (right, bottom)
 - *Destination/File* is SAMOS_OBS
 - *Duration* type is continuous
 - DD (day) = 0
 - HH (hour) = 0
 - MM (minute) = 1
 - SS (second) = 0
 - For *Lat/Lon Logging Format* select the *Signed Decimal Degrees* radio button
 - The list of selected *Output Elements* should consist of all SAMOS derived average sensors from the *Sensor ID* window



Setting up SAMOS Event Template File:

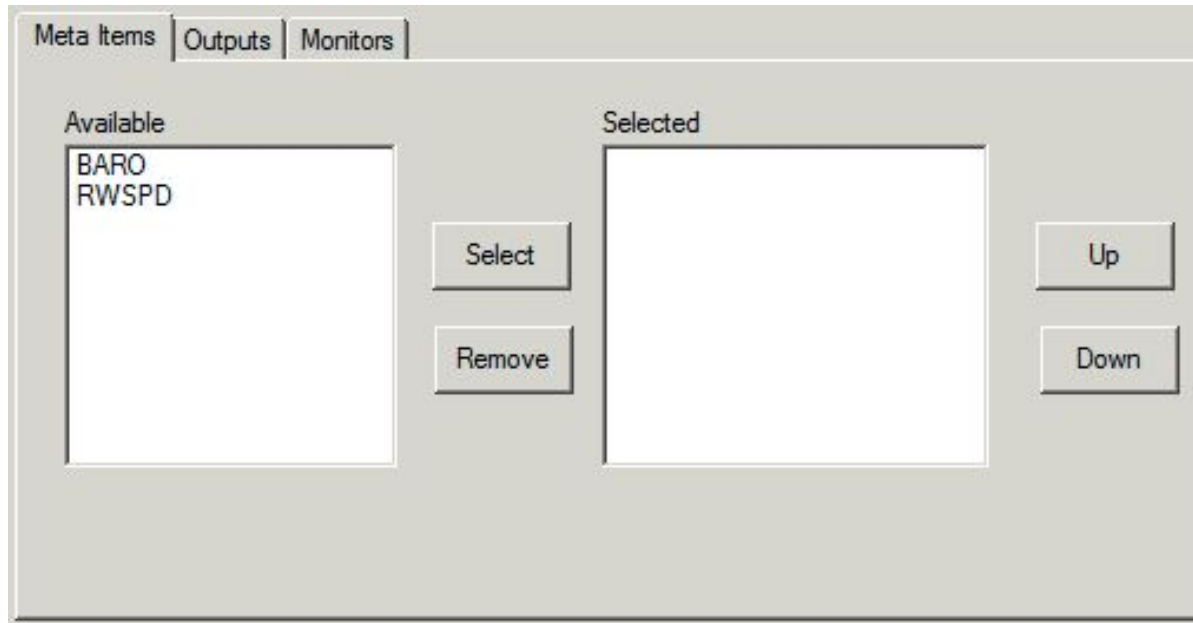
- Under the *Buttons* section, there should already be a *Button Group* labeled *Event Start / Stop* and a button for *Start Event* and *Stop Event*

See: Page 331, Section 12.4, SCS User's Guide (v4.9) for more info



Setting up SAMOS Event Template File:

- Under the *Buttons* section, there should already be a *Button Group* labeled *Event Start / Stop* and a button for *Start Event* and *Stop Event*
- Double-click the *Start Event* button
 - Under the *Meta Items* tab, add the SAMOS Derived Meta Items created earlier (*below*)

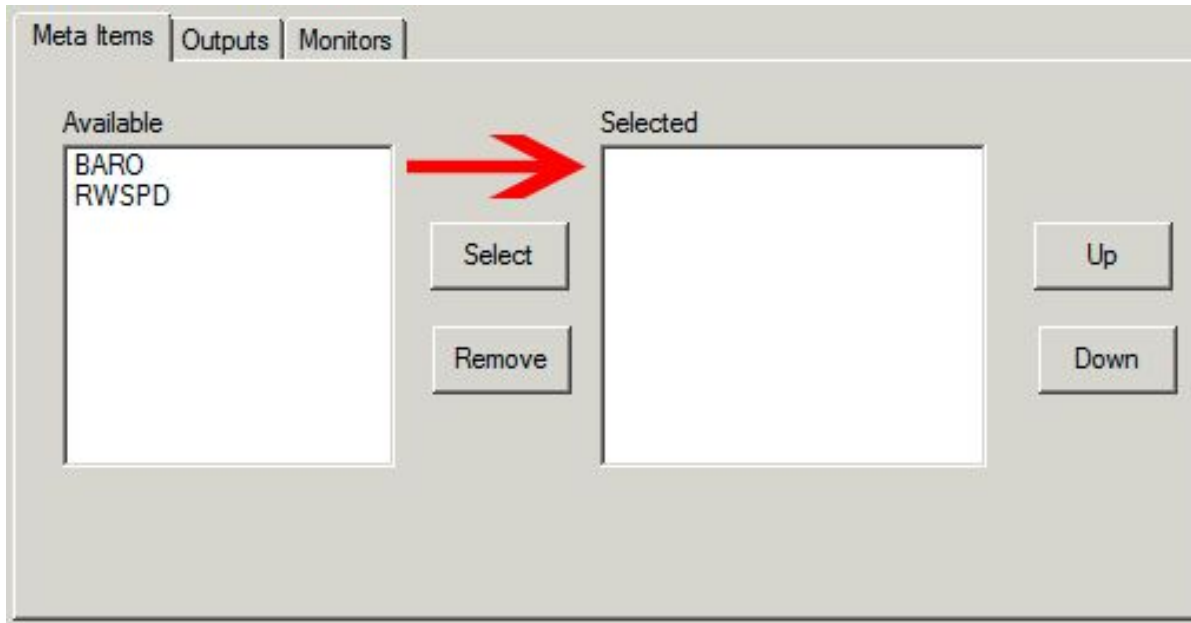


See: Page 331, Section 12.4, SCS User's Guide (v4.9) for more info



Setting up SAMOS Event Template File:

- Under the *Buttons* section, there should already be a *Button Group* labeled *Event Start / Stop* and a button for *Start Event* and *Stop Event*
- Double-click the *Start Event* button
 - Under the *Meta Items* tab, add the SAMOS Derived Meta Items created earlier (*below*)

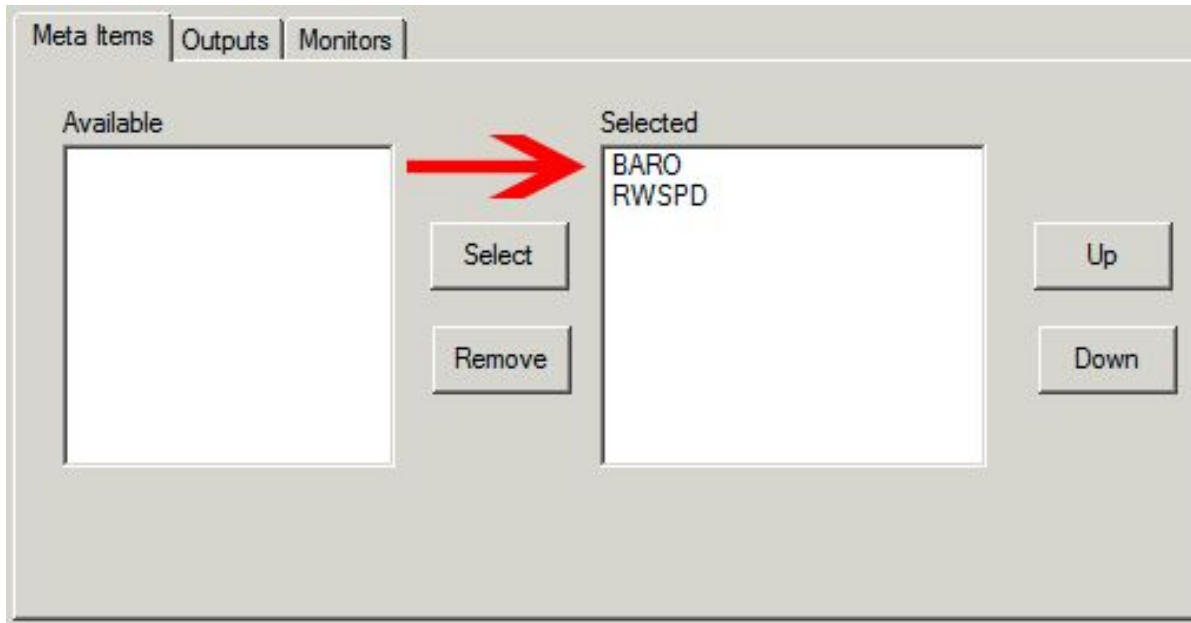


See: Page 331, Section 12.4, SCS User's Guide (v4.9) for more info



Setting up SAMOS Event Template File:

- Under the *Buttons* section, there should already be a *Button Group* labeled *Event Start / Stop* and a button for *Start Event* and *Stop Event*
- Double-click the *Start Event* button
 - Under the *Meta Items* tab, add the SAMOS Derived Meta Items created earlier (*below*)

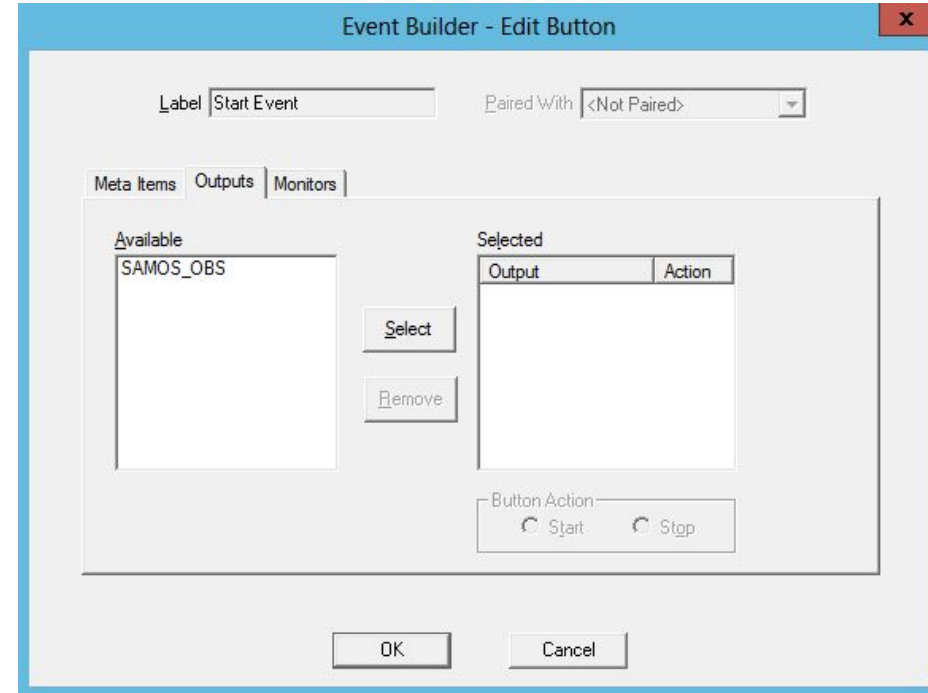


See: Page 331, Section 12.4, SCS User's Guide (v4.9) for more info



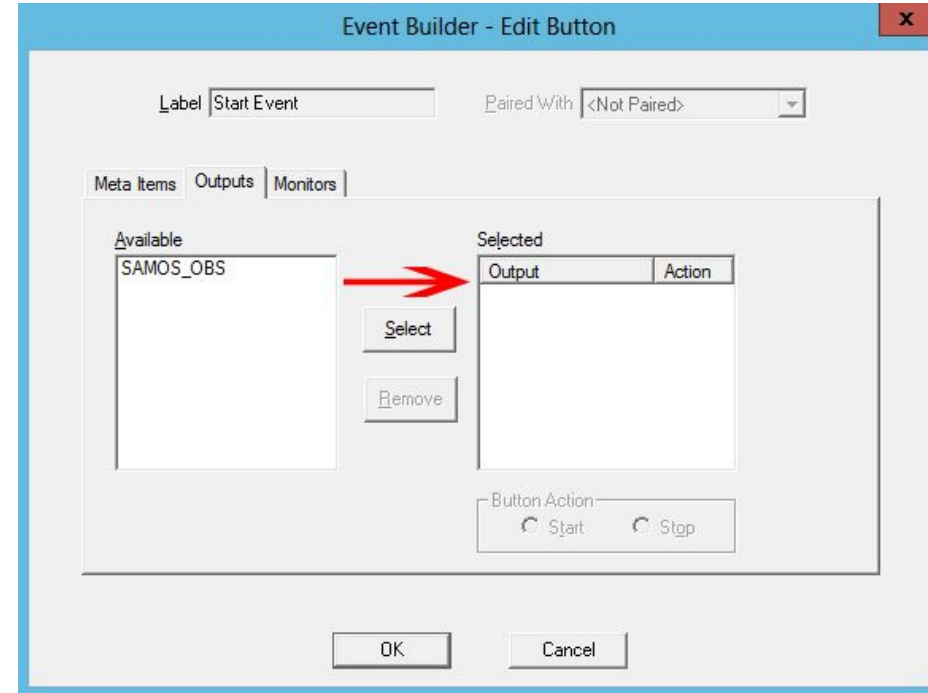
Setting up SAMOS Event Template File:

- Under the *Outputs* tab, add the *SAMOS_OBS* output created earlier
 - For the *Button Action*, select the *Start* radio button



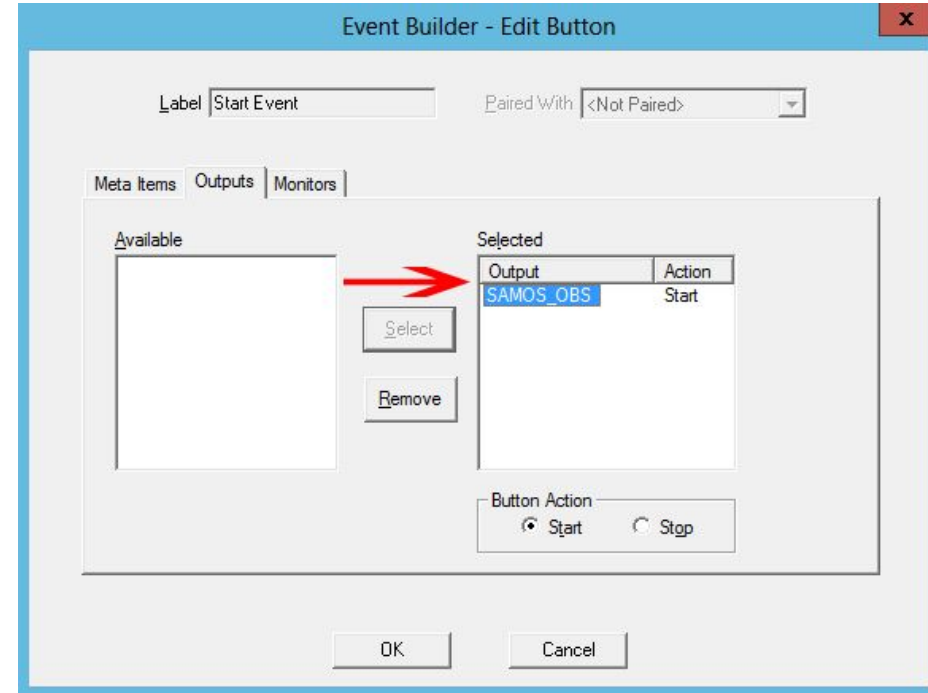
Setting up SAMOS Event Template File:

- Under the *Outputs* tab, add the *SAMOS_OBS* output created earlier
 - For the *Button Action*, select the *Start* radio button



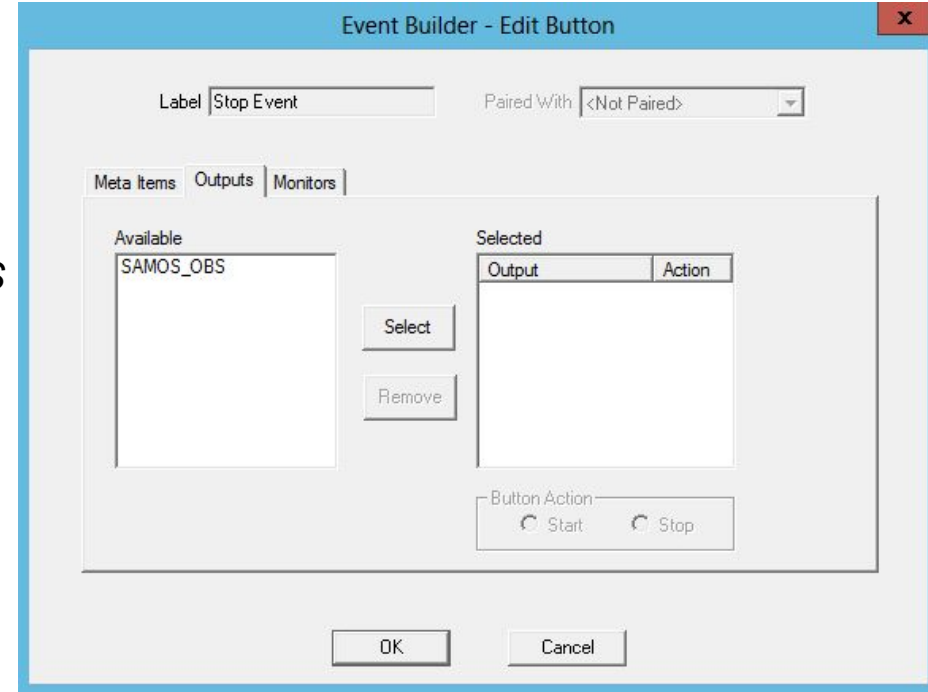
Setting up SAMOS Event Template File:

- Under the *Outputs* tab, add the *SAMOS_OBS* output created earlier
 - For the *Button Action*, select the *Start* radio button



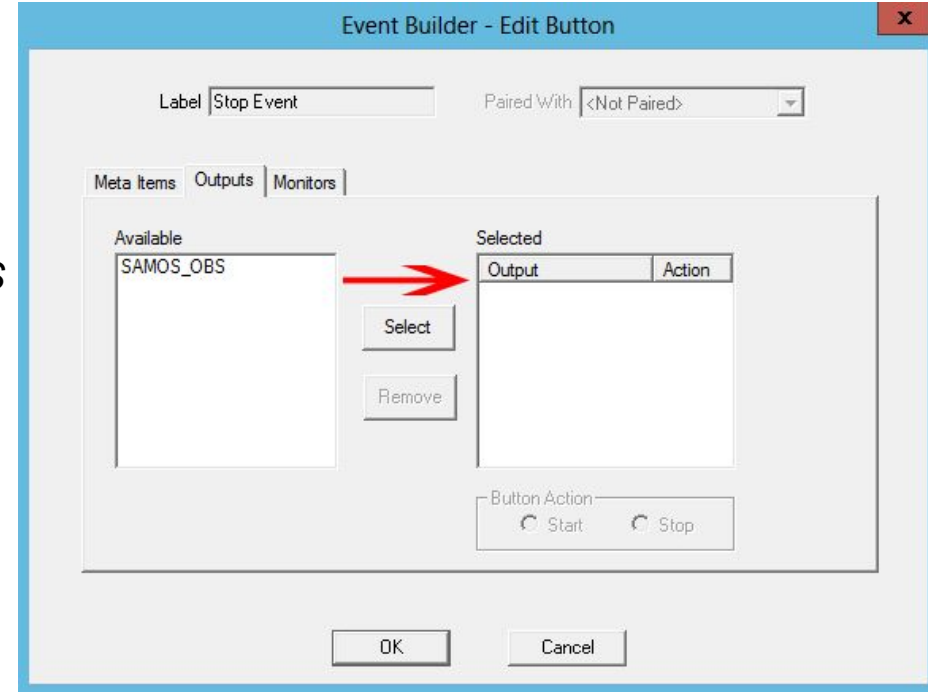
Setting up SAMOS Event Template File:

- Under the *Outputs* tab, add the *SAMOS_OBS* output created earlier
 - For the *Button Action*, select the *Start* radio button
- Double-click the *Stop Event* button
 - Follow the same steps above, adding the previously created SAMOS Derived Meta Items under the *Meta Items* tab
 - Under the *Outputs* tab, add the *SAMOS_OBS* output and select *Stop* for *Button Action*



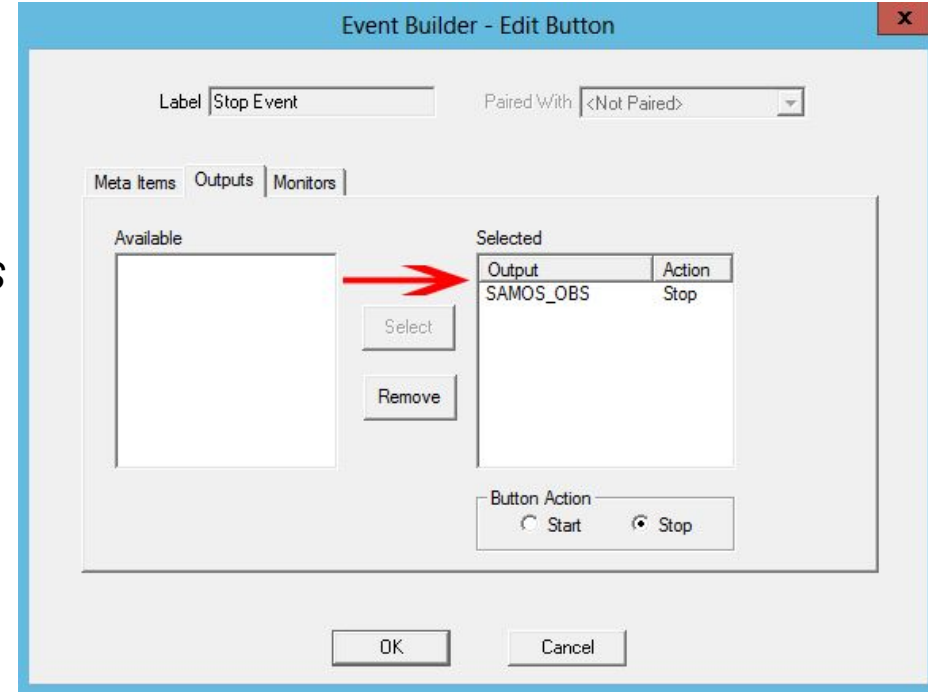
Setting up SAMOS Event Template File:

- Under the *Outputs* tab, add the *SAMOS_OBS* output created earlier
 - For the *Button Action*, select the *Start* radio button
- Double-click the *Stop Event* button
 - Follow the same steps above, adding the previously created SAMOS Derived Meta Items under the *Meta Items* tab
 - Under the *Outputs* tab, add the *SAMOS_OBS* output and select *Stop* for *Button Action*



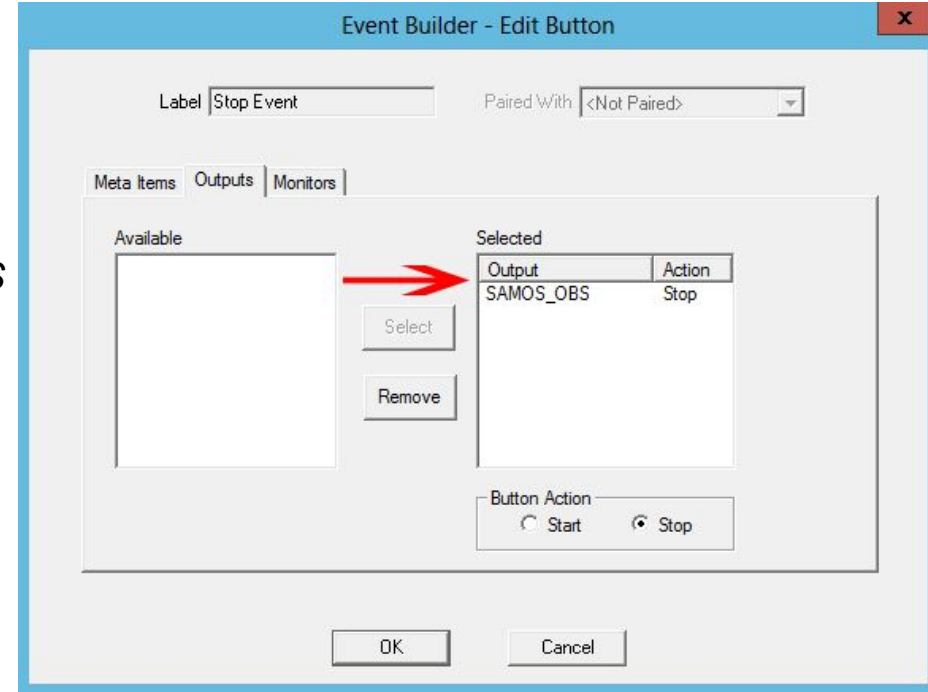
Setting up SAMOS Event Template File:

- Under the *Outputs* tab, add the *SAMOS_OBS* output created earlier
 - For the *Button Action*, select the *Start* radio button
- Double-click the *Stop Event* button
 - Follow the same steps above, adding the previously created SAMOS Derived Meta Items under the *Meta Items* tab
 - Under the *Outputs* tab, add the *SAMOS_OBS* output and select *Stop* for *Button Action*



Setting up SAMOS Event Template File:

- Under the *Outputs* tab, add the *SAMOS_OBS* output created earlier
 - For the *Button Action*, select the *Start* radio button
- Double-click the *Stop Event* button
 - Follow the same steps above, adding the previously created SAMOS Derived Meta Items under the *Meta Items* tab
 - Under the *Outputs* tab, add the *SAMOS_OBS* output and select *Stop* for *Button Action*
- Make sure to save the *Event Template* as SAMOS.tpl



Questions about Event Template?



Setting up SAMOS Mailer Configuration Values:

The following values required to send email are entered on the Email Account tab

From the main SCS Menu, select *Utilities* → *SAMOS Mailer* then select the *Email Account* tab (below)

SAMOS Mailer - v4.9.0.2782

Main Dir/Files **Email Account**

August 2016

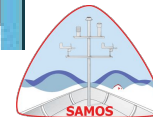
Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

Send Day

Send All

Clear All

See: Page 278, Section 9.4.7.4, SCS User's Guide (v4.9) for more info



Setting up SAMOS Mailer Configuration Values:

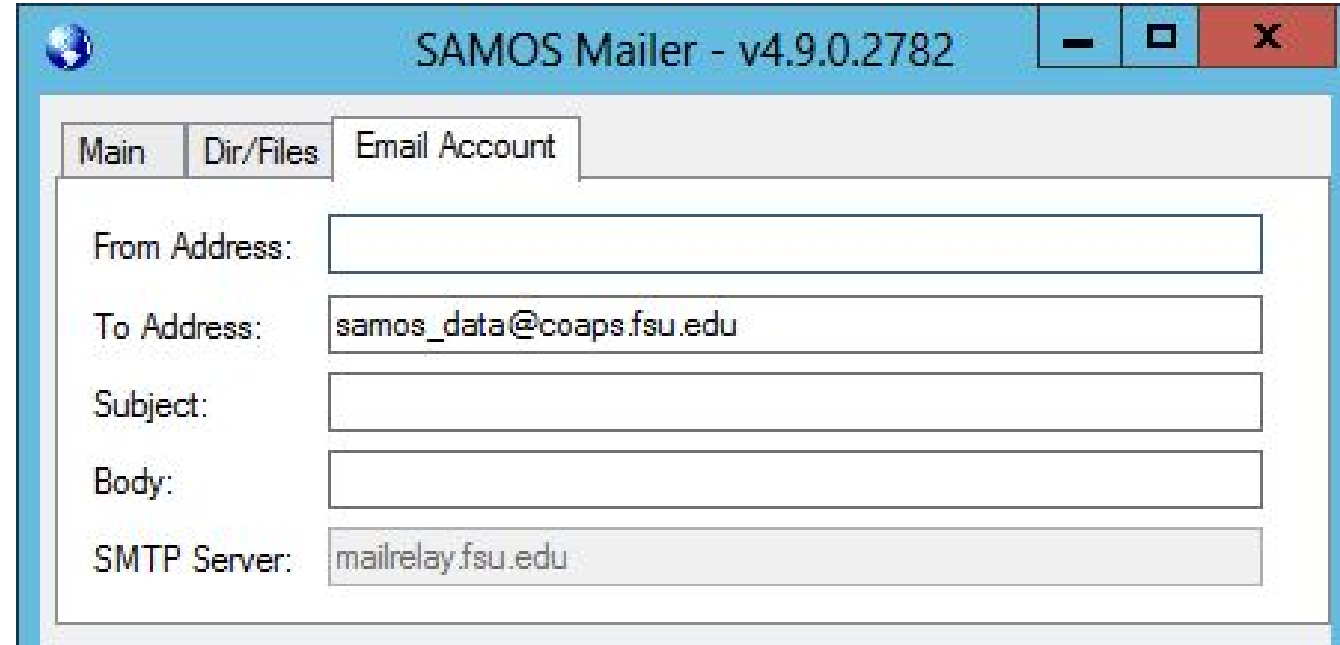
From Address (your ship's outbound email)

To Address (samos_data@coaps.fsu.edu)

Subject (preferably include call sign and date)

Body (preferably blank)

SMTP Server (filled from SCS Configuration File)



The screenshot shows a window titled "SAMOS Mailer - v4.9.0.2782". It has three tabs: "Main", "Dir/Files", and "Email Account". The "Email Account" tab is active. The form contains the following fields:

- From Address:** An empty text box.
- To Address:** A text box containing "samos_data@coaps.fsu.edu".
- Subject:** An empty text box.
- Body:** An empty text box.
- SMTP Server:** A text box containing "mailrelay.fsu.edu".

See: Page 278, Section 9.4.7.4, SCS User's Guide (v4.9) for more info



Questions about SAMOS Mailer setup?



Running the SAMOS Event:

- ACQ must be running in order for SAMOS Event to collect data

See: Page 276, Section 9.4.5, SCS User's Guide (v4.9) for more info



Running the SAMOS Event:

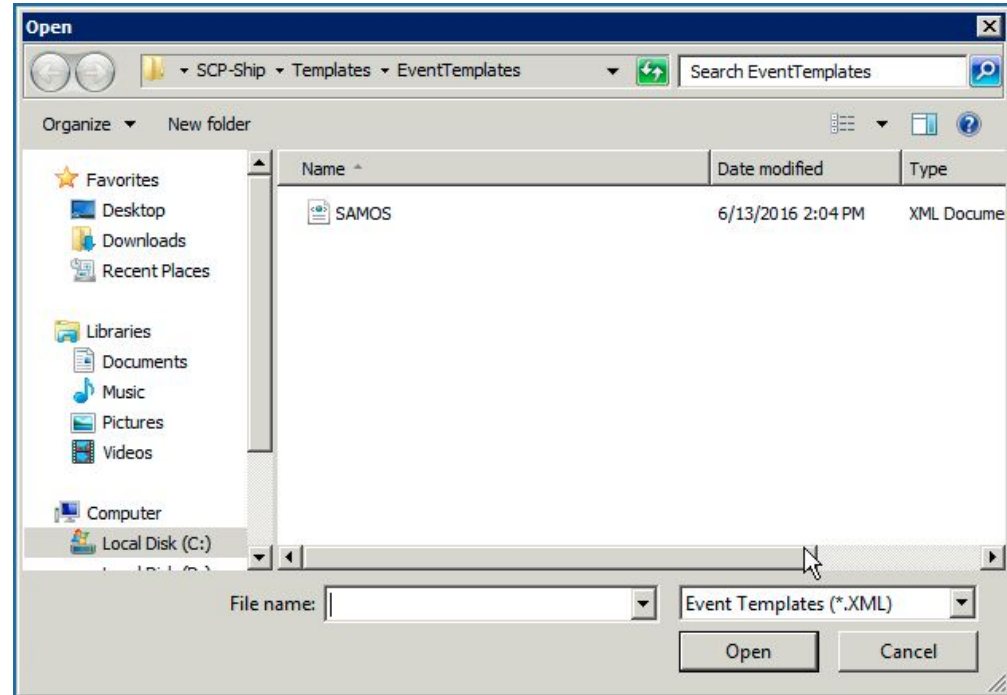
- **ACQ must be running in order for SAMOS Event to collect data**
- From the main SCS Menu, select:
Acquisition → Events → Event Logger Classic

See: Page 276, Section 9.4.5, SCS User's Guide (v4.9) for more info



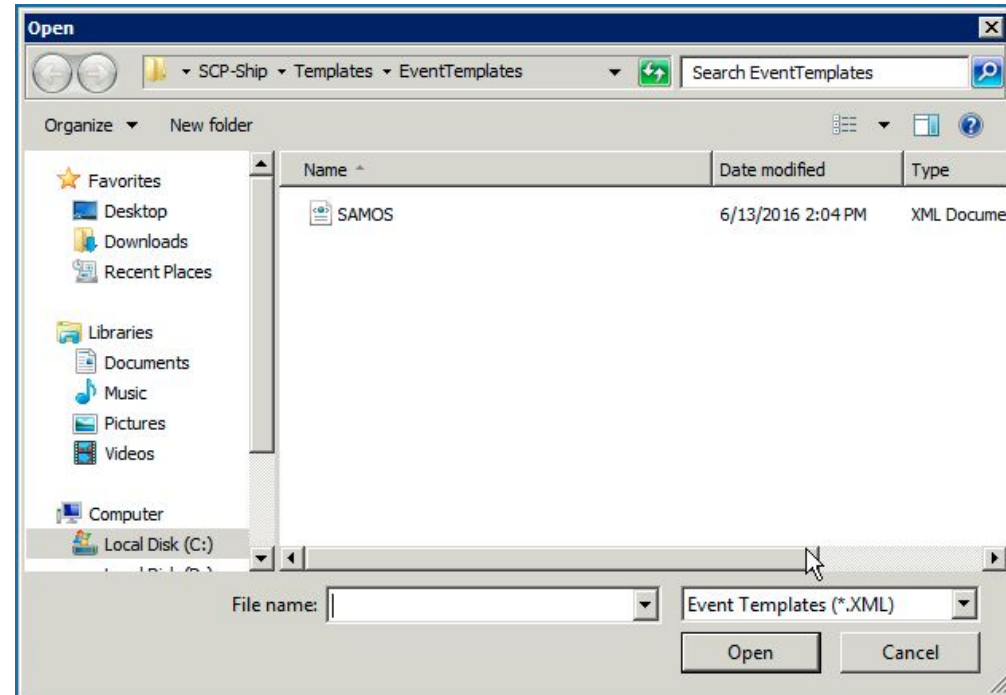
Running the SAMOS Event:

- **ACQ must be running in order for SAMOS Event to collect data**
- From the main SCS Menu, select:
Acquisition → *Events* → *Event Logger Classic*
- The Open dialog box should open in the right Location. If not, navigate to:
{Drive}:\SCSServer{version}\SHIP40\
{Ship-Name}\Templates\EventTemplates



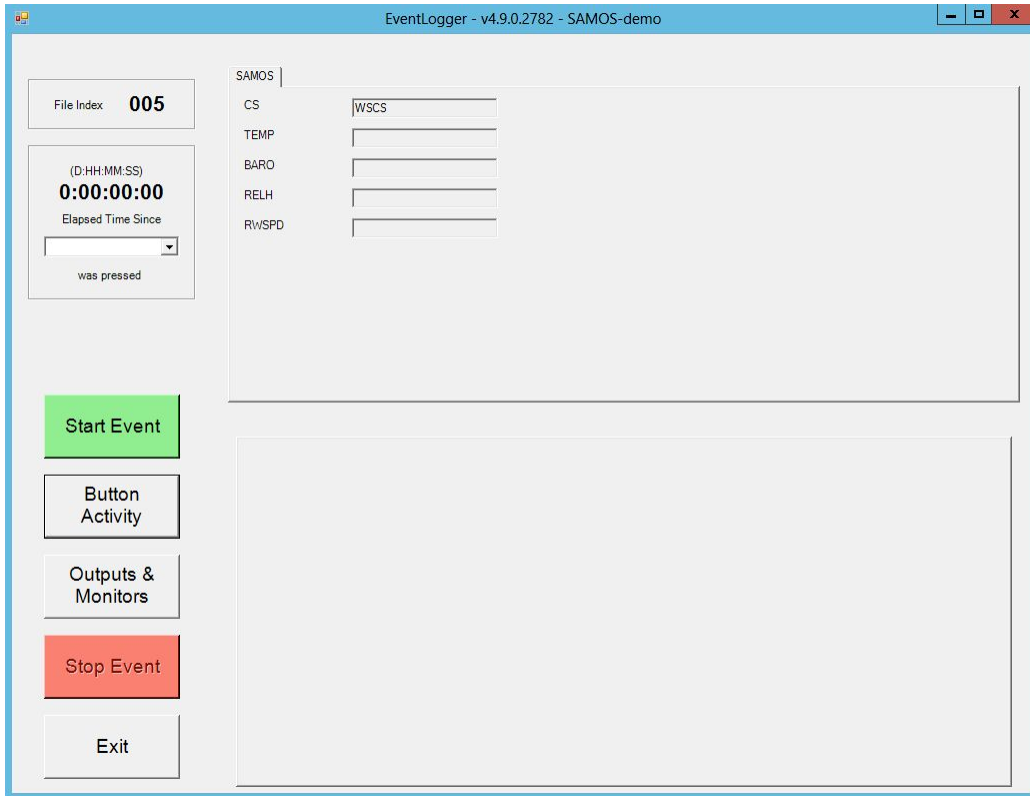
Running the SAMOS Event:

- **ACQ must be running in order for SAMOS Event to collect data**
- From the main SCS Menu, select:
Acquisition → *Events* → *Event Logger Classic*
- The Open dialog box should open in the right Location. If not, navigate to:
{Drive}:\SCSServer{version}\SHIP40\
{Ship-Name}\Templates\EventTemplates
- Select the SAMOS.tpl *Event Template* and click *Open*



Running the SAMOS Event:

- On the left side of the *Event Logger*, click *Start Event* button to start the SAMOS Event.



****NOTE: This SAMOS Event should stay running the entire time Data Acquisition is running, except in the case that the ship is doing classified research, or as otherwise instructed by Chief Officer.****



Questions about running SAMOS Event?



Running the SAMOS Mailer:

- Once the SAMOS Event is running, from the main SCS Menu, select:
Utilities → *SAMOS Mailer*



Running the SAMOS Mailer:

- Once the SAMOS Event is running, from the main SCS Menu, select:
Utilities → *SAMOS Mailer*
- The calendar displays the current month with a red circle around the current day
 - All prior dates in which data was sent are set to green (*below*)
 - If a date was missed, it is marked red (*below*)



See: Page 276, Section 9.4.7.1, SCS User's Guide (v4.9) for more info



Running the SAMOS Mailer:

- Buttons
 - Send Day - sends data for the currently selected date on the calendar
 - Send All - sends ALL available data in [Event Data/SAMOS] to the designated email address. **Do not use this option if some of the data has already been sent. Only send the days that SAMOS has not received.**
 - Clear All - deletes/clears all data for the SAMOS event



See: Page 276, Section 9.4.7.1, SCS User's Guide (v4.9) for more info



Running the SAMOS Mailer:

- Status Icon/System Tray
 - Since the software should run continuously, the SAMOS Mailer resides mainly in the System Tray. If the globe is blue (*below*), then all is well, however, if the globe is red (*below*), then a problem was encountered within the last 24 hours.



Running the SAMOS Mailer:

- Problems/Bugs
 - There is a known problem with SCS 4.9.0 where if days are missed, the Send All and Send Day buttons will not work.
 - If they are not working, we have worked with SOI R/V FALKOR to develop a method that will help get your raw ELG data converted to \$SAMOS data format and then to the SAMOS team until you can get your SCS software updated to the correct, fixed version (4.9.1).



Questions about running SAMOS Mailer?



What if SAMOS Mailer is not working?



Transforming Raw ELG Data to SAMOS Format

<https://docs.google.com/presentation/d/1P4P3RIEGkUYt5TcY8Ba-tWaLGRC8MqQ8T3X2R1h6hsU>

The screenshot displays a software application window with a file explorer on the left, a central data table, and a command window on the right. The data table contains the following columns: Date, Time, SAMOS-PROB-VALUE, SAMOS-PROB-VAL, SAMOS-PROB-VAL, and SAMOS-PROB-VAL. The command window shows a list of commands and their outputs, including file names and numerical values.

Date	Time	SAMOS-PROB-VALUE	SAMOS-PROB-VAL	SAMOS-PROB-VAL	SAMOS-PROB-VAL
08/08/2008	18:24:59	1827.5	3	6.0	
08/08/2008	18:25:59	1827.5	3	6.1	
08/08/2008	18:26:59	1827.5	3	6.1	
08/08/2008	18:27:59	1827.5	3	6.1	
08/08/2008	18:28:59	1827.5	3	6.1	
08/08/2008	18:29:59	1827.5	3	6.1	
08/08/2008	18:30:59	1827.5	3	6.1	
08/08/2008	18:31:59	1827.5	3	6.2	
08/08/2008	18:32:59	1827.5	3	6.1	
08/08/2008	18:33:59	1827.4	3	6.1	
08/08/2008	18:34:59	1827.4	3	6.1	
08/08/2008	18:35:59	1827.4	3	6.1	
08/08/2008	18:36:59	1827.4	3	6.1	
08/08/2008	18:37:59	1827.4	3	6.1	
08/08/2008	18:38:59	1827.4	3	6.1	
08/08/2008	18:39:59	1827.4	3	6.1	
08/08/2008	18:40:59	1827.4	3	6.1	
08/08/2008	18:41:59	1827.4	3	6.1	
08/08/2008	18:42:59	1827.4	3	6.1	
08/08/2008	18:43:59	1827.4	3	6.1	
08/08/2008	18:44:59	1827.4	3	6.1	
08/08/2008	18:45:59	1827.4	3	6.1	
08/08/2008	18:46:59	1827.4	3	6.1	
08/08/2008	18:47:59	1827.4	3	6.1	
08/08/2008	18:48:59	1827.4	3	6.1	
08/08/2008	18:49:59	1827.4	3	6.1	
08/08/2008	18:50:59	1827.4	3	6.1	
08/08/2008	18:51:59	1827.4	3	6.1	
08/08/2008	18:52:59	1827.4	3	6.0	



Maintaining SAMOS Metadata:

Initial Vessel Setup requires name, call sign, date of recruitment, and the time format (one string w/YYYYMMDDhhmmss or 2 strings, YYYYMMDD and HMS). The designator(s) for time must be input upon initial vessel setup in DB.

Also file format (SAMOS001, JGOFS, etc...)

Finally, we need to know the email address the data will be sent from.

Vessel: Name Call Sign Date of Recruitment Primary Contact Email *Operating Institution* *IMO#* **Institution Address** **Contact Phone Number**	Instrument: Variable Name Designator Original Units Date Metadata Valid - begin **Winds need direction convention met/oceanographic** **TS needs TS sensor type** **RAD needs RAD direction upwelling or downwelling** **RWDIR needs 0 line reference**
---	--



METADATA

* = Can get away without, but quite important

** = Can get away without, though leaves us to make assumptions. Best to have during setup.



Have Problems or Need Tech Questions Answered?

Issue Tracking System (ITS) for NOAA-SCS

noaa-scs@coaps.fsu.edu or <https://groups.google.com/a/coaps.fsu.edu/forum/#!/forum/noaa-scs>

Problems or tech issues with the SAMOS portion of NOAA's SCS software can be reported/discussed with the internal Issue Tracking System. You can visit the link above directly to access the forum, or you can send an email to noaa-scs@coaps.fsu.edu to have the issue automatically posted to the ITS.

****Be sure to CC noaa-scs@coaps.fsu.edu on all replies to ensure that the questions/responses are being tracked.****

SAMOS Technical Staff

samos@coaps.fsu.edu

SAMOS technical staff can be reached directly at the email address above.



Final Questions?

