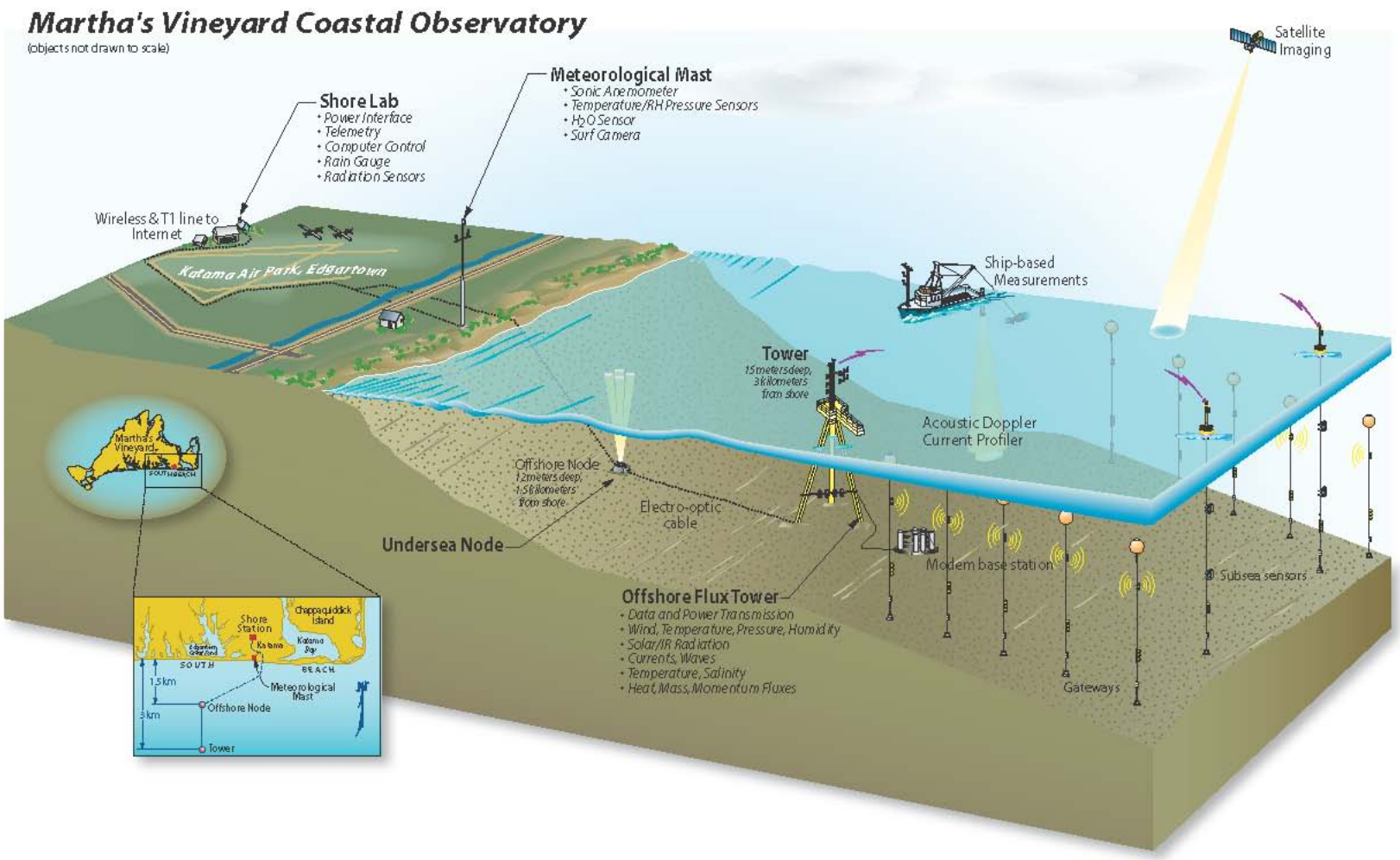
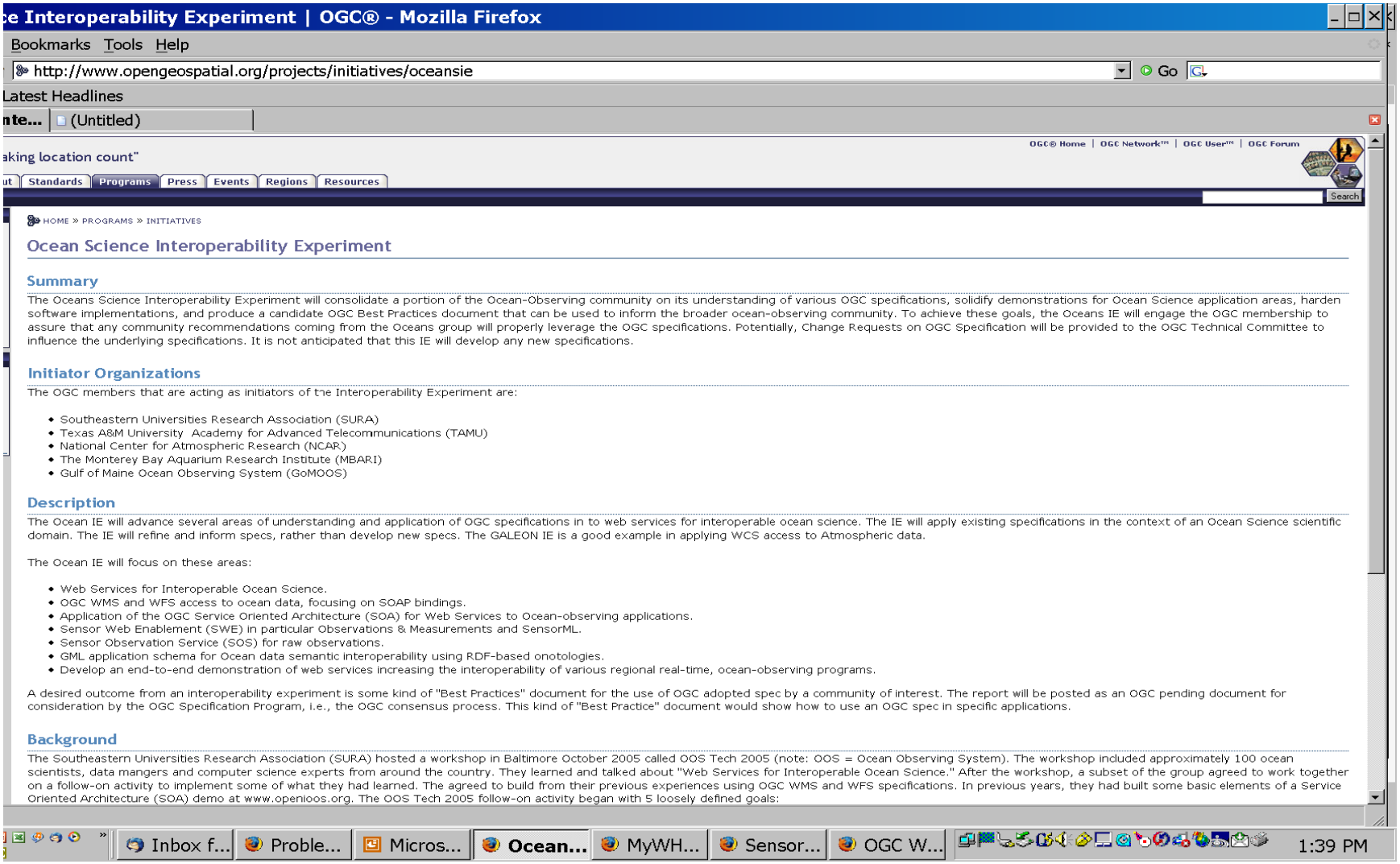
Janet Fredericks

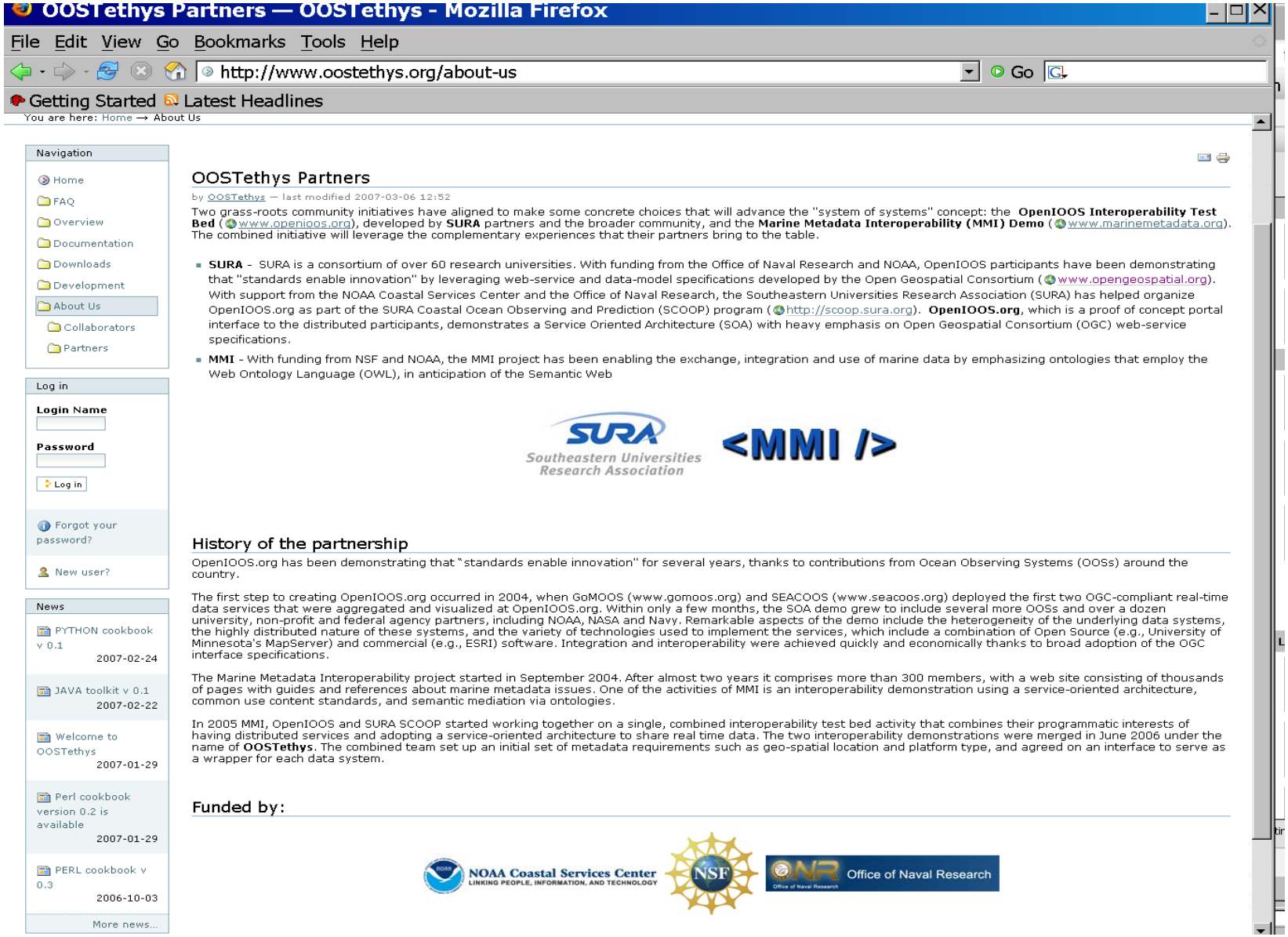
Woods Hole Oceanographic Institution
Martha's Vineyard Coastal Observatory

Chief Scientist: Dr. Heidi Sosik
COSMOS: Dr. John Trowbridge
GEOOS Sensor Workshop
Geneva – May 2008

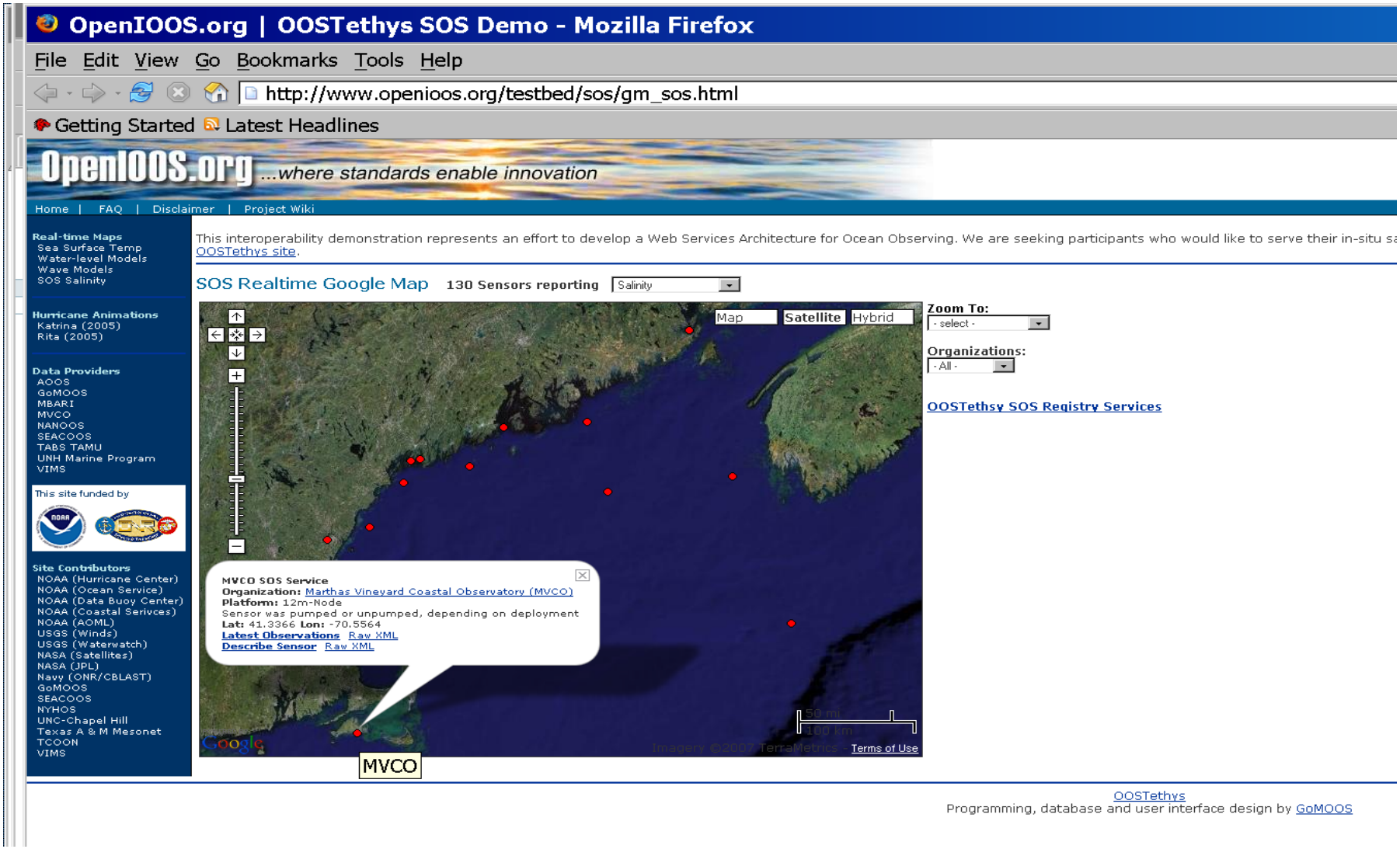

Martha's Vineyard Coastal Observatory
(objects not drawn to scale)
Satellite Imaging
Meteorological Mast
• Sonic Anemometer
• Temperature/RH Pressure Sensors
• H_2O Sensor
• Surf Camera
Shore Lab
• Power Interface
• Telemetry
• Computer Control
• Rain Gauge
• Radiation Sensors
Wireless & T1 line to Internet
Katama Air Park, Edgartown
Ship-based Measurements
Tower
15 meters deep, 3 Kilometers from shore
Acoustic Doppler Current Profiler
Martha's Vineyard
SOUTH BEACH
Offshore Node
12 meters deep, 1.5 Kilometers from shore
Electro-optic cable
Undersea Node
Modem base station
Subsea sensors
Offshore Flux Tower
• Data and Power Transmission
• Wind, Temperature, Pressure, Humidity
• Solar/IR Radiation
• Currents, Waves
• Temperature, Salinity
• Heat, Mass, Momentum Fluxes
Gateways
Shore Station
Chappaquiddick Island
Katama
Katama Bay
Edgartown Great Pond
SOUTH BEACH
1.5 km
3 km
Meteorological Mast
Offshore Node
Tower

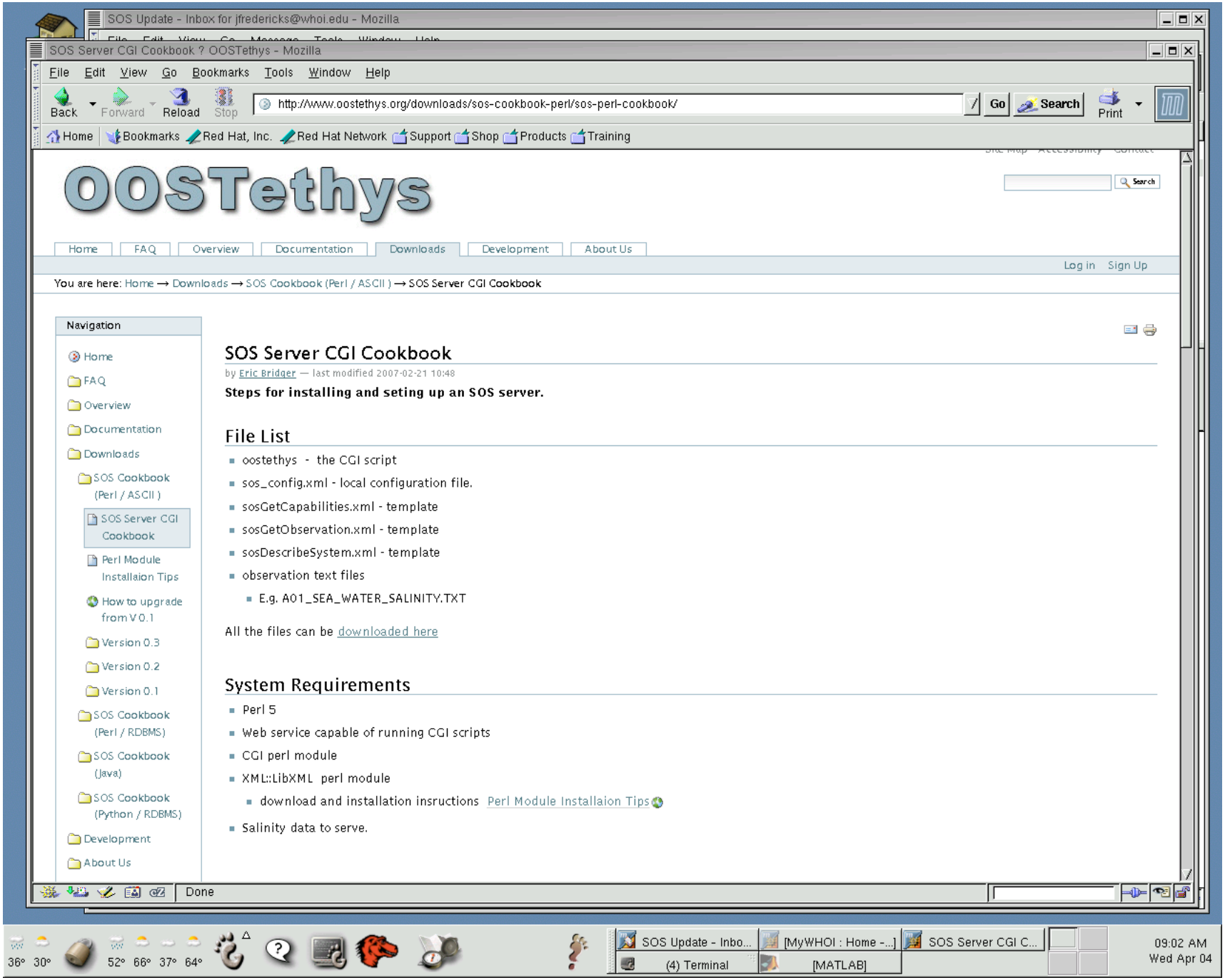
Ocean Science Interoperability Experiment

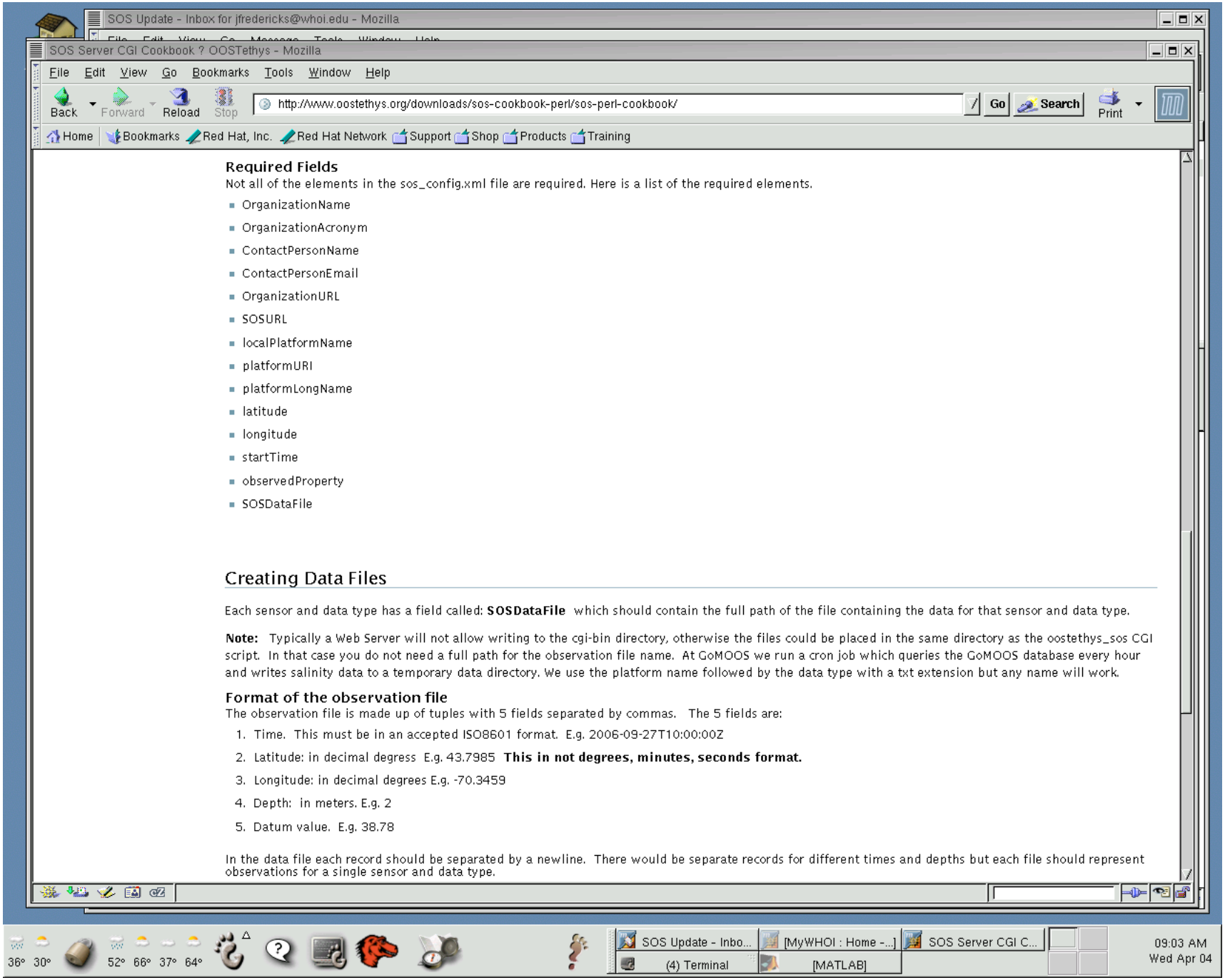


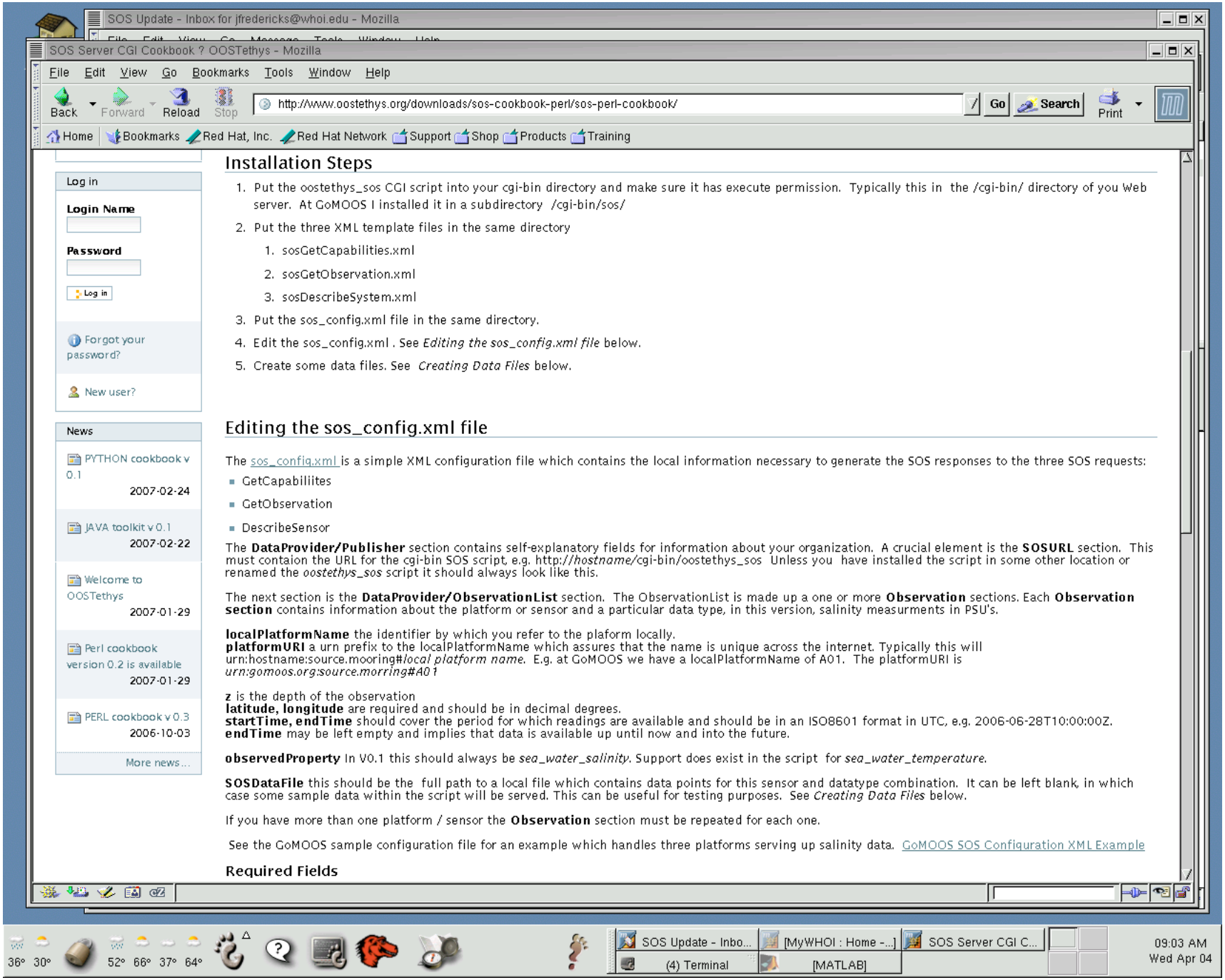

OOSTethys Partners — OOSTethys - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
http://www.oostethys.org/about-us
Go
Getting Started Latest Headlines
You are here: Home → About Us
Navigation
Home
FAQ
Overview
Documentation
Downloads
Development
About Us
Collaborators
Partners
Log in
Login Name
Password
Log in
Forgot your password?
New user?
News
PYTHON cookbook v 0.1
2007-02-24
JAVA toolkit v 0.1
2007-02-22
Welcome to OOSTethys
2007-01-29
Perl cookbook version 0.2 is available
2007-01-29
PERL cookbook v 0.3
2006-10-03
More news...
OOSTethys Partners
by OOSTethys — last modified 2007-03-06 12:52
Two grass-roots community initiatives have aligned to make some concrete choices that will advance the "system of systems" concept: the OpenIOOS Interoperability Test Bed (www.openioos.org), developed by SURA partners and the broader community, and the Marine Metadata Interoperability (MMI) Demo (www.marinemetadata.org). The combined initiative will leverage the complementary experiences that their partners bring to the table.
SURA - SURA is a consortium of over 60 research universities. With funding from the Office of Naval Research and NOAA, OpenIOOS participants have been demonstrating that "standards enable innovation" by leveraging web-service and data-model specifications developed by the Open Geospatial Consortium (www.opengeospatial.org). With support from the NOAA Coastal Services Center and the Office of Naval Research, the Southeastern Universities Research Association (SURA) has helped organize OpenIOOS.org as part of the SURA Coastal Ocean Observing and Prediction (SCOOP) program (http://scoop.sura.org). OpenIOOS.org, which is a proof of concept portal interface to the distributed participants, demonstrates a Service Oriented Architecture (SOA) with heavy emphasis on Open Geospatial Consortium (OGC) web-service specifications.
MMI - With funding from NSF and NOAA, the MMI project has been enabling the exchange, integration and use of marine data by emphasizing ontologies that employ the Web Ontology Language (OWL), in anticipation of the Semantic Web
SURA
Southeastern Universities Research Association
<MMI />
History of the partnership
OpenIOOS.org has been demonstrating that "standards enable innovation" for several years, thanks to contributions from Ocean Observing Systems (OOSs) around the country.
The first step to creating OpenIOOS.org occurred in 2004, when GoMOOS (www.gomoos.org) and SEACOOS (www.seacoos.org) deployed the first two OGC-compliant real-time data services that were aggregated and visualized at OpenIOOS.org. Within only a few months, the SOA demo grew to include several more OOSs and over a dozen university, non-profit and federal agency partners, including NOAA, NASA and Navy. Remarkable aspects of the demo include the heterogeneity of the underlying data systems, the highly distributed nature of these systems, and the variety of technologies used to implement the services, which include a combination of Open Source (e.g., University of Minnesota's MapServer) and commercial (e.g., ESRI) software. Integration and interoperability were achieved quickly and economically thanks to broad adoption of the OGC interface specifications.
The Marine Metadata Interoperability project started in September 2004. After almost two years it comprises more than 300 members, with a web site consisting of thousands of pages with guides and references about marine metadata issues. One of the activities of MMI is an interoperability demonstration using a service-oriented architecture, common use content standards, and semantic mediation via ontologies.
In 2005 MMI, OpenIOOS and SURA SCOOP started working together on a single, combined interoperability test bed activity that combines their programmatic interests of having distributed services and adopting a service-oriented architecture to share real time data. The two interoperability demonstrations were merged in June 2006 under the name of OOSTethys. The combined team set up an initial set of metadata requirements such as geo-spatial location and platform type, and agreed on an interface to serve as a wrapper for each data system.
Funded by:
NOAA Coastal Services Center
LINKING PEOPLE, INFORMATION, AND TECHNOLOGY
NSF
ONR Office of Naval Research

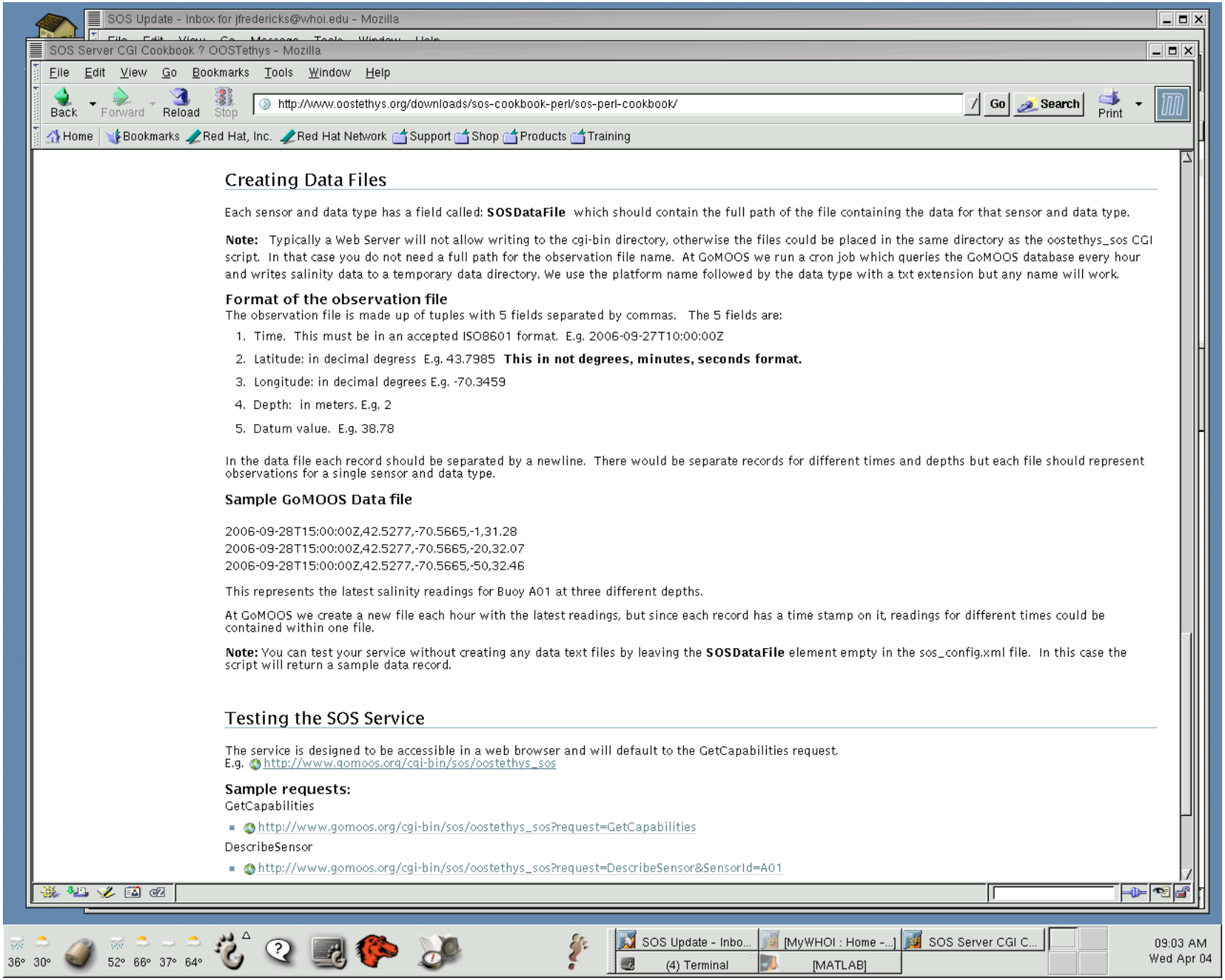
OOSTETHYS

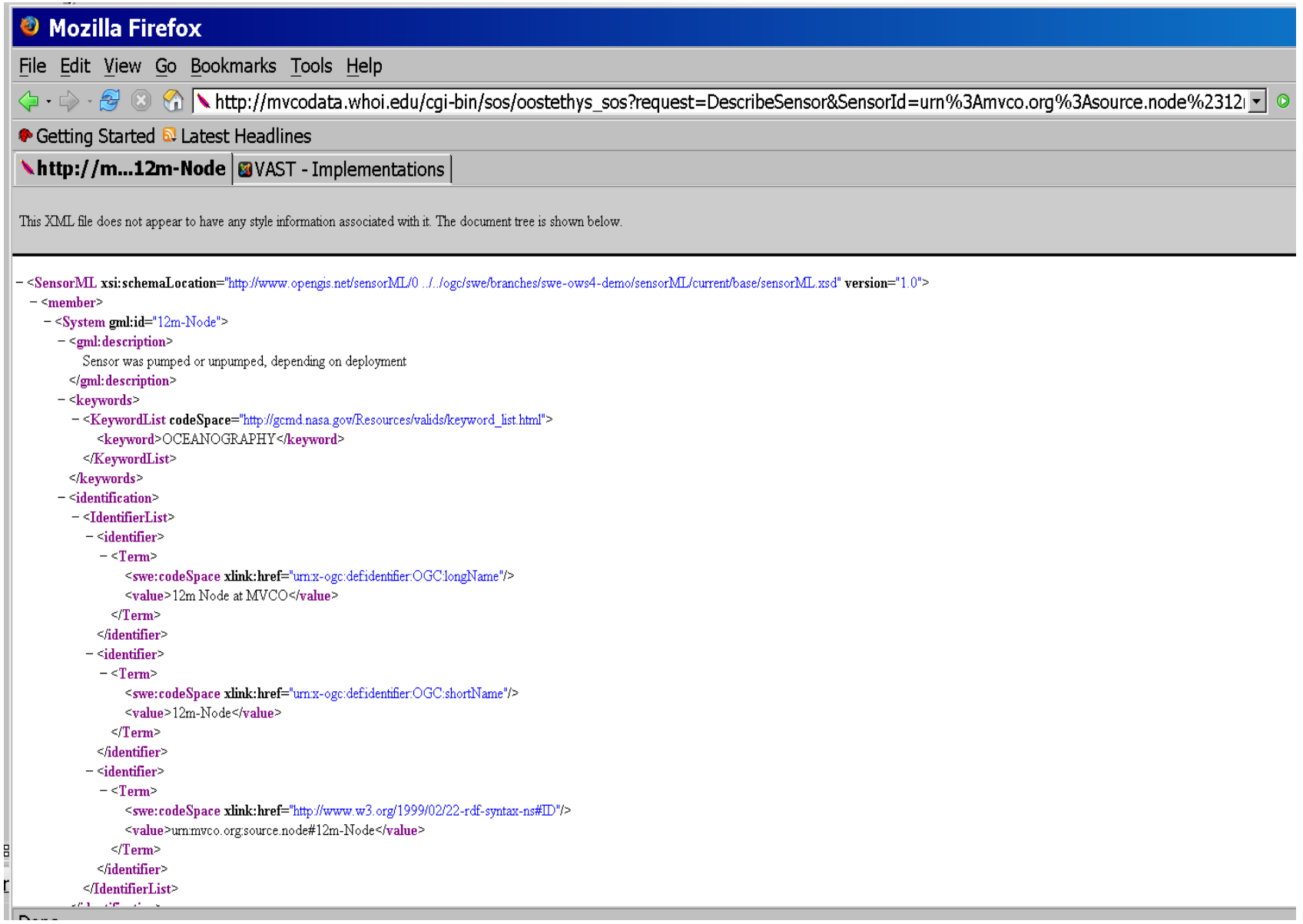

OpenIOOS.org | OOSTethys SOS Demo - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
http://www.openioos.org/testbed/sos/gm_sos.html
Getting Started Latest Headlines
OpenIOOS.org ...where standards enable innovation
Home | FAQ | Disclaimer | Project Wiki
Real-time Maps
Sea Surface Temp
Water-level Models
Wave Models
SOS Salinity
Hurricane Animations
Katrina (2005)
Rita (2005)
Data Providers
AOOS
GoMOOS
MBARI
MVCO
NANOOS
SEACOOS
TABS TAMU
UNH Marine Program
VIMS
This site funded by
Site Contributors
NOAA (Hurricane Center)
NOAA (Ocean Service)
NOAA (Data Buoy Center)
NOAA (Coastal Serivces)
NOAA (AOML)
USGS (Winds)
USGS (Waterwatch)
NASA (Satellites)
NASA (JPL)
Navy (ONR/CBLAST)
GoMOOS
SEACOOS
NYHOS
UNC-Chapel Hill
Texas A & M Mesonet
TCOON
VIMS
This interoperability demonstration represents an effort to develop a Web Services Architecture for Ocean Observing. We are seeking participants who would like to serve their in-situ sa
OOSTethys site.
SOS Realtime Google Map
130 Sensors reporting
Salinity
Map
Satellite
Hybrid
Zoom To:
- select -
Organizations:
- All -
OOSTethsy SOS Registry Services
MVCO SOS Service
Organization: Marthas Vineyard Coastal Observatory (MVCO)
Platform: 12m-Node
Sensor was pumped or unpumped, depending on deployment
Lat: 41.3366 Lon: -70.5564
Latest Observations Raw XML
Describe Sensor Raw XML
Google
Terms of Use
MVCO
OOSTethys
Programming, database and user interface design by GoMOOS

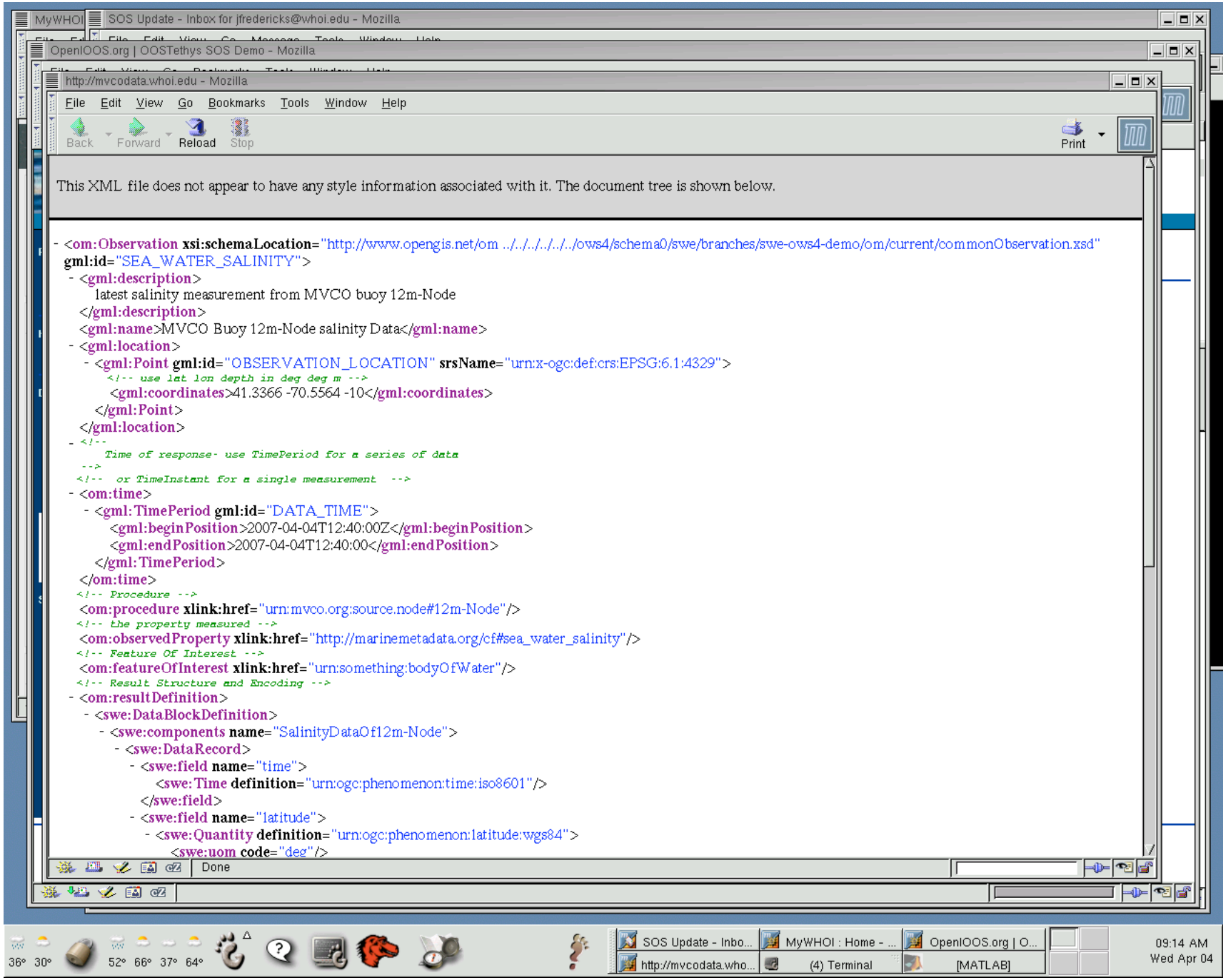

SOS Update - Inbox for jfredericks@whoi.edu - Mozilla
SOS Server CGI Cookbook ? OOSTethys - Mozilla
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop
http://www.oostethys.org/downloads/sos-cookbook-perl/sos-perl-cookbook/
Go Search Print
Home Bookmarks Red Hat, Inc. Red Hat Network Support Shop Products Training
OOSTethys
Search
Home FAQ Overview Documentation Downloads Development About Us
Log in Sign Up
You are here: Home → Downloads → SOS Cookbook (Perl / ASCII) → SOS Server CGI Cookbook
Navigation
Home
FAQ
Overview
Documentation
Downloads
SOS Cookbook (Perl / ASCII)
SOS Server CGI Cookbook
Perl Module Installaion Tips
How to upgrade from V 0.1
Version 0.3
Version 0.2
Version 0.1
SOS Cookbook (Perl / RDBMS)
SOS Cookbook (Java)
SOS Cookbook (Python / RDBMS)
Development
About Us
SOS Server CGI Cookbook
by Eric Bridger — last modified 2007-02-21 10:48
Steps for installing and seting up an SOS server.
File List
oostethys - the CGI script
sos_config.xml - local configuration file.
sosGetCapabilities.xml - template
sosGetObservation.xml - template
sosDescribeSystem.xml - template
observation text files
E.g. A01_SEA_WATER_SALINITY.TXT
All the files can be downloaded here
System Requirements
Perl 5
Web service capable of running CGI scripts
CGI perl module
XML::LibXML perl module
download and installation insructions Perl Module Installaion Tips
Salinity data to serve.
Done
36° 30° 52° 66° 37° 64°
SOS Update - Inbo...
[MyWHOI : Home -...]
SOS Server CGI C...
(4) Terminal
[MATLAB]
09:02 AM
Wed Apr 04

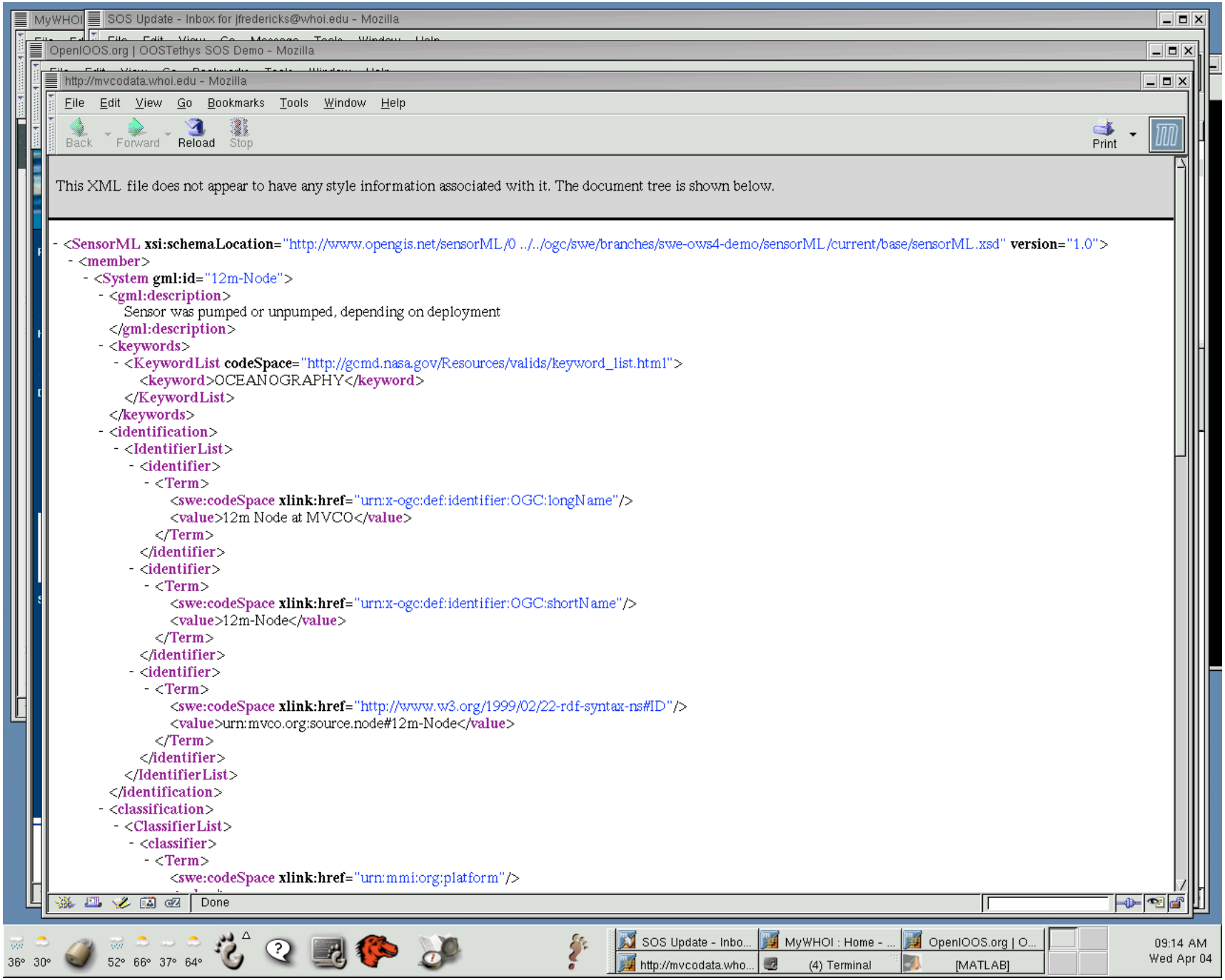

SOS Update - Inbox for jfredericks@whoi.edu - Mozilla
SOS Server CGI Cookbook ? OOSTethys - Mozilla
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop
http://www.oostethys.org/downloads/sos-cookbook-perl/sos-perl-cookbook/
Go Search Print
Home Bookmarks Red Hat, Inc. Red Hat Network Support Shop Products Training
Required Fields
Not all of the elements in the sos_config.xml file are required. Here is a list of the required elements.
OrganizationName
OrganizationAcronym
ContactPersonName
ContactPersonEmail
OrganizationURL
SOSURL
localPlatformName
platformURI
platformLongName
latitude
longitude
startTime
observedProperty
SOSDataFile
Creating Data Files
Each sensor and data type has a field called: SOSDataFile which should contain the full path of the file containing the data for that sensor and data type.
Note: Typically a Web Server will not allow writing to the cgi-bin directory, otherwise the files could be placed in the same directory as the oostethys_sos CGI script. In that case you do not need a full path for the observation file name. At GoMOOS we run a cron job which queries the GoMOOS database every hour and writes salinity data to a temporary data directory. We use the platform name followed by the data type with a txt extension but any name will work.
Format of the observation file
The observation file is made up of tuples with 5 fields separated by commas. The 5 fields are:
1. Time. This must be in an accepted ISO8601 format. E.g. 2006-09-27T10:00:00Z
2. Latitude: in decimal degress E.g. 43.7985 This in not degrees, minutes, seconds format.
3. Longitude: in decimal degrees E.g. -70.3459
4. Depth: in meters. E.g. 2
5. Datum value. E.g. 38.78
In the data file each record should be separated by a newline. There would be separate records for different times and depths but each file should represent observations for a single sensor and data type.
36° 30° 52° 66° 37° 64°
SOS Update - Inbo...
[MyWHOI : Home -...]
SOS Server CGI C...
(4) Terminal
[MATLAB]
09:03 AM
Wed Apr 04

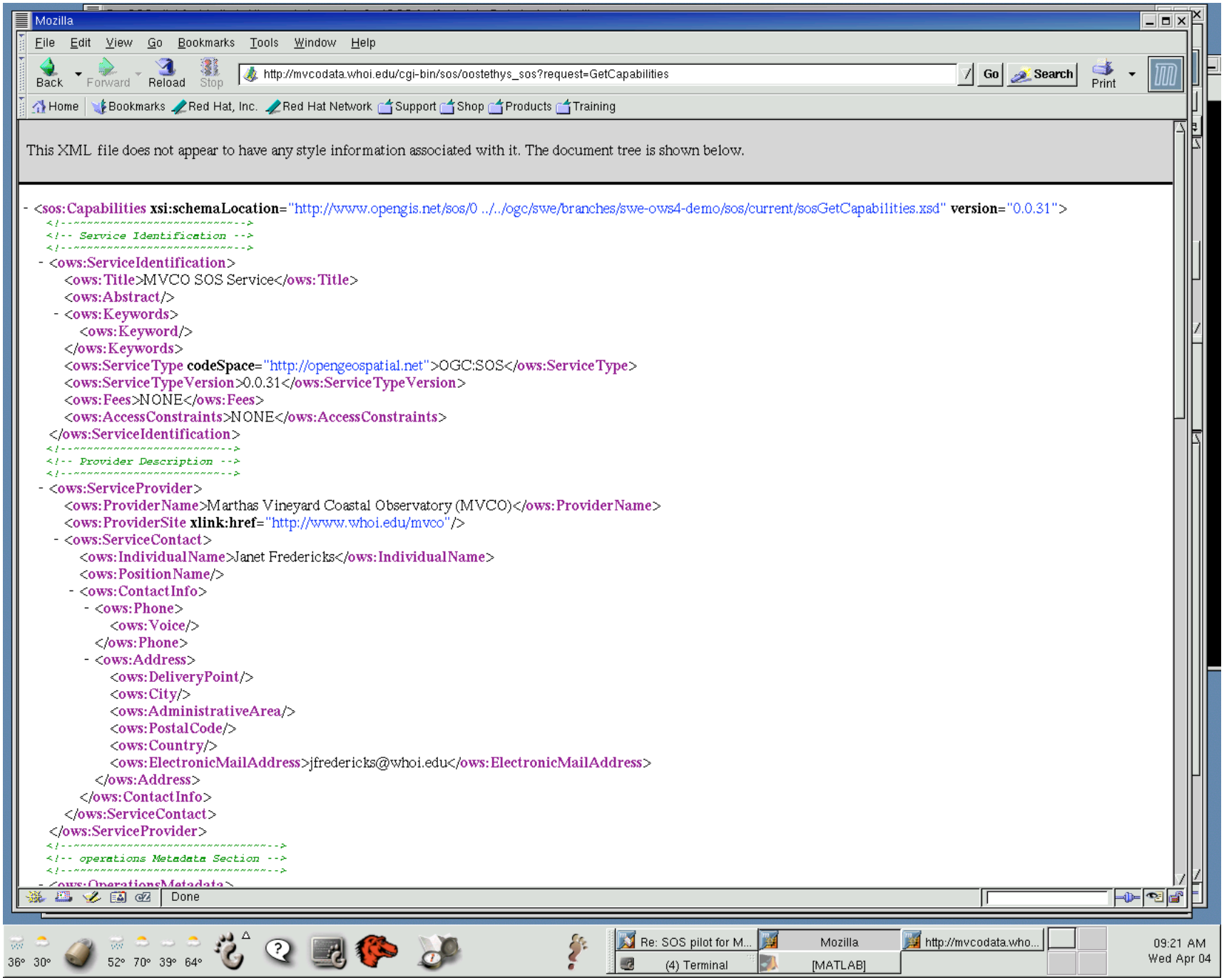

SOS Update - Inbox for jfredericks@whoi.edu - Mozilla
SOS Server CGI Cookbook ? OOSTethys - Mozilla
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop
http://www.oostethys.org/downloads/sos-cookbook-perl/sos-perl-cookbook/
Go Search Print
Home Bookmarks Red Hat, Inc. Red Hat Network Support Shop Products Training
Log in
Login Name
Password
Log in
Forgot your password?
New user?
News
PYTHON cookbook v 0.1
2007-02-24
JAVA toolkit v 0.1
2007-02-22
Welcome to OOSTethys
2007-01-29
Perl cookbook version 0.2 is available
2007-01-29
PERL cookbook v 0.3
2006-10-03
More news...
Installation Steps
1. Put the oostethys_sos CGI script into your cgi-bin directory and make sure it has execute permission. Typically this in the /cgi-bin/ directory of you Web server. At GoMOOS I installed it in a subdirectory /cgi-bin/sos/
2. Put the three XML template files in the same directory
1. sosGetCapabilities.xml
2. sosGetObservation.xml
3. sosDescribeSystem.xml
3. Put the sos_config.xml file in the same directory.
4. Edit the sos_config.xml . See Editing the sos_config.xml file below.
5. Create some data files. See Creating Data Files below.
Editing the sos_config.xml file
The sos_config.xml is a simple XML configuration file which contains the local information necessary to generate the SOS responses to the three SOS requests:
GetCapabilites
GetObservation
DescribeSensor
The DataProvider/Publisher section contains self-explanatory fields for information about your organization. A crucial element is the SOSURL section. This must contaion the URL for the cgi-bin SOS script, e.g. http://hostname/cgi-bin/oostethys_sos Unless you have installed the script in some other location or renamed the oostethys_sos script it should always look like this.
The next section is the DataProvider/ObservationList section. The ObservationList is made up a one or more Observation sections. Each Observation section contains information about the platform or sensor and a particular data type, in this version, salinity measurments in PSU's.
localPlatformName the identifier by which you refer to the plaform locally.
platformURI a urn prefix to the localPlatformName which assures that the name is unique across the internet. Typically this will urn:hostname:source.mooring#local platform name. E.g. at GoMOOS we have a localPlatformName of A01. The platformURI is urn:gomoos.org:source.morring#A01
z is the depth of the observation
latitude, longitude are required and should be in decimal degrees.
startTime, endTime should cover the period for which readings are available and should be in an ISO8601 format in UTC, e.g. 2006-06-28T10:00:00Z.
endTime may be left empty and implies that data is available up until now and into the future.
observedProperty In V0.1 this should always be sea_water_salinity. Support does exist in the script for sea_water_temperature.
SOSDataFile this should be the full path to a local file which contains data points for this sensor and datatype combination. It can be left blank, in which case some sample data within the script will be served. This can be useful for testing purposes. See Creating Data Files below.
If you have more than one platform / sensor the Observation section must be repeated for each one.
See the GoMOOS sample configuration file for an example which handles three platforms serving up salinity data. GoMOOS SOS Configuration XML Example
Required Fields
36° 30° 52° 66° 37° 64°
SOS Update - Inbo...
[MyWHOI : Home -...]
SOS Server CGI C...
(4) Terminal
[MATLAB]
09:03 AM
Wed Apr 04

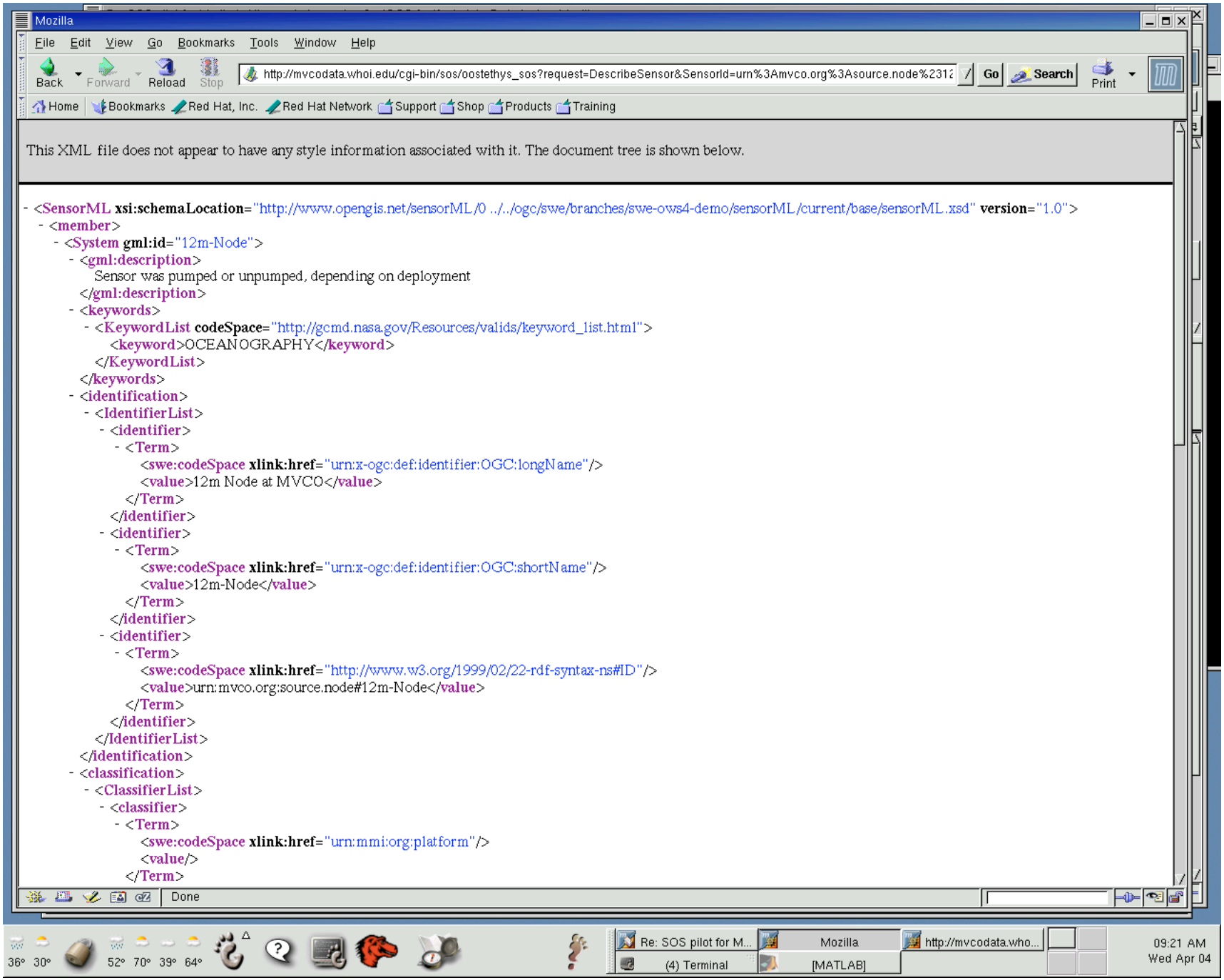

SOS Update - Inbox for jfredericks@whoi.edu - Mozilla
SOS Server CGI Cookbook ? OOSTethys - Mozilla
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop
http://www.oostethys.org/downloads/sos-cookbook-perl/sos-perl-cookbook/
Go Search Print
Home Bookmarks Red Hat, Inc. Red Hat Network Support Shop Products Training
Creating Data Files
Each sensor and data type has a field called: SOSDataFile which should contain the full path of the file containing the data for that sensor and data type.
Note: Typically a Web Server will not allow writing to the cgi-bin directory, otherwise the files could be placed in the same directory as the oostethys_sos CGI script. In that case you do not need a full path for the observation file name. At GoMOOS we run a cron job which queries the GoMOOS database every hour and writes salinity data to a temporary data directory. We use the platform name followed by the data type with a txt extension but any name will work.
Format of the observation file
The observation file is made up of tuples with 5 fields separated by commas. The 5 fields are:
1. Time. This must be in an accepted ISO8601 format. E.g. 2006-09-27T10:00:00Z
2. Latitude: in decimal degress E.g. 43.7985 This in not degrees, minutes, seconds format.
3. Longitude: in decimal degrees E.g. -70.3459
4. Depth: in meters. E.g. 2
5. Datum value. E.g. 38.78
In the data file each record should be separated by a newline. There would be separate records for different times and depths but each file should represent observations for a single sensor and data type.
Sample GoMOOS Data file
2006-09-28T15:00:00Z,42.5277,-70.5665,-1,31.28
2006-09-28T15:00:00Z,42.5277,-70.5665,-20,32.07
2006-09-28T15:00:00Z,42.5277,-70.5665,-50,32.46
This represents the latest salinity readings for Buoy A01 at three different depths.
At GoMOOS we create a new file each hour with the latest readings, but since each record has a time stamp on it, readings for different times could be contained within one file.
Note: You can test your service without creating any data text files by leaving the SOSDataFile element empty in the sos_config.xml file. In this case the script will return a sample data record.
Testing the SOS Service
The service is designed to be accessible in a web browser and will default to the GetCapabilities request.
E.g. http://www.gomoos.org/cgi-bin/sos/oostethys_sos
Sample requests:
GetCapabilities
http://www.gomoos.org/cgi-bin/sos/oostethys_sos?request=GetCapabilities
DescribeSensor
http://www.gomoos.org/cgi-bin/sos/oostethys_sos?request=DescribeSensor&SensorId=A01
36° 30° 52° 66° 37° 64°
SOS Update - Inbo...
[MyWHOI : Home -...]
SOS Server CGI C...
(4) Terminal
[MATLAB]
09:03 AM
Wed Apr 04

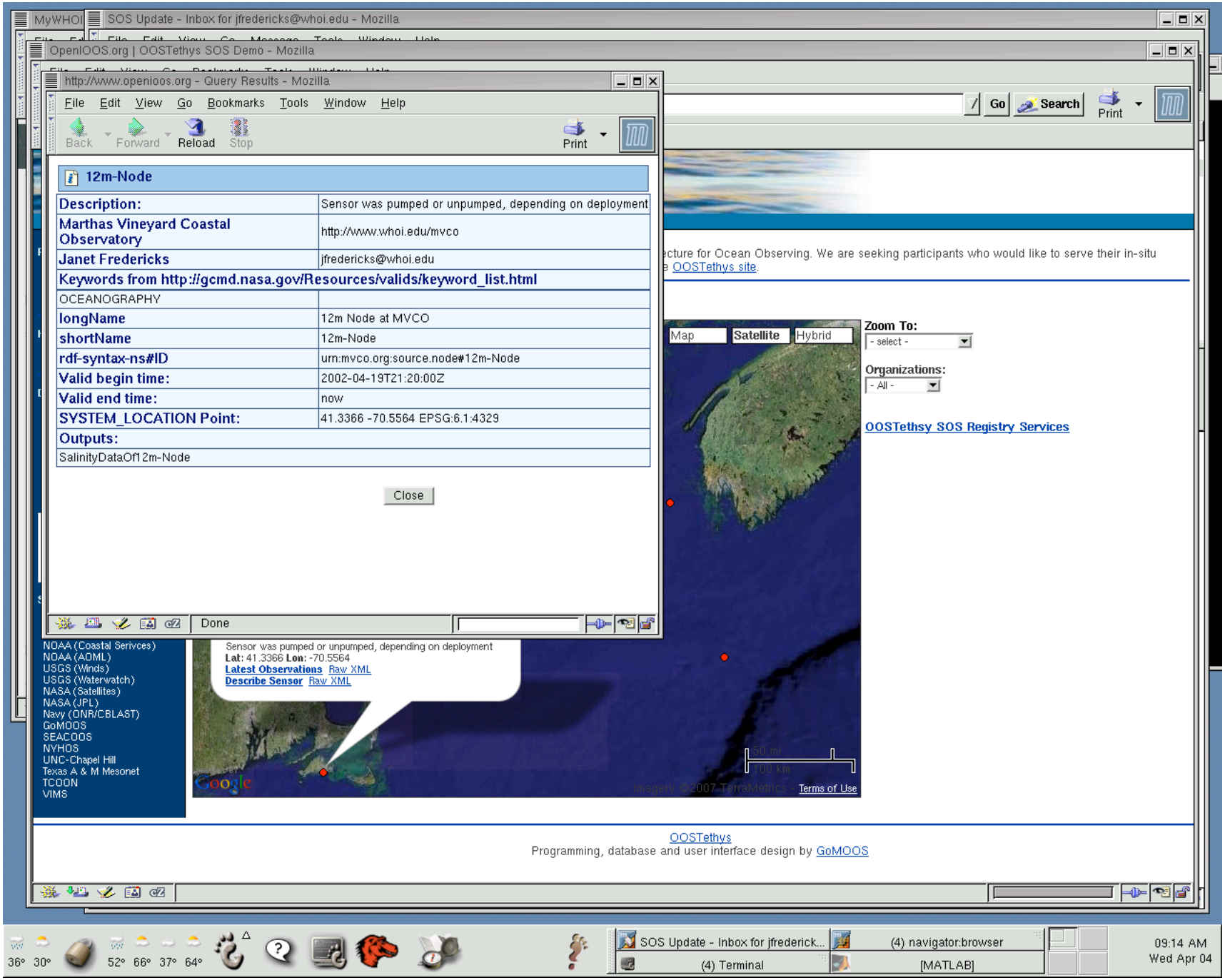

Mozilla Firefox
File Edit View Go Bookmarks Tools Help
http://mvcodata.whoi.edu/cgi-bin/sos/oostethys_sos?request=DescribeSensor&SensorId=urn%3Amvco.org%3Asource.node%2312
Getting Started Latest Headlines
http://m...12m-Node
VAST - Implementations
This XML file does not appear to have any style information associated with it. The document tree is shown below.
<SensorML xsi:schemaLocation="http://www.opengis.net/sensorML/0 ../../ogc/swe/branches/swe-ows4-demo/sensorML/current/base/sensorML.xsd" version="1.0">
<member>
<System gml:id="12m-Node">
<gml:description>
Sensor was pumped or unpumped, depending on deployment
</gml:description>
<keywords>
<KeywordList codeSpace="http://gcmd.nasa.gov/Resources/valids/keyword_list.html">
<keyword>OCEANOGRAPHY</keyword>
</KeywordList>
</keywords>
<identification>
<IdentifierList>
<identifier>
<Term>
<swe:codeSpace xlink:href="urn:x-ogc:defidentifier:OGC:longName"/>
<value>12m Node at MVCO</value>
</Term>
</identifier>
<identifier>
<Term>
<swe:codeSpace xlink:href="urn:x-ogc:defidentifier:OGC:shortName"/>
<value>12m-Node</value>
</Term>
</identifier>
<identifier>
<Term>
<swe:codeSpace xlink:href="http://www.w3.org/1999/02/22-rdf-syntax-ns#ID"/>
<value>urn:mvco.org:source.node#12m-Node</value>
</Term>
</identifier>
</IdentifierList>

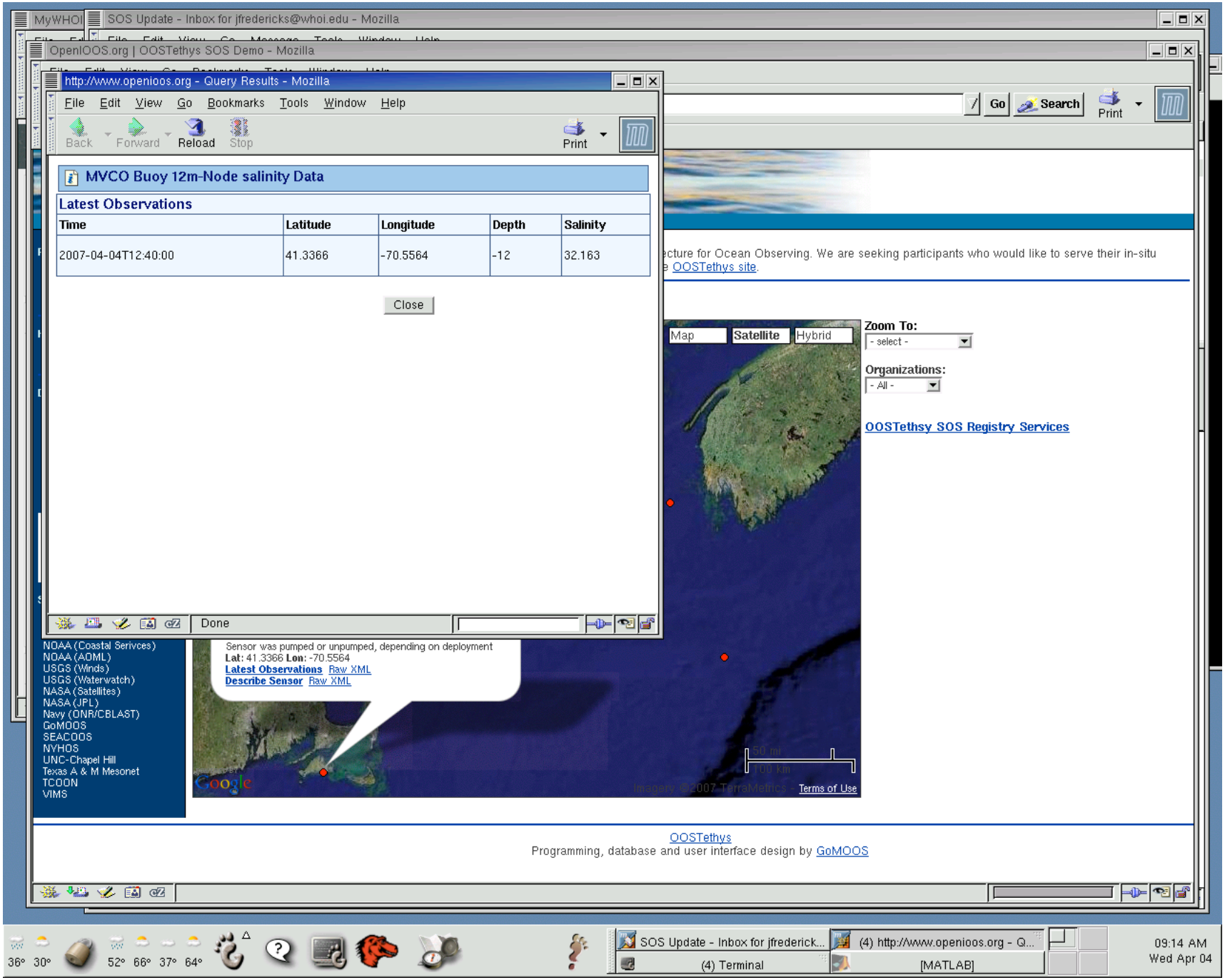

MyWHOI
SOS Update - Inbox for jfredericks@whoi.edu - Mozilla
OpenIOOS.org | OOSTethys SOS Demo - Mozilla
http://mvcodata.whoi.edu - Mozilla
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop
Print
This XML file does not appear to have any style information associated with it. The document tree is shown below.
- <om:Observation xsi:schemaLocation="http://www.opengis.net/om ../../../../../../ows4/schema0/swe/branches/swe-ows4-demo/om/current/commonObservation.xsd"
gml:id="SEA_WATER_SALINITY">
- <gml:description>
latest salinity measurement from MVCO buoy 12m-Node
</gml:description>
<gml:name>MVCO Buoy 12m-Node salinity Data</gml:name>
- <gml:location>
- <gml:Point gml:id="OBSERVATION_LOCATION" srsName="urn:x-ogc:def:crs:EPSG:6.1:4329">
<!-- use lat lon depth in deg deg m -->
<gml:coordinates>41.3366 -70.5564 -10</gml:coordinates>
</gml:Point>
</gml:location>
- <!--
Time of response- use TimePeriod for a series of data
-->
<!-- or TimeInstant for a single measurement -->
- <om:time>
- <gml:TimePeriod gml:id="DATA_TIME">
<gml:beginPosition>2007-04-04T12:40:00Z</gml:beginPosition>
<gml:endPosition>2007-04-04T12:40:00</gml:endPosition>
</gml:TimePeriod>
</om:time>
<!-- Procedure -->
<om:procedure xlink:href="urn:mvco.org:source.node#12m-Node"/>
<!-- the property measured -->
<om:observedProperty xlink:href="http://marinemetadata.org/cf#sea_water_salinity"/>
<!-- Feature Of Interest -->
<om:featureOfInterest xlink:href="urn:something:bodyOfWater"/>
<!-- Result Structure and Encoding -->
- <om:resultDefinition>
- <swe:DataBlockDefinition>
- <swe:components name="SalinityDataOf12m-Node">
- <swe:DataRecord>
- <swe:field name="time">
<swe:Time definition="urn:ogc:phenomenon:time:iso8601"/>
</swe:field>
- <swe:field name="latitude">
- <swe:Quantity definition="urn:ogc:phenomenon:latitude:wgs84">
<swe:uom code="deg"/>
Done
36° 30° 52° 66° 37° 64°
SOS Update - Inbo...
MyWHOI : Home - ...
OpenIOOS.org | O...
http://mvcodata.who...
(4) Terminal
[MATLAB]
09:14 AM
Wed Apr 04


SOS Update - Inbox for jfredericks@whoi.edu - Mozilla
OpenIOOS.org | OOSTethys SOS Demo - Mozilla
http://mvcodata.whoi.edu - Mozilla
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop
Print
This XML file does not appear to have any style information associated with it. The document tree is shown below.
- <SensorML xsi:schemaLocation="http://www.opengis.net/sensorML/0 ../../ogc/swe/branches/swe-ows4-demo/sensorML/current/base/sensorML.xsd" version="1.0">
- <member>
- <System gml:id="12m-Node">
- <gml:description>
Sensor was pumped or unpumped, depending on deployment
</gml:description>
- <keywords>
- <KeywordList codeSpace="http://gcmd.nasa.gov/Resources/valids/keyword_list.html">
<keyword>OCEANOGRAPHY</keyword>
</KeywordList>
</keywords>
- <identification>
- <IdentifierList>
- <identifier>
- <Term>
<swe:codeSpace xlink:href="urn:x-ogc:def:identifier:OGC:longName"/>
<value>12m Node at MVCO</value>
</Term>
</identifier>
- <identifier>
- <Term>
<swe:codeSpace xlink:href="urn:x-ogc:def:identifier:OGC:shortName"/>
<value>12m-Node</value>
</Term>
</identifier>
- <identifier>
- <Term>
<swe:codeSpace xlink:href="http://www.w3.org/1999/02/22-rdf-syntax-ns#ID"/>
<value>urn:mvco.org:source.node#12m-Node</value>
</Term>
</identifier>
</IdentifierList>
</identification>
- <classification>
- <ClassifierList>
- <classifier>
- <Term>
<swe:codeSpace xlink:href="urn:mmi:org:platform"/>
Done
SOS Update - Inbo...
MyWHOI : Home - ...
OpenIOOS.org | O...
http://mvcodata.who...
(4) Terminal
[MATLAB]
09:14 AM
Wed Apr 04


Mozilla
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop
http://mvcodata.whoi.edu/cgi-bin/sos/oostethys_sos?request=GetCapabilities
Go Search Print
Home Bookmarks Red Hat, Inc. Red Hat Network Support Shop Products Training
This XML file does not appear to have any style information associated with it. The document tree is shown below.
- <sos:Capabilities xsi:schemaLocation="http://www.opengis.net/sos/0 ../../ogc/swe/branches/swe-ows4-demo/sos/current/sosGetCapabilities.xsd" version="0.0.31">
<!-- Service Identification -->
- <ows:ServiceIdentification>
<ows:Title>MVCO SOS Service</ows:Title>
<ows:Abstract/>
- <ows:Keywords>
<ows:Keyword/>
</ows:Keywords>
<ows:ServiceType codeSpace="http://opengeospatial.net">OGC:SOS</ows:ServiceType>
<ows:ServiceTypeVersion>0.0.31</ows:ServiceTypeVersion>
<ows:Fees>NONE</ows:Fees>
<ows:AccessConstraints>NONE</ows:AccessConstraints>
</ows:ServiceIdentification>
<!-- Provider Description -->
- <ows:ServiceProvider>
<ows:ProviderName>Marthas Vineyard Coastal Observatory (MVCO)</ows:ProviderName>
<ows:ProviderSite xlink:href="http://www.whoi.edu/mvco"/>
- <ows:ServiceContact>
<ows:IndividualName>Janet Fredericks</ows:IndividualName>
<ows:PositionName/>
- <ows:ContactInfo>
- <ows:Phone>
<ows:Voice/>
</ows:Phone>
- <ows:Address>
<ows:DeliveryPoint/>
<ows:City/>
<ows:AdministrativeArea/>
<ows:PostalCode/>
<ows:Country/>
<ows:ElectronicMailAddress>jfredericks@whoi.edu</ows:ElectronicMailAddress>
</ows:Address>
</ows:ContactInfo>
</ows:ServiceContact>
</ows:ServiceProvider>
<!-- operations Metadata Section -->
Done
36° 30° 52° 70° 39° 64°
Re: SOS pilot for M...
Mozilla
http://mvcodata.who...
(4) Terminal
[MATLAB]
09:21 AM
Wed Apr 04


Mozilla
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop
http://mvcodata.whoi.edu/cgi-bin/sos/oostethys_sos?request=DescribeSensor&SensorId=urn%3Amvco.org%3Asource.node%2312
Go Search Print
Home Bookmarks Red Hat, Inc. Red Hat Network Support Shop Products Training
This XML file does not appear to have any style information associated with it. The document tree is shown below.
- <SensorML xsi:schemaLocation="http://www.opengis.net/sensorML/0 ../../ogc/swe/branches/swe-ows4-demo/sensorML/current/base/sensorML.xsd" version="1.0">
- <member>
- <System gml:id="12m-Node">
- <gml:description>
Sensor was pumped or unpumped, depending on deployment
</gml:description>
- <keywords>
- <KeywordList codeSpace="http://gcmd.nasa.gov/Resources/valids/keyword_list.html">
<keyword>OCEANOGRAPHY</keyword>
</KeywordList>
</keywords>
- <identification>
- <IdentifierList>
- <identifier>
- <Term>
<swe:codeSpace xlink:href="urn:x-ogc:def:identifier:OGC:longName"/>
<value>12m Node at MVCO</value>
</Term>
</identifier>
- <identifier>
- <Term>
<swe:codeSpace xlink:href="urn:x-ogc:def:identifier:OGC:shortName"/>
<value>12m-Node</value>
</Term>
</identifier>
- <identifier>
- <Term>
<swe:codeSpace xlink:href="http://www.w3.org/1999/02/22-rdf-syntax-ns#ID"/>
<value>urn:mvco.org:source.node#12m-Node</value>
</Term>
</identifier>
</IdentifierList>
</identification>
- <classification>
- <ClassifierList>
- <classifier>
- <Term>
<swe:codeSpace xlink:href="urn:mmi:org:platform"/>
<value/>
</Term>
Done
36° 30° 52° 70° 39° 64°
Re: SOS pilot for M...
Mozilla
http://mvcodata.who...
(4) Terminal
[MATLAB]
09:21 AM
Wed Apr 04


SOS Update - Inbox for jfredericks@whoi.edu - Mozilla
OpenIOOS.org | OOSTethys SOS Demo - Mozilla
http://www.openioos.org - Query Results - Mozilla
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop Print
12m-Node
Description: Sensor was pumped or unpumped, depending on deployment
Marthas Vineyard Coastal Observatory http://www.whoi.edu/mvco
Janet Fredericks jfredericks@whoi.edu
Keywords from http://gcmd.nasa.gov/Resources/valids/keyword_list.html
OCEANOGRAPHY
longName 12m Node at MVCO
shortName 12m-Node
rdf-syntax-ns#ID urn:mvco.org:source.node#12m-Node
Valid begin time: 2002-04-19T21:20:00Z
Valid end time: now
SYSTEM_LOCATION Point: 41.3366 -70.5564 EPSG:6.1:4329
Outputs:
SalinityDataOf12m-Node
Close
Done
Go Search Print
ecture for Ocean Observing. We are seeking participants who would like to serve their in-situ
e OOSTethys site.
Map Satellite Hybrid
Zoom To:
- select -
Organizations:
- All -
OOSTethsy SOS Registry Services
NOAA (Coastal Serivces)
NOAA (AOML)
USGS (Winds)
USGS (Waterwatch)
NASA (Satellites)
NASA (JPL)
Navy (ONR/CBLAST)
GoMOOS
SEACOOS
NYHOS
UNC-Chapel Hill
Texas A & M Mesonet
TCOON
VIMS
Sensor was pumped or unpumped, depending on deployment
Lat: 41.3366 Lon: -70.5564
Latest Observations Raw XML
Describe Sensor Raw XML
Google
Terms of Use
OOSTethys
Programming, database and user interface design by GoMOOS
36° 30° 52° 66° 37° 64°
SOS Update - Inbox for jfrederick...
(4) navigator:browser
(4) Terminal
[MATLAB]
09:14 AM
Wed Apr 04


SOS Update - Inbox for jfredericks@whoi.edu - Mozilla
OpenIOOS.org | OOSTethys SOS Demo - Mozilla
http://www.openioos.org - Query Results - Mozilla
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop Print
MVCO Buoy 12m-Node salinity Data
Latest Observations
Time
Latitude
Longitude
Depth
Salinity
2007-04-04T12:40:00
41.3366
-70.5564
-12
32.163
Close
Done
Go Search Print
ecture for Ocean Observing. We are seeking participants who would like to serve their in-situ
e OOSTethys site.
Map Satellite Hybrid
Zoom To:
- select -
Organizations:
- All -
OOSTethsy SOS Registry Services
NOAA (Coastal Serivces)
NOAA (AOML)
USGS (Winds)
USGS (Waterwatch)
NASA (Satellites)
NASA (JPL)
Navy (ONR/CBLAST)
GoMOOS
SEACOOS
NYHOS
UNC-Chapel Hill
Texas A & M Mesonet
TCOON
VIMS
Sensor was pumped or unpumped, depending on deployment
Lat: 41.3366 Lon: -70.5564
Latest Observations Raw XML
Describe Sensor Raw XML
Google
Terms of Use
OOSTethys
Programming, database and user interface design by GoMOOS
36° 30° 52° 66° 37° 64°
SOS Update - Inbox for jfrederick...
(4) http://www.openioos.org - Q...
(4) Terminal
[MATLAB]
09:14 AM
Wed Apr 04

Important Future Initiatives?

QA/QC into SensorML: data dictionaries; setting them up in SensorML profiles; providing tutorials for implementation and demonstrating by integration into oostethys_sos

http://q2o.whoi.edu Funded 3 yrs

Semantic Interoperability

- Domain experts define best practices and required vocabularities – working with IT experts to keep Interoperability goal in mind and guide in developing relationships for RDF definitions (Eg, http://qartod.org)
- Build buy-in within and across communities to promote interdisciplinary potential (Eg, http://marinemetadata.org)