



Outline

- ESONET WP2 overview
- Workplan
- Links
- DM on ANTARES



**“What few things must be the same
so that everything else can be
different”** Eliot Christian, lead of GEO task AR 06-03



ESONET WP2 Tasks

- Task a) sensors and scientific packages.
- Task b) quality assurance / quality control.
- Task c) underwater intervention.
- Task d) Sharing testing facilities
- Task e) Contribution to GEOSS standardisation and implementation activities



WP2: Workplan

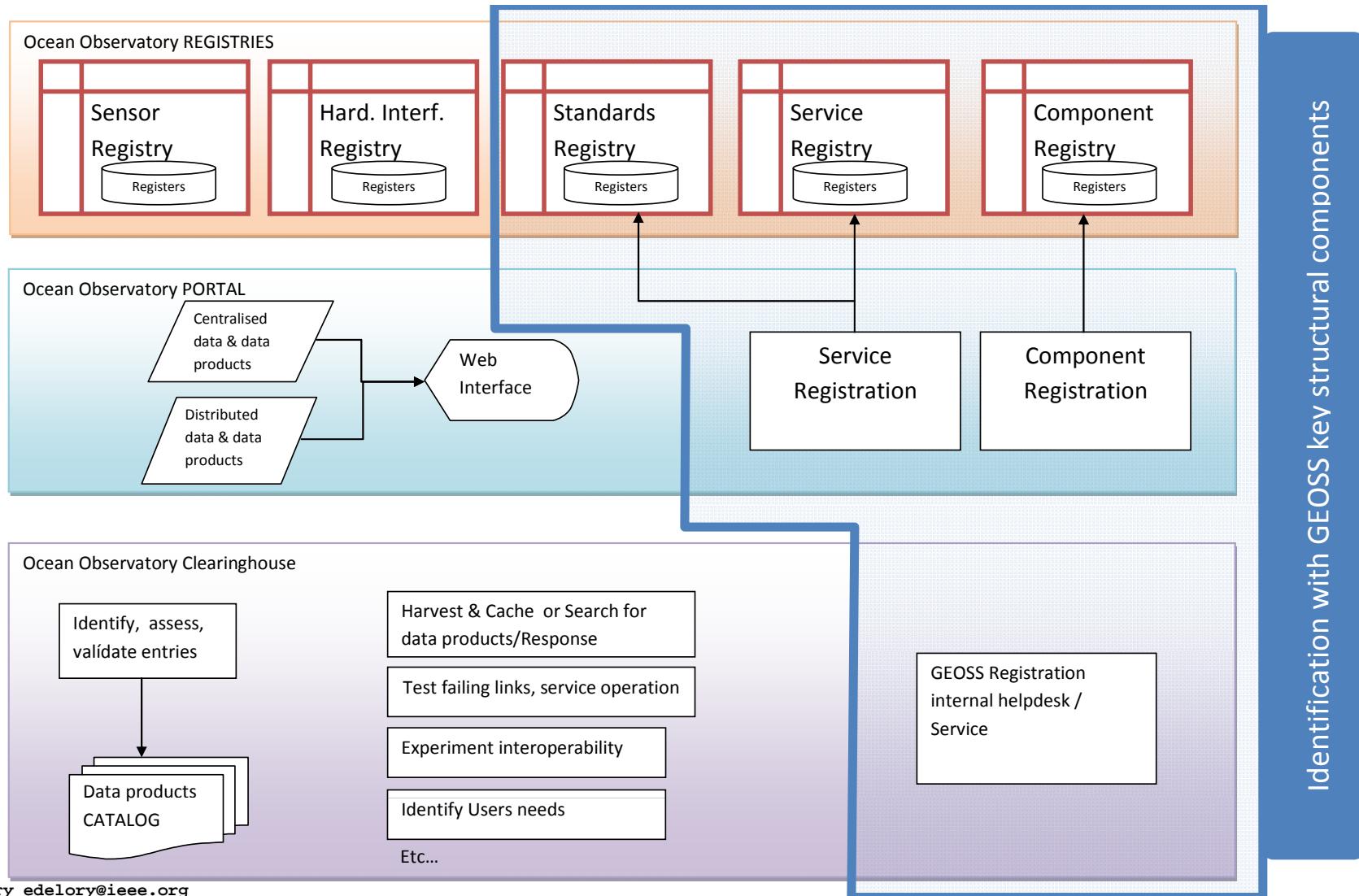
- Surveying ESONET data management systems and physical layers
- Match needs and existing standards in a pragmatic fashion
- Implement simple working prototypes (proof of concept)
- Deploy in ESONET Demonstration Missions



WP2 workplan

- Review of existing standardisation as well as systems engineering schemes.
- Review of subsea infrastructure interfaces
- Evaluation of practicability of existing standardisation concepts with involvement of European SMEs (Link to WP6).
- Organisation of a Best Practice workshop, used as training sessions for ESONET partners and associated SMEs (Link to all WPs).
- Detailed definition of a first implementation phase.
- Specifications for the demonstration cruises (Link to WP 4).
- Demonstration of the concept during field trials, using existing observatories/infrastructures and where possible in cooperation with international partners (MBARI, NEPTUNE, ARENA)

WP2 Links: Liaison and compliance with GEOSS



Links: Ontologies

- Promote interoperability and the use of marine controlled vocabularies
- Links with ontology clearinghouses such as MMI, ontology-related EU projects
- Through IEEE, presence on the GEO Ontology task



The screenshot shows the homepage of the GEOSS Best Practices Wiki. The top left features logos for IEEE and ICEO, with the text "Sponsored by". Below this are "log in" and "register" buttons. The top right displays the GEO logo and "GROUP ON EARTH OBSERVATIONS" next to a globe graphic. A navigation bar at the top includes "My Page", "Recent changes", "Tools", and "Help". Below the navigation is a toolbar with icons for "Edit page", "New page", "Print page", and "More". A "Table of content" link is also present. The main title "GEOSS Best Practices Wiki" is centered at the bottom, accompanied by a padlock icon.

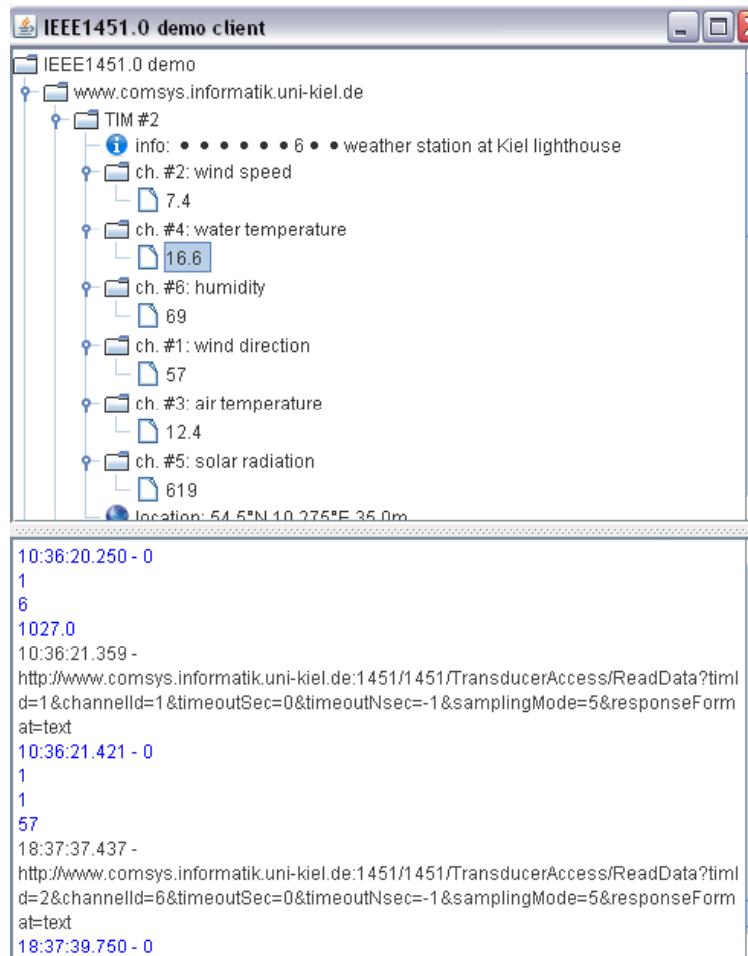


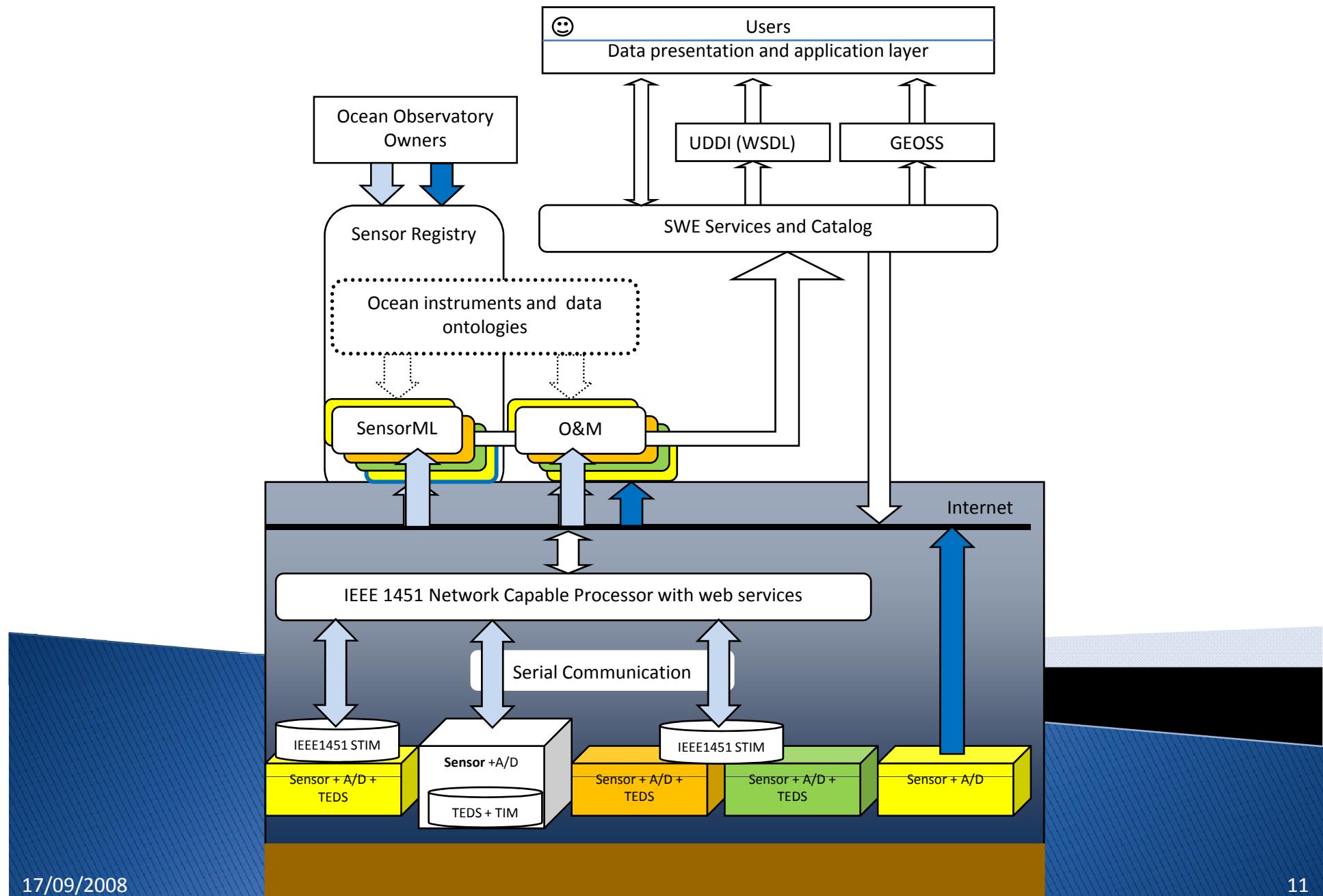
Demonstration on ANTARES ?

- Exploratory phase? Pre-study?
- Identify integrated solutions based on useful existing standards
- Sensor registration, standard encoding for data lineage
- Instrument control document, identification and implementation of data quality procedures



Smart sensors (IEEE)







Sensor Registration for observation lineage

The screenshot shows a dual-panel interface. The left panel is a web browser window titled "ESONET Sensor Registration - Mozilla Firefox" displaying the "Sensor Registry Entry Form". The form includes fields for "Component name*", "Your sensor location will fit here", "Sensor Type & Name Brand, type number, etc.", and various identification fields like "uuid", "short name", "long name", "manufacturer name", "model number", "serial number", and "device ID". A note at the bottom says "*If unavailable go to the ESONET Component Registry page and register a component." The right panel is a code editor showing an XML document structure. The XML code is as follows:

```
<?xml version="1.0"?>
<sml:member xlink:role="urn:ogc:def:role:OGC:detector">
<sml:System>
<!-->
    ||| SYSTEM SEARCH KEYWORDS
<!-->
    <sml:keywords>
        <sml:keyword>OCEANOGRAPHY</sml:keyword>
        <sml:keyword>MARINE SENSORS</sml:keyword>
        <sml:keyword>ACOUSTIC TRANSDUCERS</sml:keyword>
        <sml:keyword>HYDROPHONE</sml:keyword>
    </sml:keywords>
    <sml:keywords>
        <sml:keyword></sml:keyword>
    </sml:keywords>
<!-->
    ||| SYSTEM IDENTIFIERS
<!-->
    <sml:identification>
        <sml:identifierList>
            <sml:identifier name="UUID">
                <sml:Term definition="urn:ogc:def:identifier:OGC:uuid">
                    <sml:value>uid of the sensor(if it exists)</sml:value>
                </sml:Term>
            </sml:identifier>
            <sml:identifier name="Short Name">
                <sml:Term definition="urn:ogc:def:identifier:OGC:shortName">
                    <sml:value>short name</sml:value>
                </sml:Term>
            </sml:identifier>
        </sml:identifierList>
    </sml:identification>

```



Summary

- Identify needs and match with standards (Data/sensor lineage, Smart sensors)
- Evolving towards Sensor web enablement types of standards, encodings and web services (Sensor Alert, Sensor Planning, etc.)
- QA/QC
- Create standard instrument control documentation
- And...
- Define sensor standard calibration procedures
- Sensor time synchronization using the IEEE 1588 standard
- Etc.



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