

STANDARDISATION IN SEAFLOOR OBSERVATORIES  
Paris, 1<sup>st</sup> and 2<sup>nd</sup> February 2005

## Agenda (Version 2)

### First day - 1 February 2005

9 a.m to 12; 2 p.m to 5 p.m

#### **Experience and/or requirements**

*ION representative* - Presentation of ION

*Alan Chave* – WHOI – Observatory architecture with an emphasis on making it into a Grid (the LOOKING project)

*Duane Edgington and Daniel Davis* – MBARI - The ORION/NSF Workshop on Instrument Software Infrastructure at MBARI, September 13-15,2004

*Yuichi Shirasaki* - The University of Tokyo - Standardisation of System for VENUS Project in Japan

*Paolo Favali* – Ingv – Geostar, SN-1 and ORION experience

*Jérôme Blandin and Jean-François Rolin* – Ifremer - Interoperability in EU project Assem

*Christoph Barnes* – University of Victoria –Neptune Canada

*John Carr* – In2p3 – Antares Neutrino telescope

#### **Perspectives by large scale seafloor observatory networks**

*Roland Person* – Ifremer - Introduction

*I.G. Priede* – University of Aberdeen – ESONET

*Hitoshi Mikada* – Japanese observatories

## Second day – 2 February 2005

**9 a.m to 12; 2 p.m to 4 p.m Parallel sessions**

### **Work group 1 on Networking, data management and data dissemination**

*Alan Chave* – Whoi – An integrated approach to Ocean Observatory data

Acquisition/Management and Infrastructure Control using Web Services.

*Kenichi Asakawa*- Jamstec - Basic studies on Linux based interfaces and extension cables

*Jerome Blandin* – Ifremer – ASSEM experiment on CAN-CAN/OPEN

*Catherine Maillard* – Ifremer - Data management proposed in EU project ESONET

Continuation of this working group at international and european level.

### **Work group 2 on Technology, sensors interoperability and modular designs**

*Gary Waterworth* – Alcatel – Design and operation of cable networks

*Jean-François Rolin* – Ifremer – Scientific packages: development process for easy integration.

*Keith Shepherd* – ROPOS experience

*Jean-François Drogou* – Ifremer – Deployment and maintenance subsea intervention in Europe

*Christoph Waldman* – Marum – Sensor interoperability on relocatable platforms and vehicles - Examples from the EU-project EXOCET/D

*Mario Sedita* – Infn – Neutrino telescopes: a new way to look at the sky. Technical aspects.

*John Carr* – In2p3 - Antares modularity.

*John English* – Oceanworks International Corp.– Venus and Neptune involvements.

Continuation of this working group at international and european level.

**4 p.m. to 5 p.m.**

### **Plenary session**

Presentation of working groups and preliminary roadmap.

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## Background and intent

For a long time, deep sea investigation relied on autonomous bottom landers. Landers can vary in size from 200 kg weight to more than 2 tonnes for the heaviest scientific landers. Main geophysical institutes have a pool of OBS or OBH used during exploration cruise on medium period, from one week to some months. These instruments are sometime used for monitoring seismic activities of area of special interest. These kind of instrumentation fitted well with extensive exploration needs. But to day, new requirements appear. The scientist community want to understand in details phenomena outlined during exploration cruise, to elaborate a model to be able of forecast in the future and needs high sampling rate measurements. For this, it is necessary to deploy instrumentation at a precise location often for a long period.

So, a new mode of ocean science investigation using long-term seafloor observatories to obtain four dimensional data sets has appeared. Although this concept has been proposed for many years, the high level of investment required limited the number of project carried into effect. Only multidisciplinary programs, supported by a strong social requirement (for example in Japan) were funded. In US, the ORION initiative proposes to deploy coastal, regional and global observatories. In Europe, ESONET project investigates the feasibility of a network of long term multidisciplinary sea floor observatories at key provinces around the European margins, to 4000 m depth. In Japan, 9 observatories are already in operation and the ARENA project propose a network all around the country.

During different workshops and conference (ION at San Francisco, ORION in San Juan, ESONET in London for example), the need to organize an international discussion on recommendations and standards appears recurrently.

Main reasons for “standardisation” are:

- To allow the integration of different Observatories in operational networks;
- To share infrastructures such as deployment/recovery facilities or communication systems;
- To allow easily the integration of new/additional scientific packages;
- Recovery/dissemination/Interpretation of observatory data with common tool of analysis;
- ...

We are not working in area with a large number of customers. Less than 100 observatories will be operational in the next future. How to optimize the international effort? What can be standardised? What levels of standardisation?

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