

iSSP Meeting Minutes

@ Peking University

February 25-27, 2002

<Day 1, 25 February 2002>

1. Welcome and Introduction

Self introduce by all participants
Meeting logistics
Meeting agenda was approved.

2. Reports

iSAS Report (Eguchi)

Explain current iSAS (interim Science Advisory Structure) structure
Total of 78 active proposals are handled
Next proposal deadline 1 April 2002

iPC Report (Tatsumi)

Three proposal groupings, only give stars to exceptional proposals in a global grouping stage.
iSSP can use any method that they want to judge the site survey readiness of proposals.
Have been asked to rank Mission Specific Platform proposals by July for review at iPC in late summer.

iISSP/iESSP Report (Takahashi & Byrne)

CDP proposals would be multi-year programs that might be broken down into several legs, maybe on more than one platform.

New iSAS/IODP proposal evaluation forms have been developed for use by the SSEPs. There are a full proposal form and a pre-proposal form.

PPSP Report (Thompson)

Suggestion to integrate PPSP guidelines into the site selection guidelines from the very start. This lets the proponent make an initial trade off between safety and science at an early stage.

OD21 Report (Tatsumi)

Riser drilling vessel was launched. Her name is "CHI-KYU-U" (means the earth). A new core repository facility will be set up in Kochi Japan for the cores from the new riser ship. They will be stored for 10 years.

3. Discussion Item-1

SSP/ODP's procedure (Diebold)

John Diebold Reviewed SSP data review procedures. He started with the various target types that sites are classified into. He then reviewed the data type matrix which shows the data requirement for each target type. The tricky part of reviewing sites is determining which "recommended" data types are required in specific locations.

Another problem is that the site forms in the proposal list survey data that are available, but the watchdog must manually enter similar data onto the site review forms. When watchdogs change and a new one looks at a proposal that has already been reviewed, it is possible that the recommended data can be revised. This is good, but can upset the proponents.

Rather than a system of requirements and recommendations for a site, perhaps a unique set of required data should be assigned for each site. Then the requirements are very clear and less prone to change with a change in watchdog.

Riser Drilling Data Requirements (Enachescu)

- Due to complexity of proposals and uniqueness of every hole, Site Survey Data becomes an integral part of the Science Program within various proposals.
- Criteria developed for riserless drilling still applies – see “SSP/ODP Drilling environment (target) type template”
- Additionally, dense 2-D or better, 3-D high resolution seismic surveys are necessary: they will completely characterize the water bottom, sub-bottom and the shallow-medium subsurface (2sec), on minimum 5 by 5 km block around the hole (this allows for moving the hole if needed from safety or other reasons)
- High resolution multi-channel seismic can be acquired with one or multi-streamer short lay out 600m and high frequency air gun arrays 10-260 Hz signal
- Alternatively, if a long tow 3-D exists for the proposal, this can be specially processed for the upper 2 seconds, taking only the near offsets and keeping time variant gain to a minimum.
- ISSP/IPSP should be involved with the evaluation of the proposals from the initial stage of IESSP and take a proactive position depending on the target type and platform used = watchdog and coach.

Michael showed a set of high resolution 3D seismic data that showed the benefits of this type of survey. The track lines were about 12.5m and the water depth was 600-1000m. First it characterizes the water bottom at a high resolution and gives a very good 3D bathymetry. It shows reflectors to about 30cm thickness. He showed amplitude data which showed anomalies indicating hydrocarbons. These anomalies can be mapped and avoided.

This type of survey will have to be programmed into a proposal from the start because it is highly unlikely that such a dataset would be available to be submitted to the Data Bank. Also, some method of identifying country specific data requirements for territorial waters needs to be built into the review system earlier than the site clearance that TAMU does for scheduled legs.

Michael showed several images of horizons that were made from 3-D data which showed features and hazards that could only be seen from the 3-D data and were missed when looking at 2-D data.

Mike pointed out that industry survey data around dry holes will just sit unused and that this is an area where a joint IODP/Industry partnership could bear fruit. Perhaps industry could provide the data and IODP could do the drilling in the area.

Brief Review of Mission Specific Platform Proposals

By Okino, Neben, McIntosh, Enachescu and Droxler

Report on JEODI Consortium (Nogi)

Proposal types: various targets

Geographical: Areas where JR cannot drill due to ice

Topographical: Areas too shallow for J/R

Mechanical: Fractured and other types of materials that have been difficult for JR to recover.

The report is available from the ESF website: www.esf.org

<Day 2, 26 February 2002>

Enachescu gave a talk on the History of the short-offset method of 3-D surveying in the Gulf of Mexico.

- Short-offset method applied to exploration-level 3-D data
- Closely spaced 2-d survey at Ursa
- Development of Hi-Res 3-D acquisition system

Seismic boats often transit from one sea to another and you can hire them to do a survey with minimum of mob-demob costs. The system is relatively cheap and may be available to install on research ships.

This type of data allows use of a single data set for multiple purposes, it shows hazards to the vessel, improves the science, reduces rig delays, all results in lower overall cost.

150-200 Hz data, 6.25 m 15m cmp

The earlier the 3D data is collected in the cycle of the proposal the more it can be integrated into the science of the project, as well as for planning and hazards. It is also very useful for permitting in territorial waters.

Penetration can be up to 3 seconds depending on source and geology. Maximum useful penetration in the case shown is 1.7sec ~5000ft below mud level.

Use only near trace data

No binning or DMO

Retain amplitudes

Signal to noise ratio enhanced and data output regularized in migration process. Precise time corrections (use tidal statics)

Tidal corrections from tide tables

Several configurations:

6 streamers with single source, 100 m streamer length, 25-30 m streamer separation.

Dual streamer with dual source, 600 m streamer

Working rate \$25.5 k/day

Standby rate \$16.5k/day

Average production 60 vessel miles/day

Average mileage rate \$425/vessel mile

Average CMP rate: \$0.54/cmp

Discussion

The group agreed that 3-D seismic surveys were desired, but the question was how to pay for them. JAMSTEC will pay for safety surveys for the new ship, but could some science funds be merged with these funds to get a single survey that can meet both science and safety objectives.

Broke into three discussion groups to discuss SSP data requirements:

Group 1 (non-riser): Diebold, Korja, Qiu, Sohn, Toh

Group 2 (riser): Enachescu, Leroy, Naar, Park

Group 3 (MSP): Okino, Neben, McIntosh, Droxler, Nogi

Initial discussion of the matrix showed that people want digital data in the new program and some indication of the minimum quality of the data that will be accepted.

Annakaisa suggested that small samples of the data sets be submitted in advance to be checked for formatting problems. Then the large data sets can be handled more efficiently.

Make sample data sets that people can download so that they can see how it needs to be properly formatted. This should include digital data.

Results of the Non-riser subgroup

- SSP should be seen as playing a supportive role rather than as being obstructive.
- Change philosophical stance: proposals will not be formally categorized but rather each will be considered independently.

Proposed ISSP Review Procedure

- Pre-Proposal forwarded to chair from SSEPS
- ISSP chair assigns ~4 reviewers from ISSP
- Reviewers electronically access pre-proposal and make preliminary assessment of required data types (1-2 weeks)
- Information forwarded back to SSEPS, which is then included in letter to proponents.

The matrix is then available for consultation within the ISSP and during initial assessment.

Boiler plate text describing how site survey data is required to;

- Characterize the drilling environment
- Image the subsurface to at least the target depth
- Allow a site to be moved if necessary at sea
- Protect against drilling hazards
- Express that amount of site survey data required is proportional to the cost of the hole(s)

Acceptable types of data

- Databank maintain a website that contains archetypal examples of required data for each requisite category
- Website referenced in initial letter to proponents

Data quality and format

- Digital data only, but not necessarily raw data (e.g., SEG-y). Digital data includes images of analog records such as scanned seismic data.
- Databank must be able to construct a “project “ that is electronically accessible by panel members
- Data formats for all types must be worked out and specified

ISAS office would prefer having iSSP review the pre-proposals and then have the advice go to the proponent through the ISAS office.

Report of the Riser group

Came up with a revised matrix for riser sites. **Need to get a copy of the revised matrix.** Removed most of the optional requirements and made many types required data. Requires 3D data and gridded gravity, magnetics and bathymetry. Digital navigation required as well.

Recommends that riser drilling (and non-riser) surveys should be included in the cost of a leg. Surveys should be funded by the drilling program.

It was suggested that riser sites might go through a two stage development. They could first go through a review similar to the non-riser sites in order to verify that the location is the best place to answer the science questions in the proposal. Once a site has been validated then site survey money should be programmed into the cost of the leg and 3-D data should be collected.

3D reconnaissance data might still be required to justify the site for science purposes, but ultimately a smaller, higher resolution 3-D data set would be needed for safety and site characterization.

Report of the Mission specific platform group

Came up with 20 possible platforms from JEODI book. Can't come up with a matrix for each case. Will require a case by case assignment of requirements for msp proposals, but there have to be some guidelines to ensure consistent treatment:

New target types:

- A) Shallow Water/Shallow Target < 100m
- B) Shallow Water/Intermediate target 100-1000m
- C) Shallow Water/Deep Target (Riser) >1000m
- D) Deeper Water (beyond shelf)/Shallow Target

Andre Droxler showed a new matrix for these four target types

4. Discussion Item-2

IODP Data Bank

The panel discussed what was needed by the IODP Data Bank. Shin'ich presented an example of Japanese data repository that is currently operated by JNOC/Schlumberger. Panel basically had a consensus.

The JNOC/Schlumberger NDR appears to be a viable model, or basic framework, for the future IODP data bank. The ideal is to have the capability of accessing all future data and interpretations for riser, riserless, and MSP projects remotely accessible in digital form, and to have all shipboard data packages assembled in the form of "projects" as in the NDR. The problems of handling proprietary datasets and in importing existing, largely analog datasets can be handled within such a system, but the level of technical assistance required for this needs to be carefully assessed.

< Day 3, 27 February 2002 >

iSSP reviewed each consensus statement from the previous day and revised them as needed. They also made three motions to IPC regarding:

- 1) 3D seismic data for Riser drilling.
- 2) IODP Data Bank
- 3) ISSP recommends that the vacant position of co-chair will be seated by Dr. Andre Droxler.

The next meeting of the iSSP will be February 24-26 in or near Villefranche sur Mer, Nice.