

Executive Summary
IODP Engineering Development Panel
Twelfth Meeting
February 22-24, 2011
Grenoble, France

**EDP Consensus Statements,
Recommendations, and Action Items**

The EDP forwards the following consensus statements and action items to SAS panels, IODP-MI, or other entities as appropriate.

EDP Consensus 1102-01: Approval of Agenda

The EDP approves the agenda for EDP Meeting #12.

Routing: IODP-MI

Priority: Medium

EDP Consensus 1102-02: Approval of EDP Meeting #11 Minutes

The EDP approves the minutes from EDP Meeting #11.

Routing: IODP-MI

Priority: High

EDP Consensus 1102-03: EDP SPC Representative

The EDP designates Bill Ussler as the EDP representative at the next SPC meeting to be held March 28 - 31, 2011 in Edinburgh, UK.

Routing: IODP-MI, SPC

Priority: High

EDP Consensus 1102-04: DS³F Initiative

The EDP strongly endorses the ongoing efforts by Work Package 7 (WP 7), *Mission-specific sub-seafloor sampling* within the European Union coordination project - “*Deep Sea and Sub-Seaflor Frontier*” (DS³F). The EDP recognizes that this effort has the potential to contribute to needed and important engineering development for the new IODP, and that the source of funding would be outside that currently is contributed by ECORD to the IODP.

Routing: IODP-MI, STP, SPC, Lead Agencies, IWG+, SASEC

Priority: High

Background: The workshop “*Improving Technologies for Sub-Seaflor Sampling and Instrumentation*” was organized by WP 7 of the DS³F to occur concurrently with the EDP #12 meeting. At the joint meeting the afternoon of February 22, 2011, DS³F-WP7 participants discussed with the EDP plans for developing sub-seafloor sampling technologies within Europe, with special focus on the fields of seabed rock drills, high temperature and high pressure tools, borehole observatories, and long piston coring.

EDP Consensus 1102-05: IODP-MI Allocation of At-sea Engineering Testing Time to Active Engineering Development Projects

The EDP continues to strongly endorse allocation of at-sea engineering testing time to the SCIMPI and MDHDS engineering development projects prior to the end of the current drilling program. The EDP recommends that the specific testing sites should be determined by proponent consultation with the USIO. Additionally, EDP suggests that the proponents investigate if the two at-sea tests can be conducted on the same expedition.

Routing: IODP-MI, IOs, SPC, STP

Priority: High

Background: EDP Consensus statement 1007-23: IODP-MI Allocation of at-sea Engineering Testing Time to Active Engineering Development Projects

EDP Consensus 1102-06: Publication of Engineering Development Project Results

The EDP recommends that IODP-MI summarize the output of all the Engineering Development (ED) projects supported by funding from IODP-MI and publish this information so that scientists and engineers interested in these technological developments can build on this knowledge. This information should include rationale for the engineering development, the accomplishments, limitations of the technology, unresolved technical issues and future prospects for continued development of the technology.

Routing: IODP-MI, SPC, STP, SASEC

Priority: High

Background: A total of 5 (and 1 pending) ED proposals have been funded by the IODP. Reports of the EDs have been uploaded to the IODP website, however, the status and accomplishments of the EDs are not well documented. The EDP recognizes that it is of great importance to share information on accomplishments and technical problems identified throughout the engineering development project for the benefit of future planning of expeditions and engineering development.

EDP Consensus 1102-07: Technical Review of Draft Science Plan

The EDP restates its offer of providing a technical review of the draft new science plan.

Routing: IODP-MI, IWG+, SASEC, SPC, STP

Priority: High

EDP Consensus 1102-08: Blue Ribbon Committee

The EDP proposes that a knowledgeable and experienced expert in engineering is appointed to the “Blue Ribbon Committee” that will review the draft Science Plan.

Routing: IODP-MI, IWG+, SASEC, SPC, STP

Priority: High

EDP Consensus 1102-09: Improving Expedition Planning and Performance

Analysis of recent expeditions has revealed that some inexpensive hardware and drill bits could have been provided or leased that would have improved core recovery and the returns to the science community. The EDP recommends that knowledgeable and experienced outside technical experts in sampling/coring/drilling technology be involved in the pre-planning of expeditions. This will ensure that appropriate tools/bits/logging and drilling techniques not known to the IODP, as well as existing IODP hardware options/drilling parameters are identified. Upon identification of such items, the feasibility and costs can be explored to ensure that core quality, quantity and site characterization are maximized within the confines of the current vessels drilling equipment.

Routing: IODP-MI, IOs, STP, Lead Agencies, ORTF

Priority: High

Background: ORTF reports on recent expeditions (EXP 317 and EXP 325).

EDP Consensus 1102-10: Stress Measurement Tool

The EDP endorses further development of the wireline hydraulic testing and borehole imaging tool. Involvement of the technical advisory group suggested by the proponents will help to identify and overcome challenges encountered as the project progresses. The EDP recommends that IODP-MI approve funding from April 1, 2011 and distribution of a Phase 1 report by September 1, 2011 to the EDP. Comments from the EDP shall be used to determine Phase 2 funding.

Routing: IODP-MI, STP, SPC

Priority: High

EDP Consensus 1102-11: Additional Input to IODP Coring Report

The EDP recommends that IODP-MI request input from ESO and CDEX to the report on "IODP Drilling and Coring Technology: Past and Present". This report is currently only includes USIO tools; hence, it will not be complete without contributions from ESO and CDEX.

Routing: IODP-MI, IOs, SPC

Priority: Medium

Background: If complete, this report will be an important resource for proponents when developing an implementation plan for their drilling proposal.

EDP Consensus 1102-12: Funding Platform-Independent Engineering Development in the New Drilling Program

The EDP endorses the continued use of comingled funds by the CMO to support new Engineering Developments within the drilling program. The funding structure proposed for the new drilling program will make it even more difficult for IOs to initiate new engineering developments. A platform-independent source of funding is necessary for support of high-risk engineering developments to achieve new science goals and improve cost and time efficiencies.

Routing: IODP-MI, Lead Agencies, IWG+, SASEC, SPC
Priority: High

EDP Consensus 1102-13: Maintaining and Fostering Industry Involvement in the new IODP

A primary motivation for industry to participate in the EDP or in a future engineering panel is that their employees will have the opportunity to evaluate new technologies and instruments that may become important for their respective industry, e.g. hydrocarbon, geothermal, mining, and geotechnical industries. However, from an industrial point of view, it is becoming increasingly difficult to justify participation in such a panel because of the general decrease in emphasis and focus on development and application of new technologies and instruments within the current and especially the future drilling program. Industrial engagement is essential for the future drilling program because this presents an opportunity to share technology and engineering developments of mutual interest that may otherwise not occur. A new model for engineering in the future drilling program that explicitly includes industrial engagement is not only desirable but is necessary because engineering developments will play a more critical role in achieving the scientific targets enunciated for the next phase of drilling.

Routing: IODP-MI, Lead Agencies, IWG+, SASEC, SPC
Priority: High

EDP Action Item 1102-01: SASEC Request for Comments on Implementation of Engineering Development in the New Drilling Program

The EDP responds to the SASEC request for comment by sending letter to the SASEC sub-committee no later than April 1, 2011. The EDP proposes to send an EDP liaison to the June 2011 SASEC meeting to make a formal presentation of EDP recommendations. The EDP chairs will circulate drafts of the letter for internal review by the entire EDP.

Routing: SASEC, IWG+, IODP-MI, SPC
Priority: High

EDP Consensus 1102-14: Merger of the EDP and STP Roadmaps

The EDP supports STP Consensus Statement 1102-18. The EDP recognizes the benefit for the future program to have a long-term vision regarding technology development. The mechanism to continue this endeavor should be maintained into the new program.

Routing: STP, IODP-MI, IOs, SPC

Priority: Medium

Background: **STP Consensus Statement 1102-18: Joint activities on Technology Roadmaps of the EDP and STP towards program completion:** Both EDP and STP have developed technology roadmaps over the last five years. STP supports additional linkage between these two roadmaps to ensure continuity of this work into the new program and to facilitate a more public dissemination of the roadmaps' priorities. These documents need to be properly archived for future drilling programs. STP supports development of an integrated executive summary and publication of the major recommendations of the roadmaps. STP does not believe a full merger is necessary because it is not yet clear how the two complementary mandates of the EDP and STP will be handled in the new program

EDP Action Item 1102-02: Joint Working Group for TR merger

The EDP proposes that a joint working group is formed, consisting of the two chairs from each panel (STP and EDP), and with Saneatsu Saito as the coordinator. This group is charged with writing drafts of an integrated executive summary and a contribution to the Scientific Drilling journal, and together with IODP-MI, determining the correct place for archiving the two roadmaps and their summary.

The EDP chairs will circulate drafts of both documents (executive summary and the contribution to Scientific Drilling) for internal review by the entire EDP. This work should be completed by September 30, 2011.

Routing: STP, IODP-MI, IOs, SPC

Priority: Medium

EDP Consensus 1102-15: Conceptual Model for USIO Engineering Task Force

The EDP enthusiastically endorses the conceptual model proposed by the USIO for creating a platform-dependent Engineering Task Force.

Routing: IODP-MI, IOs, STP, SPC, Lead Agencies

Priority: High

EDP Consensus 1102-16: EDP #12 Meeting Host

The EDP thanks EDP member Mai-Linh Doan for organizing an excellent meeting venue.

Routing: IODP-MI, PMOs

Priority: High