

IODP Science Planning and Policy Oversight Committee

3rd Meeting, 11-12 December 2004

The Sir Francis Drake Hotel
San Francisco, California, U.S.A.

Science Planning and Policy Oversight Committee - SPPOC

Michael Bickle	Department of Earth Sciences, University of Cambridge, United Kingdom
Margaret Delaney	Ocean Sciences Department, University of California, Santa Cruz, USA
Yoshio Fukao	Institute for Research on Earth Evolution (IFREE), JAMSTEC, Japan
Susan Humphris	Woods Hole Oceanographic Institution, USA
Gaku Kimura	Department of Earth & Planetary Science, University of Tokyo, Japan
Hermann Kudrass	Bundesanstalt für Geowissenschaften und Rohstoffe, Germany
Roger Larson	Graduate School of Oceanography, University of Rhode Island, USA
Xavier Le Pichon	Chaire de Géodynamique, Collège de France, France
Larry Mayer	Center for Coastal and Ocean Mapping, University of New Hampshire, USA
Judith McKenzie	Departement Erdwissenschaften, ETH Zürich, Switzerland
Nicklas Pias (vice-chair)	College of Oceanic & Atmospheric Sciences, Oregon State University, USA
David Rea	Department of Geological Sciences, University of Michigan, USA
Kenji Shuto	Department of Geology, Niigata University, Japan
Eli Silver*	Earth Sciences Department, University of California, Santa Cruz, USA
Paul Stoffa ^a	Institute of Geophysics, University of Texas, USA
Kensaku Tamaki (chair)	Department of Geosystem Engineering, University of Tokyo, Japan
Yoshiyuki Tatsumi	Institute for Research on Earth Evolution (IFREE), JAMSTEC, Japan
Hidekazu Tokuyama	Ocean Research Institute, University of Tokyo, Japan
Kaoru Tsujii	Research Institute for Electronic Science, Hokkaido University, Japan

^aAlternate for Eli Silver.

*Unable to attend.

Liaisons, observers, and guests

Jamie Allan	National Science Foundation (NSF), USA
Keir Becker (SPC)	Rosenstiel School of Marine and Atmospheric Sciences, University of Miami, USA
Steve Bohlen	JOI Alliance, Joint Oceanographic Institutions, Inc. (JOI), USA
Mike Coffin (SPC)	Ocean Research Institute, University of Tokyo, Japan
Nobuhisa Eguchi	IODP Management International, Inc., Sapporo, Japan
Dan Evans	ECORD Science Operator, British Geological Survey, United Kingdom
Jeff Fox	JOI Alliance, Texas A&M University, USA
David Goldberg	JOI Alliance, Lamont Doherty Earth Observatory, USA
Benoit Ildefonse (SPC)	Laboratoire de Tectonophysique, ISTEEM, Université Montpellier II, France
Tom Janecek	IODP Management International, Inc., Washington, D.C., USA
Yoshihisa Kawamura	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Kenji Kimura	Ministry of Education, Culture, Sports, Science, and Technology (MEXT), Japan
Hajimu Kinoshita	Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Japan
Tsuyoshi Kogo	Ministry of Education, Culture, Sports, Science, and Technology (MEXT), Japan
Hans Christian Larsen	IODP Management International, Inc., Sapporo, Japan
Therese Lowe	IODP Management International, Inc., Washington, D.C., USA
Bruce Malfait	National Science Foundation (NSF), USA
Catherine Mevel	ECORD Managing Agency, Institut de Physique du Globe de Paris, France
Yoichiro Otsuka	IODP Management International, Inc., Washington, D.C., USA
Frank Rack	Joint Oceanographic Institutions, Inc. (JOI), USA
Saneatsu Saito	IODP Management International, Inc., Sapporo, Japan
Jeff Schuffert	IODP Management International, Inc., Sapporo, Japan
Laura Snow	National Science Foundation (NSF), USA
Kiyoshi Suyehiro	Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Japan
Asahiko Taira	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Manik Talwani	IODP Management International, Inc., Washington, D.C., USA
Yasuhisa Tanaka	Ministry of Education, Culture, Sports, Science, and Technology (MEXT), Japan
Pinxian Wang	Department of Marine Geology, Tongji University, China

IODP Science Planning and Policy Oversight Committee

3rd Meeting, 11-12 December 2004

The Sir Francis Drake Hotel
San Francisco, California, U.S.A.

Draft Executive Summary (v2.2)

1.4 Approve meeting agenda

SPPOC Consensus 0412-1: The SPPOC approves the revised agenda for its third meeting on 11-12 December 2004 in San Francisco, California, U.S.A.

1.5 Approve last meeting minutes

SPPOC Consensus 0412-2: The SPPOC approves the minutes for its second meeting on 8-9 July 2004 in Paris, France.

3. Program Management update by IODP-MI, Inc.

SPPOC Consensus 0412-3: The SPPOC favors in principle the geographic model presented by the IODP-MI for distributing IODP, ODP, and DSDP cores among the Bremen, Gulf Coast, and Kochi core repositories. The SPPOC requests the SPC to define the geographic boundaries of the plan by the June 2005 SPPOC meeting.

10. Approval FY2005 Program Plan Addendum

SPPOC Motion 0412-4: The SPPOC accepts the following revised science plan for non-riser drilling operations from late April 2005 to early January 2006.

<u>Exp.</u>	<u>Proposal</u>	<u>Short Title</u>	<u>Comments</u>
1.	573-Full2	Porcupine Basin Carbonate Mounds	as modified from 573-PRL5
2.	589-Full3	Gulf of Mexico Overpressures	as modified in 589-Add
3.	522-Full3	Superfast Spreading Crust, Part I	
4.	553-Full2	Cascadia Margin Hydrates	without A-CORKs
5.	621-Full	Monterey Bay Observatory	with pending modifications
6.	522-Full3	Superfast Spreading Crust, Part II	

Larson moved, Rea seconded; 16 in favor, 1 opposed (Le Pichon), 1 non-voting (McKenzie).

SPPOC Motion 0412-5: The SPPOC approves the FY2005 program plan addendum amended to incorporate the FY2005 portion of the revised science plan described in SPPOC Motion 0412-4.

Mayer moved, Humphris seconded; 16 in favor, 1 opposed (Le Pichon), 1 non-voting (McKenzie).

11. SAS Architecture: SPPOC Conclusions

SPPOC Motion 0412-6: The SPPOC accepts the oral report of its own *Ad Hoc* Committee 1 for evaluating and modifying the IODP Science Advisory Structure (SAS) and approves the changes to the SAS as recommended therein. These changes include:

- a) Science Planning Committee (SPC) - add scientific assessment of expeditions in cooperation with the IODP-MI to its mandate;

- b) Science Steering and Evaluation Panels (SSEPs) - merge the two existing SSEPs into one SSEP with twice the membership of a normal SAS panel and with the membership and leadership reflecting the IODP Initial Science Plan;
- c) Site Survey Panel (SSP) - nurturing and evaluating proposals in closer coordination with the SSEP;
- d) Environmental Protection and Safety Panel (EPSP) - increase environmental protection expertise among the membership, and initiate rotation of panel membership;
- e) Scientific Measurements Panel (SciMP) - transform into the Scientific Technology Panel (STP), adding proposal evaluation to its mandate and initiating direct communication with the IODP-MI;
- f) Technology Advice Panel (TAP) - transform into the Engineering Development Panel (EDP), adding engineering prioritization and proposal evaluation to its mandate and initiating direct communication with the IODP-MI;
- g) Industry Liaison Panel (ILP) - transform into the Industry-IODP Science Program Planning Group (IS-PPG), with a mandate of fostering joint academic-industry proposals.

In addition, each SAS panel except the SSEP will have a chair and vice-chair. The SPPOC and the SPC, in cooperation with the IODP-MI, will work together to implement the changes as soon as possible. The SPPOC expects to consider the revised SAS terms of reference for final approval at its June 2005 meeting.

Humphris moved, Larson seconded; 15 in favor, 2 absent (Kimura, Stoffa), 1 non-voting (McKenzie).

12. SPPOC Mandate: Implementation Strategy

SPPOC Consensus 0412-7: The SPPOC assigns observers to facilitate oversight of program activities for operations and technology. The observers, Humphris for operations and Silver for technology, should report on their efforts at the June 2005 SPPOC meeting.

SPPOC Consensus 0412-8: The SPPOC establishes a standing subcommittee for long-range planning. The subcommittee, composed initially of Delaney, Le Pichon, Tatsumi (chair), and Tsujii, should begin by identifying and prioritizing future IODP workshops and report on their efforts at the June 2005 SPPOC meeting.

SPPOC Consensus 0412-9: The SPPOC will develop a plan for evaluating the performance of the IODP-MI. The SPPOC chair and vice-chair should interact with the IODP-MI in determining the scope and procedure of such evaluations and report on their efforts at the June 2005 SPPOC meeting.

SPPOC Consensus 0412-10: The SPPOC establishes a working group for scientific program assessment. The working group, composed of Bickle, Fukao, and Rea (chair), should develop the procedures for conducting assessments of IODP projects and report on their efforts at the June 2005 SPPOC meeting.

SPPOC Consensus 0412-11: The SPPOC establishes a working group for determining how to interact with other international scientific research programs. The working group, composed of Mayer (chair), Shuto, and Wang (observer), should identify the programs of interest, define the role of liaisons, produce a list of potential liaisons, and report on their efforts at the June 2005 SPPOC meeting.

13.2.1 Sample, Data, and Obligations Policy

SPPOC Consensus 0412-12: The SPPOC accepts the proposed change to the IODP Sample, Data, and Obligations Policy requiring that scientific party members submit either a peer-reviewed paper or data report to fulfill their obligations. We understand that scientific party members may still submit progress reports or explanatory letters to the IODP-MI for consideration by program representatives, but such reports and letters will not fulfill any incurred obligations. The SPPOC prefers maintaining a flexible moratorium period for the early expeditions of multi-expedition projects involving a joint scientific party, as determined on a case-by-case basis by the SPC and the IODP-MI.

13.2.2 Publications Policy

SPPOC Consensus 0412-13: The SPPOC accepts the IODP-MI plans for implementing a fully electronic, Web-based, program publication encompassing scientific prospectuses, preliminary expedition results, expedition reports, data reports, synthesis papers, and continuously updated electronic bibliographies. The SPPOC accepts the principle that all post-expedition scientific papers should appear in the open literature, and we encourage the IODP-MI to pursue the idea of creating a new peer-reviewed, open-access, electronic journal for publishing papers from all kinds of scientific drilling and related studies.

13.2.4 HSE Policy

SPPOC Consensus 0412-14: The SPPOC accepts the IODP Health, Safety, and Environment (HSE) Policy as presented in SPC Consensus 0503-3 and forwards it to the IODP-MI and the implementing organizations.

17. Any other business

SPPOC Consensus 0412-15: The SPPOC thanks Manik Talwani for hosting this meeting and the joint reception with representatives of the International Continental Scientific Drilling Program (ICDP). We also thank Stephanie Murphy and Therese Lowe for their very successful efforts in arranging a comfortable meeting venue and providing a convivial atmosphere for the reception.

SPPOC Consensus 0412-16: The SPPOC acknowledges Eric Barron, Motoyoshi Oda, and Akira Nishimura, all of whom rotated off the committee since our previous meeting in July 2004. We thank these three distinguished scientists for their valuable contributions to the IODP and wish them well in their future endeavors.

IODP Science Planning and Policy Oversight Committee

3rd Meeting, 11-12 December 2004

**The Sir Francis Drake Hotel
San Francisco, California, U.S.A.**

Draft Minutes (v2.0)

Saturday

11 December

8:00-18:00

1. Introduction

1.1 Opening remarks and introduction of new vice chair

Kensaku Tamaki opened the meeting promptly at 8:00 and identified several important agenda items. He introduced Nick Piasias as the new SPPOC vice-chair, plus several new committee members from Japan and the U.S.

1.2 Introduction of participants

The committee members and other meeting participants introduced themselves individually.

1.3 Welcome and meeting logistics

Manik Talwani, the host, welcomed everyone to the meeting and explained the onsite logistics. He promoted the joint reception on Saturday evening co-hosted by the IODP and the International Continental Scientific Drilling Program (ICDP).

1.4 Approve meeting agenda

Kensaku Tamaki explained the overall strategy of the meeting. He proposed combining former Agendum 8 on technical assessment and task force reports with the IODP-MI report under Agendum 3 and renumbering the rest of the agenda accordingly. Tamaki noted that Delaney would report on her presentation at the International Conference on Paleoceanography as other business under Agendum 17. Piasias distributed sticky notes to the committee and other participants for proposing the tasks for the SPPOC mandate under Agendum 5. The committee offered no comments and approved the revised agenda by consensus.

SPPOC Consensus 0412-1: The SPPOC approves the revised agenda for its third meeting on 11-12 December 2004 in San Francisco, California, U.S.A.
--

1.5 Approve last meeting minutes

Kensaku Tamaki sought comments on the minutes from the previous SPPOC meeting. The committee offered no comments and approved the minutes by consensus.

SPPOC Consensus 0412-2: The SPPOC approves the minutes for its second meeting on 8-9 July 2004 in Paris, France.

2. Agency reports

2.1 NSF

Bruce Malfait reported that the U.S. Congress approved the national budget for FY2005 and the president signed it this week. He said that the NSF budget would remain flat from 2004 and include \$15 million for initiating the conversion of a drilling ship, with the rest of the initial \$40 million requested for ship conversion depending on the FY2006 budget. Malfait expected a decrease in research funding but said that the NSF can extend the operations of the *JOIDES Resolution* through FY2005, and they plan to terminate platform operations in February 2006. He noted that JOI issued a request for proposals for ship conversion in

October 2004 and expected to provide the vessel by mid to late 2007, depending on the FY2006 budget. Malfait announced that the *Maurice Ewing* will retire in early 2005 and the U.S. will convert a replacement vessel in 2005, thus precluding seismic surveys by either vessel in the interim. He added that the NSF also plans to replace the *Alvin*, has established a planning initiative for ocean observatories, and a new major facilities project starts funding in 2006.

Delaney asked to confirm that the IODP would have an eighteen-month hiatus in operating a non-riser vessel. Malfait said yes. Larson asked about the market for ships. Fox replied that the JOI Alliance had received expressions of interest for five or six ships.

2.2 MEXT

Yasuhisa Tanaka reported that MEXT has a new minister. He said that an internal committee for evaluating ocean drilling activities met in early August 2004 and discussed education, outreach, and science activities. Tanaka stated that Japan had communicated with government representatives from Australia and Taipei about joining the program. He noted that J-DESC launched a promotional campaign at Japanese universities and museums, and local television stations have shown great interest.

Tanaka reported that the lead agencies had concerns with the initial submission of the FY2005 program plan in terms of the strategy for implementing certain activities, budget presentation, and subcontracting activities, and they asked the IODP-MI to modify the plan to address those concerns. He stated that the lead agencies approved the planned budget of \$56 million, including \$20.6 million for SOCs, but with caveats concerning subcontractual relations, engineering development, and responsibilities for education and outreach. Tanaka noted that the IODP-MI responded well to most of the concerns in October 2004. He identified the principal remaining concern of identifying, evaluating, and prioritizing engineering projects, with input from the SAS as specified in the Memorandum of Cooperation and the IODP-MI contract. Tanaka said that the lead agencies had requested an FY2005 program plan addendum for extending operations of the *JOIDES Resolution* through September 2004, with a target budget of \$10 million in POCs and \$2 million in SOCs. He noted that the submitted plan had a higher budget than expected, but the NSF could support the increased POCs and additional SOCs if necessary. Tanaka announced the next SPPOC and IODP council meeting planned for mid June 2005 in Japan.

Tamaki remarked that the SPPOC must devise a new system for effectively reviewing program plans, and he recognized the importance of developing plans for engineering development. Delaney asked if the addendum presented the budget details in a clearer fashion. Janecek replied that the addendum included two budget tables, one for just the addendum and one for everything.

2.3 EMA

Catherine Mevel reported that the ECORD council recently confirmed that ECORD will contribute funding for two participation units, or \$7 million, in SOCs plus fund the POCs for the Tahiti expedition in FY2005. She stated that the ECORD Council chair rotates every six months, and Soeren Dürr stepped in as the new chair in October 2004. Mevel announced that ECORD now has fifteen member countries since Austria joined starting in FY2005 and Canada joined as a provisional member in FY2004, pending funding of a three-year proposal now under review. She noted that Belgium has submitted a proposal to join, and ECORD has engaged in membership talks with Greece, Russia, and Ireland, as well as with the Baltic countries and Poland. Mevel explained that ESSAC nominates the ECORD candidates for IODP expeditions and discusses expedition staffing with the IOs. She said that ESSAC also

has a budget to organize two workshops in FY2005, one on microbiology and the second topic still undecided. Mevel mentioned the EUROCORE proposal under development for organizing and funding site-survey cruises among ECORD scientists. She referred to EMA activities in providing promotional materials and organizing IODP exhibit booths for international conferences and also noted the plans for integrating the ECORD and ESSAC Web sites and standardizing them with other program-related sites.

2.4 MOST - China

Pinxian Wang noted that China benefited greatly from participating in the ODP, despite joining late, and had already begun participating actively in the IODP. He cited the new impulse for deep-sea studies in China as spurred by the mid- and long-term plan of science and technology development (2005-2020), interests in deep-sea oil, gas hydrates, and mineral resources, and the commissioning of new research vessels and submersibles. Wang identified the difficulties of the narrow scientific coverage among the participating community in China, the current lack of any drilling proposals submitted to the IODP, the separateness from other international programs such as IMAGES, InterRidge, and InterMARGINS, and the need to access new fields in the IODP, especially microbiology. He described deep-sea research as at a crossroads now in China, with the possibilities of either moving forward or drawing back in the next five years. Wang hoped to involve the technological community and find new means of international cooperation. He lamented the divergence of science communities worldwide and the exclusion from the IODP of countries with a small science community and inadequate infrastructure. He also identified the lack of short-term results as a problem for some Asian funding agencies and said that the political and cultural diversity among Asian countries precluded forming a viable consortium in the near future. Wang suggested forming a joint international deep-sea research system, providing more diverse accesses to IODP activities, and perhaps using the program to provide new science and technology education to developing countries.

Tamaki suggested that the SPPOC should discuss these previously unconsidered issues. Le Pichon wondered why China participates much more strongly in the ICDP than in the IODP. Wang referred to the lack of tradition and very small community for marine studies, though some universities had established new departments for marine science. Le Pichon suggested that efforts to engage a broader community beyond just marine scientists might impress the funding agencies. Delaney asked if China had started moving toward a more global scientific outlook instead of just local and regional studies. Wang said yes but it would take time. Kudrass recommended that other IODP members should try to find partners in China for specific research projects. Tokuyama asked if China had taken any steps to involve other Asian countries. Wang advocated the exchange of scientists.

3. Program Management update by IODP-MI, Inc.

Talwani reported on interactions between the IODP-MI and the SAS. He recognized the science community as the principle stakeholder of the program and the SAS as the principle source of advice. Talwani stated that the IODP-MI would ask the SAS for advice on various matters and would expect timely input. He said that the IODP-MI would also a) use task forces when necessary for implementing plans and advice, b) submit annual operations plans to the SPC for approval, c) submit annual program plans to the SPPOC for approval, and d) ask the SPPOC to review the IODP-MI performance on an annual basis. Talwani noted the difficulty of performing those tasks in a timely manner without budget guidance. He described the general responsibilities of specific personnel and said that the IODP-MI would gladly receive advice on its internal structure but ultimately must decide that on its own. Talwani explained the purpose of forming temporary task forces to conduct specific tasks. He

proposed considering OPCOM and REVCOM as task forces and identified others for education and outreach, publications, data management, and engineering. Talwani outlined the activities for education and outreach and cited the example of reaching out to scientists through the AGU exhibit booth and town meeting. He emphasized the importance of coordinating Web sites and improving internal communications and expected to introduce a new logo soon.

Mayer saw a limited role for the SPPOC, with only two tasks specified. Talwani replied that the SPPOC could still provide overall guidance in coordination with the SPC. Piasias did not hear anything that really limited the role of the SPPOC. Larson wondered if task force members would rotate more rapidly than in the SAS. Talwani answered that the operations task force would probably have more continuity than the others. Allan asked if the operations task force would still submit drilling schedules to the SPC for approval. Talwani said yes, of course.

Janecek described the function of expedition review task forces and said that they would consist of the president, the vice-president for operations, the co-chiefs, the IOs, SAS representatives, and others. He explained that the SAS would review scientific accomplishments over a longer timeframe. Janecek mentioned a series of recommendations from the first review meetings that call for improving communications between the IOs and scientists, defining the respective roles and responsibilities, and developing appropriate timelines and procedures. He also reviewed the balance of participants among program members for the first expeditions. Janecek advocated a geographic plan for distributing IODP cores among the three IODP core repositories. He presented two models for handling the DSDP and ODP legacy cores and noted that both models would involve redistributing some cores from the existing repositories. He also explained the benefits and risks of the two models and showed the estimated costs and timelines, with the first model costing \$1.1 million and the second costing \$2 million.

Larson asked whether the Scripps and Lamont-Doherty repositories would close no matter what. Janecek said yes. Humphris inquired if the redistribution plan affected when the cores would fill the available repository space. Kudrass questioned the large cost difference between the models. Janecek said that the facilities might eventually need to expand, but not for a while, and the higher cost of the second model included additional transportation for redistributing legacy cores from the Bremen and Gulf Coast repositories, plus involvement of the Kochi repository. Larsen added that the Kochi repository would have to begin operating one year earlier under the second model and would immediately fill two-thirds of its capacity with 80 km of inherited core. Piasias noted the additional minor disadvantage of not having access to certain cores during the transfer. He wondered what the program would lose by spending the extra funds on the more costly second model but found it hard to determine without a program plan. He also asked about input from the SPC. Janecek confirmed that the SPC had advocated the geographic model. Evans stated that it would help to know the plan by January 2005 when the Bremen repository starts transferring cores from the old to the new facility.

Tatsumi wondered who decided the exact boundaries of the geographic scheme for distributing cores. Janecek viewed the boundaries as just a guideline and hoped to maintain flexibility for deciding where to store particular cores based on historical distribution patterns and proposals. Kudrass asked who would decide on the core distribution models and when. Piasias believed that the SPPOC should provide advice on this matter because it entailed budget and policy issues; however, he noted that the SPPOC would not see it in the program

plan until next year, despite the immediate concerns regarding the Bremen repository. Larson suggested a need for more information on the balance and capacities. Janecek preferred separating the issues of the IODP model and redistributing the legacy cores. Piasias asked if the SPC report would address this issue. Coffin read SPC Consensus 0406-24 on core distribution and noted that the SPC did not have budget information at that time. Talwani requested uniform advice from the SPC and the SPPOC. Piasias replied that the SPPOC procedures remained in an undecided state of transition. Delaney suggested that the SPPOC should focus on the trade-offs and budget implications. Piasias proposed deciding the next day after hearing the program plan, and the committee agreed.

The committee returned to the core distribution issue the following afternoon. Larson favored the second model if affordable. Tokuyama asked if it applied to the old cores or new cores. Piasias reiterated that the SPPOC should decide the two questions separately. Tatsumi agreed with the principle of geographic distribution but hoped to see the boundary between the eastern and western Pacific discussed elsewhere. Humphris worried about the costs and priorities given the current difficulties of implementing the proposed science plan with existing funds. Piasias suggested delaying the core redistribution for one year to reduce the costs, even if it would involve limiting the access to certain cores for a period of time. Le Pichon preferred doing it correctly from the start.

SPPOC Consensus 0412-3: The SPPOC favors in principle the geographic model presented by the IODP-MI for distributing IODP, ODP, and DSDP cores among the Bremen, Gulf Coast, and Kochi core repositories. The SPPOC requests the SPC to define the geographic boundaries of the plan by the June 2005 SPPOC meeting.

Larsen reported that the IODP-MI Sapporo office has a five-year contract with AESTO for personnel and infrastructure support. He anticipated four new staff joining the office in FY2005 and showed the projected staff structure, including a new science coordinator who would have a strong link to site-survey data. Larsen outlined the process for establishing the new site-survey data bank, with a recently published request for proposals, letters of interest due in early January 2005, full proposals due in early February 2005, and a working data bank in place by June 2005. He mentioned the publications task force, initiated in September 2004 with IO involvement, and said that the online program publication would constitute the archive, the NSF waived its request for printed copies, and the successor to the *JOIDES Journal* would involve the International Continental Scientific Drilling Program (ICDP). Larsen said that he also consulted with the IOs on data management issues and requested vision statements and generic plans from them by mid January 2005. He commented on the likely difficulty of coordinating the three different data management systems now in place or under development by the IOs and noted that he had formed a data management coordination group that might eventually become a task force.

Tsujii asked who would have access to the online site-survey data bank. Larsen described it as open access, except perhaps for certain proprietary data. Coffin suggested that if drilling proposals remain confidential, then the associated data packages should also remain confidential. Allan advised defining whether the term proprietary referred to the program or to commercial interests. Mayer asked if the new data bank would have responsibility for data migration. Larsen answered that the current data bank would handle it under a separate contract.

Humphris stressed the importance of integrating the Web portal to provide a seamless face to the public for education and outreach, including publications. Tatsumi asked about national versus international responsibilities for education and outreach, especially in terms of

presenting materials in different languages. Talwani responded that the task forces would address those issues.

Le Pichon asserted that the committee should receive written reports instead of spending so much time listening to reports at the meeting. Piasias noted the ongoing work on determining how to receive requests for advice rather than reports. Larsen recounted an unsuccessful effort to obtain all written reports for the agenda book of this meeting. Talwani suggested that SPPOC members should review the reports in detail offline and report to the committee.

4. Implementing Organization Reports

4.1 JOI Alliance

Frank Rack briefly summarized the FY2004-2005 operations of the *JOIDES Resolution*. He noted the delayed arrival of the ship in St. John's, Newfoundland because of a delayed passage through the Panama Canal and hurricane avoidance measures. He also outlined several education and outreach activities, such as the teacher-at-sea initiative, the laboratory brief series, a minority fellowship program, and conference promotions. Rack reported on the process for developing and approving the FY2005 program plan addendum. He noted that the estimated costs of extending the drilling schedule currently exceeded the available funding, and the USIO would work with the NSF to finalize the budget. Rack identified some of the difficulties involved with the FY2006 scheduling options, such as competing weather windows, complex operations, long lead-times for required hardware that would add procurement costs in FY2005, and finishing near a U.S. port for demobilizing the ship. He reported that the JOI Alliance hoped to negotiate a nine-year contract with the IODP-MI by April 2005. Rack listed eight recommendations from the USIO to OPCOM on scheduling expeditions with well-defined products, maximizing results through resource management, and providing adequate lead-time for complex projects. He also briefly listed various topics discussed at the IO meetings in 2004.

Tamaki asked why the program plan exceeded the budget guidance. Rack attributed the difference to the lack of enough lead-time, fuel costs, and other factors. Delaney asked if the SPPOC needed to advise the IODP-MI on the budget difference. Tanaka preferred discussing the program plan later under Agendum 9. Piasias asked if the USIO presented its recommendations to the SPC. Coffin said yes, the SPC had received the recommendations.

4.2 CDEX

Yoshi Kawamura reported on the reorganization of JAMSTEC and the accompanying relocation of CDEX to Yokohama. He outlined the *Chikyu* construction and operation schedule showing the expected delivery of the ship to JAMSTEC for shakedown and training cruises beginning in April 2005 and the projected beginning of international IODP operations in October 2006. He also described the facilities at the Kochi Core Center and downplayed any concerns about core storage capacity. Kawamura briefly outlined the basic characteristics of the SIO₇ database system for handling core, log, and seismic data through J-CORES and DEXIS applications. He listed the basic agenda of the NanTroSEIZE project scoping group meeting held at JAMSTEC in October 2004 and identified the resulting concerns on developing observatory systems for deep water. Kawamura mentioned several education and outreach activities, including the appearance of the *Chikyu* in a popular comic book series with over one million copies sold.

Malfait asked about the plans for developing deeper riser drilling capabilities. Kawamura replied that CDEX had begun the initial internal feasibility studies but had not yet developed a clear picture of the overall development time.

4.3 ESO

Dan Evans reported that the Arctic Coring Expedition 302 (ACEX) spent twenty-four days on site, despite experiencing more extensive than expected ice cover of over 90%. He stated that the expedition has already yielded interesting scientific results after succeeding in penetrating to a maximum depth of 428 m below the seafloor, just through the targeted unconformity in the sedimentary sequence covering the Lomonosov Ridge. Evans asserted that the ACEX experience would benefit the planning of future MSP expeditions. He noted that the EMA has provisionally approved the POCs budget for the Tahiti Sea Level expedition, and the IODP-MI and funding agencies had agreed on the SOCs budget. He added that the ESO would soon tender the contracts and had already prepared a provisional prospectus and submitted a measurements plan to the SciMP for review. Evans also referred to the ancillary project (650-APL) still under consideration for the Tahiti expedition, pending outside funding.

Kudrass asked about the planned drilling schedule for the Tahiti expedition. Evans expected it to occur sometime in the window of June to August 2005, depending on the availability of ships.

5. SPPOC Mandate: Defining Tasks for SPPOC

Kensaku Tamaki and Nick Piasias organized and reviewed the general tasks for the SPPOC that the participants had submitted in writing. Piasias proposed dividing into subcommittees or working groups to consider the various tasks. He identified the basic categories of long-range planning, approval of program plans, oversight of the SAS, oversight of engineering development, assessment of programmatic goals and achievements, assessment of the IODP-MI, interacting with other international programs and industry, engaging other communities from national and scientific perspectives, facilitating education and outreach, and communicating within the IODP.

Humphris thought that the SPPOC should focus more on assessing rather than facilitating outreach activities. Mayer also wanted to focus on oversight aspects and identified the fundamental task of defining and assessing long-range plans and achievements. Tokuyama wondered if long-range planning included engineering development. Le Pichon saw difficulties with undertaking permanent oversight. Bickle believed that the SPPOC should strive to maximize scientific output and must determine how to deliver advice to the IODP-MI. Humphris proposed that subcommittees could handle the short-term tasks, whereas long-term planning required full committee involvement. Larson suggested that the SPPOC should ensure the integrated character of the program. Malfait stated that the IODP-MI has the central role of integrating the program.

After a one-hour lunch break, Piasias presented the list of tasks compiled earlier and assigned the SPPOC members among five working groups for determining how to implement those tasks. Tatsumi asked if everyone agreed on the proposed set of tasks. Le Pichon saw no necessity to approve the list of tasks now because the working groups would likely recommend changes. Humphris suggested focusing on the main categories and not necessarily each specific task. Piasias proposed having the working groups meet the next morning at 8:00 and delay the start of the full meeting until 9:00. The committee agreed.

6. SAS *ad hoc* committee report presentation

Judy McKenzie presented the findings of the *ad hoc* committee for evaluating and modifying the SAS. She summarized the main purposes of changing the SAS to utilize the full scientific and engineering expertise of SAS members and changing how the SAS interacts with the IODP-MI to improve the timeliness and efficiency of the advisory process. Among the changes, McKenzie recommended a) combining the two SSEPs into a single, double-sized

panel, with leadership and membership reflecting the Initial Science Plan; b) utilizing the scientific expertise of the SSP in evaluating and nurturing proposals, in closer coordination with the SSEP; c) increasing the environmental expertise of the EPSP membership, initiating a three-year term for EPSP members, and adding an EPSP vice-chair; d) transforming the SciMP into the Scientific Technology Panel (STP) with a revised mandate that includes providing short-term advice on proposals and allows for communicating directly with the IODP-MI; e) transforming the TAP into the Engineering Development Panel (EDP) with a revised mandate that includes providing short term advice on proposals and prioritizing engineering developments and allows for communicating directly with the IODP-MI; and f) redefining the ILP as a program planning group for developing scientific proposals that combine industry and IODP objectives.

McKenzie cited the SAS functions of proposal evaluation, expedition assessment, and long-term assessment and planning. She queried the role of the SPPOC and showed a revised structure diagram listing the SPPOC tasks of program plan approval, long-range planning, program assessment, review of IODP-MI performance, and scientific outreach. McKenzie identified other issues such as how to foster proposal development for underrepresented initiatives, how to link to other international programs, how to engage communities not traditionally involved in marine science research, and how to integrate observatory science into the program. She also defined the terms liaison and observer with regard to participating in SAS meetings, diagrammed the expertise and gender balance among SAS panels and committees, and assigned responsibility to the SPPOC or the SPC for several specific challenges related to the activity of the SAS.

7. Discuss SAS *ad hoc* committee report

Kensaku Tamaki opened the discussion of the *ad hoc* committee report on evaluating and modifying the SAS. Humphris noted that the two SSEPs already meet jointly and wondered if combining them into one panel would increase the workload of the leadership. Coffin explained that the SSEPs essentially work now as a single panel, with the co-chairs sharing and alternating duties for each meeting. Larson thought that the change to the SSEPs sounded like merely a matter of nomenclature. McKenzie believed that it would give better exposure to the deep biosphere theme of the Initial Science Plan and provide more flexibility for creating working groups.

Humphris asked how the new industry PPG would differ from the ILP. McKenzie indicated that the PPG would focus on proposal development and could perhaps have a more flexible balance of membership. Le Pichon stated that he would object to the new advisory structure if it included a mandate for the industry PPG to write proposals without requiring industry to provide funding because he opposed the idea of using public money to support industry projects. Piasias noted the fundamental difference between attracting industry scientists to participate in developing proposals versus accepting proposals from industry companies for drilling. Coffin cited one example of an existing proposal with most of the proponents from industry. Talwani believed in the possibility of having collaborative projects that would bring in funding.

Allan noted that the SciMP already has an extremely broad mandate, including data management and publications, and he expressed concern about broadening it even further with proposal reviews for the new panel. He worried that a panel with so many items in its mandate would have trouble managing the agenda for its meetings. Coffin identified the major change as enabling the IODP-MI to make requests and receive advice directly from the STP without passing through the SPC and the SPPOC.

Tokuyama asked if the number of members would change for any of the new panels. McKenzie responded that all panels would preserve the current membership balance as specified in the Memorandum of Cooperation and Memoranda of Participation, but the industry PPG could have a more flexible membership. Delaney noted the change of imposing term limits on the EPSP membership. Humphris suggested that the IODP could integrate better with other programs through exchanging liaisons at the panel level instead of with the SPPOC.

Janecek asked whether the *ad hoc* committee considered the timing of SAS meetings in terms of providing enough lead-time for developing program plans. Coffin replied that the *ad hoc* committee did not address the two-year planning schedule but recognized a desire in the community to reduce the amount of time between submitting a proposal and seeing it implemented. Kudrass wondered if the proposed structure accounted for the long-term planning associated with CDPs. Coffin explained that the SSEPs decide when to ask the SPC to designate a set of proposals as a CDP and thus allow the scoping process to begin.

Tamaki asked when the SPPOC would receive the revised SAS terms of reference for approval. Piasias proposed approving the principles the next day and then worrying later about the details of the terms of reference. Tatsumi asked when the new structure would start working if the SPPOC approved it at this meeting. McKenzie thought it could happen in two months, after the next scheduled ILP meeting. Kimura noted the need for advice on engineering development in time for the FY2006 program plan. Piasias suggested that the SPC would have to ask the EDP to provide that advice. Talwani stressed the urgency of the SAS providing engineering advice so that the IODP-MI could create an engineering task force in FY2005. Tamaki asked McKenzie to consider the timing issues in drafting a recommendation for approval the next day.

8. Introduction to FY2005 Program Plan Addendum & FY2006 Science Plan

Mike Coffin summarized the science of the FY2005 program plan addendum. He described the scientific objectives of the three expeditions planned from Proposals 573-PRL5 Porcupine Basin Carbonate Mounds, 589-Add Gulf of Mexico Overpressures, and 522-Full3 Superfast Spreading Crust. Tom Janecek presented the corresponding operational plans, identified the environmental and safety concerns, and noted the estimated budgets of \$3.9 million, \$4.4 million, and \$5.6 million, respectively, for the three expeditions.

Coffin presented the science plan for FY2006. He described the scientific objectives of two non-riser drilling expeditions for Proposals 553-Full3 Cascadia Margin Gas Hydrates and 621-Full Monterey Bay Observatory. Coffin noted that the former involved only the simpler and less-costly of the proposed objectives because of insufficient lead time for procuring the necessary hardware, and the latter would essentially involve just drilling holes and installing casing, and returning later to install CORKs and instruments. He stated that the SPC forwarded Proposal 621-Full to OPCOM without including it in the global scientific ranking because it essentially focuses on engineering, and he explained the relation of the proposed Monterey Bay Observatory to the MARS test facility. Coffin also described the scientific objectives of potential MSP expeditions for Proposal 564-Full New Jersey Shallow Shelf and for the Great Barrier Reef component of Proposal 519-Full2 South Pacific Sea Level.

Coffin presented a model for developing the FY2006 program plan that involved holding electronic meetings of OPCOM, the SPC, and the SPPOC after receiving budget guidance from the funding agencies in January 2005. Mevel noted that the complete budget guidance would probably have to wait for the next ECORD Council meeting in April 2005. Tamaki

concluded that the SPPOC could wait until its June 2005 meeting to approve the program plan.

9. Discuss FY2005 Program Plan Addendum & FY2006 Science Plan

Kensaku Tamaki opened the discussion of the FY2005 program plan addendum and the FY2006 science plan. Larson wondered what would happen if the SPPOC did not approve a plan that starts five months from now. Le Pichon worried that the first two additional projects did not include very exciting science and would send a poor message to the community just before a long hiatus in non-riser drilling operations. Janecek referred to the very limited options in terms of scheduling and said that this represented one of three models presented to the SPC. Coffin asserted that economics played a significant factor in trying to maximize the science for the lowest cost. He explained that although the Porcupine Basin proposal ranked relatively low as a full proposal, the SPC held a very favorable view of scheduling a small portion of it, and the Gulf of Mexico proposal ranked very highly. Coffin added that the SPC debated the relative merits of including long transit times versus conducting science and definitely preferred the latter. Kudrass noted the usefulness of a transparent decision for later assessing the decision-making process. Delaney regretted that the program plan addendum did not fully explain how the SPC weighed the good and bad points and decided on the schedule.

Larson asked about the methods of shallow-water drilling and recovering sands on the New Jersey margin. Evans expected to use a jack-up rig and suggested that shorter drilling strokes might help in recovering sands. Le Pichon wondered about the difficulty of obtaining permits for drilling on the Great Barrier Reef. Coffin cited some recent successes in obtaining permission for small-scale drilling. Piasias inquired about the cost and impact of scoping a project that might not get drilled. Evans indicated that it would not cost too much for this particular project because the Tahiti Sea Level Expedition would provide an opportunity to examine and solve many of the technical issues. Kudrass wondered about the advantages of drilling on the Cascadia Margin again for gas hydrates instead of in a more hydrate-rich environment. Coffin recalled that the JOIDES Gas Hydrates PPG recommended drilling in different types of gas-hydrate environments.

Shuto inquired about the large discrepancy between the target budget and the proposed plan. Janecek responded that the original budget guidance for late FY2005 would suffice to cover only the basic day-rate of the drilling vessel and not the entire science operations. He added that the JOI Alliance and the NSF had discussed the possibility of redirecting other resources. Humphris hoped that the current budget difficulties and shortcomings did not portend of future troubles.

Mayer reemphasized the necessity of understanding the rationale behind the program plan before approving it. Kimura also stressed the importance of explaining better how the schedule developed with significant changes from the SPC ranking. Piasias expressed concern about making too many compromises on the scientific objectives. Coffin explained that the SPC received a request for a full schedule of non-riser operations in FY2006 and had originally recommended a different model that would have included other high-ranked proposals, whereas the latest plan had to account for demobilizing the *JOIDES Resolution* by February 2006. He restated that the Porcupine Basin proposal probably would have ranked much higher if considered strictly as a shortened project, but the SPC decided after considerable debate to rank all proposals as presented. Talwani conceded that the program plan should include more information on how the SPC and OPCOM developed the drilling schedule. Larson proposed sending SPPOC liaisons to the SPC and OPCOM meetings to get first hand understanding of the process and the trade-offs.

The committee adjourned the open meeting for the day at 17:00 and remained in executive session until 18:00.

Sunday **12 December** **08:00-17:30**

As discussed the previous day under Agendum 5, the committee broke into working groups at 8:00 to define the SPPOC mandate and subsequently convened again in an executive session until 9:30.

10. Approval of FY2005 Program Plan Addendum

Kensaku Tamaki explained the outcome of the SPPOC executive session and noted that the committee had serious concerns about the proposed program plan addendum. He asked Janecek and Coffin to return later with a revised program plan.

In the early afternoon, Janecek explained the OPCOM strategy of examining the proposed science in each proposal and determining the operational and environmental constraints. He listed the proposals forwarded to OPCOM from the SPC and showed a map of their geographic distribution. Janecek said that the USIO conducted a detailed project assessment and provided the initial cost estimates. He listed the operational and environmental constraints, identified the microbiology assumptions, and noted the long lead-time required for procuring certain equipment. Janecek reported that OPCOM developed a series of scheduling options from a matrix of the scientific, operational, and fiscal constraints, and then selected three models for presenting to the SPC. He then showed a timeline of the proposed schedule.

Larson noted that most of the expeditions looked short. Janecek described the diagram as partly conceptual, with transits and port calls included. Humphris favored the revised schedule much more than the previous version. Le Pichon remained concerned that the schedule still included two poor expeditions and would send the wrong message to the community. Coffin explained that the SPC ranked proposals as presented but asked for a response letter from the proponents of Proposal 573-Full2 outlining a greatly reduced project. He stated that the proponents delivered as requested and the SPC felt satisfied that the shortened project could yield good science. Coffin said that the Gulf of Mexico proposal would require an MSP in addition to using the *JOIDES Resolution*, and the SPC agreed with scheduling the achievable part now, accounting for perhaps two-thirds of the proposed objectives, and returning sometime later to accomplish the rest. Becker supported the objectives and staged approach with the appropriate technology. Le Pichon objected to the idea of drilling reference sites without drilling the principle objective. Pisiass asserted that the SPPOC could not properly debate the science without reviewing the proposals and therefore had to accept that the process of reviewing, ranking, and scheduling worked appropriately. McKenzie believed that the Porcupine Basin expedition would yield interesting results for a wide community. Kudrass commended the diversity of science in the proposed plan. Le Pichon still objected to approving automatically what the committee receives. Larson disagreed, saying that the SPPOC had in fact changed the original plan.

SPPOC Motion 0412-4: The SPPOC accepts the following revised science plan for non-riser drilling operations from late April 2005 to early January 2006.

<u>Exp.</u>	<u>Proposal</u>	<u>Short Title</u>	<u>Comments</u>
1.	573-Full2	Porcupine Basin Carbonate Mounds	as modified from 573-PRL5
2.	589-Full3	Gulf of Mexico Overpressures	as modified in 589-Add
3.	522-Full3	Superfast Spreading Crust, Part I	
4.	553-Full2	Cascadia Margin Hydrates	without A-CORKs
5.	621-Full	Monterey Bay Observatory	with pending modifications
6.	522-Full3	Superfast Spreading Crust, Part II	

Larson moved, Rea seconded; 16 in favor, 1 opposed (Le Pichon), 1 non-voting (McKenzie).

Delaney asked about the process for approving the FY2005 program plan addendum. Pisas identified the need for a motion approving the FY2005 addendum provided that it demonstrates consistency with the approved science plan.

SPPOC Motion 0412-5: The SPPOC approves the FY2005 program plan addendum amended to incorporate the FY2005 portion of the revised science plan described in SPPOC Motion 0412-4.

Mayer moved, Humphris seconded; 16 in favor, 1 opposed (Le Pichon), 1 non-voting (McKenzie).

Bohlen questioned the value of the guidance if the USIO could not afford the approved plan. Talwani believed that the funding agencies would have the final decision on the affordability of the plan. Allan said that the lead agencies could not approve it if the NSF did not have the funds. Malfait added that the final budget estimate from the operator should come fairly quickly now that the SPPOC had approved the plan. Tanaka asked if the IODP-MI board of governors could approve the plan without a final budget estimate. Talwani stated that the IODP-MI decided to seek provisional approval without the final budget because of the time constraints. Allan clarified that the budget remains fixed, leaving only the question of whether it suffices to afford the plan. Stoffa commented that the SPPOC had done its job and the board of governors would meet shortly to do theirs.

11. SAS Architecture: SPPOC Conclusions

Judy McKenzie presented some of the text of the draft report from the *ad hoc* committee specifying the proposed changes to the terms of reference of each SAS panel. Mayer suggested that the structure diagram should show a communication link between OPCOM and the SPPOC. Talwani asked if another diagram would show the interaction between the SPPOC and the IODP-MI, and he requested that the SPPOC include the IODP-MI in discussions of how the two entities would communicate with each other. Pisas envisioned that the SAS panels could report directly to the IODP-MI without necessarily going through the SPC or the SPPOC and that management could decide which issues should receive additional input from the SPC and the SPPOC. Talwani advised keeping it simple concerning where the IODP-MI should seek advice. Pisas preferred letting management exercise judgment on what part of the SAS to ask for advice and having the SPPOC oversee the whole process. Malfait identified the mutual benefit to management and the SAS of having all advice flowing through one committee to avoid second-guessing.

Tatsumi looked for a clearer flow in evaluating proposals, especially regarding communication between the SSEP and the SSP. Coffin noted that proposals would go to both panels. Allan asked if the SSP terms of reference would still include responsibility for

evaluating data quality. Coffin said yes, that function would stay the same, with the added responsibility for giving scientific assessments of proposals to the SSEP.

Tamaki summarized that the EDP should prioritize annual engineering developments and pass the list through the SPC for approval. Tanaka asked how the EDP would find the seeds of engineering development to prioritize. Tamaki replied that the SSEP would recommend proposals to the EDP for review. Tatsumi asked if the EDP would review all proposals. Tamaki said no. Pias hoped that the EDP would also identify engineering needs that do not arise directly from specific proposals. Tatsumi asked about the timeline for implementing the change to the EDP and whether it fits the constraints of the SPC ranking exercises. Coffin said yes.

SPPOC Motion 0412-6: The SPPOC accepts the oral report of its own *Ad Hoc* Committee 1 for evaluating and modifying the IODP Science Advisory Structure (SAS) and approves the changes to the SAS as recommended therein. These changes include:

- a) Science Planning Committee (SPC) - add scientific assessment of expeditions in cooperation with the IODP-MI to its mandate;
- b) Science Steering and Evaluation Panels (SSEPs) - merge the two existing SSEPs into one SSEP with twice the membership of a normal SAS panel and with the membership and leadership reflecting the IODP Initial Science Plan;
- c) Site Survey Panel (SSP) - nurturing and evaluating proposals in closer coordination with the SSEP;
- d) Environmental Protection and Safety Panel (EPSP) - increase environmental protection expertise among the membership, and initiate rotation of panel membership;
- e) Scientific Measurements Panel (SciMP) - transform into the Scientific Technology Panel (STP), adding proposal evaluation to its mandate and initiating direct communication with the IODP-MI;
- f) Technology Advice Panel (TAP) - transform into the Engineering Development Panel (EDP), adding engineering prioritization and proposal evaluation to its mandate and initiating direct communication with the IODP-MI;
- g) Industry Liaison Panel (ILP) - transform into the Industry-IODP Science Program Planning Group (IS-PPG), with a mandate of fostering joint academic-industry proposals.

In addition, each SAS panel except the SSEP will have a chair and vice-chair. The SPPOC and the SPC, in cooperation with the IODP-MI, will work together to implement the changes as soon as possible. The SPPOC expects to consider the revised SAS terms of reference for final approval at its June 2005 meeting.

Humphris moved, Larson seconded; 15 in favor, 2 absent (Kimura, Stoffa), 1 non-voting (McKenzie).

12. SPPOC Mandate: Implementation Strategy

Kensaku Tamaki proposed that the SPPOC mandate did not require changing, but the committee needed to determine how to implement it. He asked the working groups to present their conclusions from the early morning session.

Humphris reported on long-range planning. She recommended preparing for writing the next science plan by holding a series of workshops over the next two years for receiving input from inside and outside the community. She suggested summer or early fall 2005 for a workshop on CDPs and very deep drilling, involving community education, input for the science plan, and fostering riser proposals; early 2006 for microbiology; and others as desired by the SAS. Humphris proposed that each workshop should have two conveners from the

SPPOC and the SPC and one from outside the program, for example from the ICDP. She advised seeking input from the SPC on proposal pressure for MSPs and asking the program member organizations to inform their communities of a desire for more proposals.

Pisias wondered if the workshops could receive support from the IODP and not just from the national programs. Malfait nodded yes. Kudrass noted that ESSAC had already started planning a microbiology workshop. Humphris queried if it would involve international participants. Mevel replied that it certainly could. McKenzie described the workshop as intended for twelve to fifteen participants but supposed that it could expand. Ildefonse mentioned an InterRidge workshop. Humphris wondered how to turn such workshops into broader-based IODP projects. Tokuyama asked if long-range planning included coordinating between continental and ocean drilling. Humphris agreed on the importance of involving the ICDP in the workshops. She proposed that the SPPOC should examine the workshops already planned and develop a plan for IODP involvement.

McKenzie reported on continuous oversight activities. She defined oversight as observing and helping to define the processes, evaluating execution and function, and evaluating goals versus achievements. McKenzie proposed that the SPPOC would need observers for preparing and presenting program plans from operational task forces, engineering, and science technology, and for interacting with the IODP-MI. Talwani did not see exactly how the observers would participate. Pisias said just in watching the process. Allan worried that the language implied a management role.

Kimura reported on the process for approving program plans. He outlined the cycle of planning activities, including SPC ranking, budget guidance, and program plan development, and he recommended sending a SPPOC liaison to OPCOM. Le Pichon wanted to see the ranking of all proposals available for scheduling and not just the most recent set. Kudrass asserted that the SPC should rank all available proposals competitively against each other and not allow some to just sit at OPCOM. Kawamura noted that riser projects require longer-term planning and advance ranking. Pisias agreed that the committee should consider how long a proposal could reside with OPCOM before returning to the SPC for ranking again. Coffin suggested that a proposal should return to the SPC if it does not account for recent scientific advances.

Tamaki worried about overloading SPPOC members with extra duties as liaisons and observers, and he wondered about sending a liaison to OPCOM when the SPC decides the schedule. Tanaka suggested considering that OPCOM evaluates science proposals against the cost constraints, but he also questioned the necessity and exact role of having a SPPOC liaison at OPCOM when the IODP-MI presents the detailed program plan at SPPOC meetings. Kimura noted that the presentations so far had not included the details. Tatsumi imagined that the SPPOC liaison might receive more detail than necessary at OPCOM meetings. Larson still regarded OPCOM as the best place to get detailed information on the inherent trade-offs involved in scheduling, with the liaison transmitting those details to the rest of the committee. Talwani believed that the IODP-MI should hold the responsibility of reporting detailed program plans to the SPPOC. Humphris suggested that the SPPOC would still need an observer to evaluate the process and see if it works. Tamaki concluded that the SPPOC would send an observer to OPCOM meetings.

Rea reported on long-term assessments. He defined one type of assessment as comparing the scientific results with the Initial Science Plan to identify any gaps, and he suggested doing those assessments at the time of publishing the initial results. Rea stated that assessments of integrated activities should include publications, scoping groups, data management,

integrating with other programs, multi-platform operations, and outcomes. He advocated doing a careful assessment of IODP-MI performance in the short term, probably with longer-term assessments by the funding agencies and possibly an overlap with continuous assessment. Humphris asked if the IODP-MI would review expedition achievements. Talwani indicated that the SPC would conduct such reviews in cooperation with the IODP-MI. Larsen asked whether the proposal or the prospectus should form the basis for comparison. Mayer recommended comparing results with the Initial Science Plan. Rea did not want to do it every two months.

Mayer reported on international and national program interactions. He identified the main issues of bringing new international partners into the program and working with other international research programs. Mayer proposed that liaisons should work to set up joint workshops with other programs, possibly through UNESCO. He characterized observatories as presenting a special but extremely important challenge to the program. Larson suggested that liaisons to other organizations should come from the SPC. Piasias believed that liaisons would not succeed as well as workshops for generating joint proposals. Bohlen recommended defining the expected outcome of having liaisons and workshops. He also suggested that other observational scientists besides those in the geosciences could make use of time onboard the drilling platforms. Mevel called for additional interactions to collaborate on technology developments. Humphris proposed linking liaisons to other activities such as long-range planning. Wang suggested inviting other programs to participate in global town meetings.

SPPOC Consensus 0412-7: The SPPOC assigns observers to facilitate oversight of program activities for operations and technology. The observers, Humphris for operations and Silver for technology, should report on their efforts at the June 2005 SPPOC meeting.

SPPOC Consensus 0412-8: The SPPOC establishes a standing subcommittee for long-range planning. The subcommittee, composed initially of Delaney, Le Pichon, Tatsumi (chair), and Tsujii, should begin by identifying and prioritizing future IODP workshops and report on their efforts at the June 2005 SPPOC meeting.

SPPOC Consensus 0412-9: The SPPOC will develop a plan for evaluating the performance of the IODP-MI. The SPPOC chair and vice-chair should interact with the IODP-MI in determining the scope and procedure of such evaluations and report on their efforts at the June 2005 SPPOC meeting.

SPPOC Consensus 0412-10: The SPPOC establishes a working group for scientific program assessment. The working group, composed of Bickle, Fukao, and Rea (chair), should develop the procedures for conducting assessments of IODP projects and report on their efforts at the June 2005 SPPOC meeting.

SPPOC Consensus 0412-11: The SPPOC establishes a working group for determining how to interact with other international scientific research programs. The working group, composed of Mayer (chair), Shuto, and Wang (observer), should identify the programs of interest, define the role of liaisons, produce a list of potential liaisons, and report on their efforts at the June 2005 SPPOC meeting.

Fukao worried about the SPPOC taking on too much responsibility and suggested that perhaps the SPC could take on some of these tasks. Piasias clarified that the working groups would just define the processes, and the eventual liaisons need not come from the SPPOC. Le

Pichon wanted to move forward faster and not wait until the next SPPOC meeting to take action. He recommended doing at least one concrete thing before then. Humphris also wanted to make something happen sooner. Tatsumi stated that his subcommittee could work by email and report to the SPPOC before June 2005. Tamaki hoped that the science assessment group could also make significant progress by then. Rea said that he had already discussed several ideas on program assessment with Larsen and expected that his group could deliver a report at the next SPPOC meeting.

13. SAS report and IODP policy development

13.1 SPC report

Mike Coffin explained the SPC procedure for ranking proposals and outlined the many other types of feedback that proponents already receive from the SPC and SAS panels. He presented SPC Consensus 0410-7 against making the SPC voting procedure fully transparent, as well as the associated comments and opinions recorded in the SPC minutes.

SPC Consensus 0410-7: The SPC does not favor implementing fully transparent reporting of proposal rankings. The SPPOC raised this issue in connection with the SAS conflict-of-interest policy that may need further attention from the SPC and the SPPOC.

Tamaki asked for comments on the concept of transparent voting. Fukao suggested that the SPPOC might have to revise the conflict-of-interest policy again because they had defined conflicts of interest in a more relaxed way in expectation of having transparent voting. Le Pichon agreed that the SPPOC should revisit the conflict-of-interest policy if not accepting transparent voting. Piasias inquired about the purpose of keeping the signed ballots from SPC ranking exercises. Humphris responded that it allowed for examining the data in the event of any questions arising about bias or block voting. Piasias thus characterized the procedure as transparent in spirit, provided that a mechanism exists for requesting to see the results. Mayer regarded that as a reasonable compromise and believed that keeping the ballots on file served as a warning or deterrent. Piasias proposed forming a standing SPPOC subcommittee to receive requests and examine the situation on a case-by-case basis. Le Pichon suggested informing the community that such a possibility exists. Delaney preferred not publicizing the opportunity to challenge votes at the risk of getting lawyers involved. Fukao said that he could accept the compromise without changing the conflict-of-interest policy. Larsen asked whether SPC members sign a document indicating that they accept and understand the policy. Mayer noted that standard documents exist for that purpose. The committee agreed to take no further action.

Coffin presented SPC Consensus 0410-8 on the style of SPC minutes, Consensus 0410-11 on how to assess the scientific achievement of IODP expeditions, Consensus 0410-26 on creating a checklist of scientific measurements for use in evaluating proposals, and Consensus 0410-27 on incorporating engineering testing and development in the annual program plan. The committee offered no comments.

Coffin presented SPC Consensus 0410-28 on developing a plan for managing the MARS-IODP test facility.

SPC Consensus 0410-28: The proponents of Proposal 621-Full Monterey Bay Observatory assert that the Monterey Accelerated Research System (MARS) management program of the Monterey Bay Aquarium Research Institute (MBARI) can be modified to accommodate the MARS-IODP test site. The SPC reiterates its earlier request (see SPC Consensus 0406-14) for the SciMP and the TAP to work with MBARI scientists (C. Paull, lead proponent) to develop a draft plan for managing the MARS-IODP borehole test sites. Issues to be considered in developing the plan include:

- a) integrating and coordinating management of the site with the MARS management program (available at www.mbari.org),
- b) managing the site in the transition from IODP to MARS-IODP management when the MARS fiber optic cable is attached to the site, and
- c) establishing a data management policy that will accommodate potential IODP users.

The SciMP and the TAP should submit a joint report for the March 2005 SPC meeting, and the SPC and OPCOM intend to submit a final report for the SPPOC to consider at its mid-2005 meeting.

Humphris asked if the IODP expected to maintain some level of management over the MARS test facility after drilling the hole. Malfait wondered about the membership of the working group for developing the management plan and noted that the lead proponent does not represent MBARI management.

Coffin presented SPC Consensus 0410-30 on improving the gender balance among the SAS membership and IODP proponents, Consensus 0410-32 and 0410-33 on the Tahiti Sea Level Expedition and related ancillary project, Consensus 0410-37 on developing a policy for third-party tools, and Consensus 0410-38 on developing generic terms of reference for program planning groups (PPGs) and detailed planning groups (DPGs). Delaney asked if the TAP has a meeting scheduled. Coffin said no. The committee offered no further comments.

13.2 IODP Policy updates

13.2.1 Sample, Data, and Obligations Policy

Hans Christian Larsen reported on the sample, data, and obligations policy. He focused on the issues of refining the obligations of science party members and defining the maximum allowable moratorium period after the first expedition of a multi-expedition project. Larsen noted that the current interim policy allows for science party members to fulfill their obligation by submitting a peer-reviewed paper, a data report, or a progress report. He proposed changing the policy to require a peer-reviewed paper or a data report, but with no penalty clause for not performing, and having the IODP-MI keep progress reports or letters of explanation on file for the program member organizations, IOs, and co-chiefs to access. Larsen also proposed either setting a maximum allowable moratorium period of eighteen to twenty-four months after the first expedition of a multi-expedition project or letting the SPC and the IODP-MI determine an appropriate moratorium period on a case-by-case basis.

McKenzie asked about the timeline for publishing. Larsen suggested on the order of four years and said it needed incorporating in the policy. Delaney lauded the sensible approach of the IODP-MI in consulting with the IOs and modifying the policy. Larson worried about putting a fixed timeline on the moratorium because of the likely complexity and extended nature of riser drilling projects. Humphris anticipated a very lengthy gap between some expeditions and preferred a flexible case-by-case policy.

SPPOC Consensus 0412-12: The SPPOC accepts the proposed change to the IODP Sample, Data, and Obligations Policy requiring that scientific party members submit either a peer-reviewed paper or data report to fulfill their obligations. We understand that scientific party members may still submit progress reports or explanatory letters to the IODP-MI for consideration by program representatives, but such reports and letters will not fulfill any incurred obligations. The SPPOC prefers maintaining a flexible moratorium period for the early expeditions of multi-expedition projects involving a joint scientific party, as determined on a case-by-case basis by the SPC and the IODP-MI.

13.2.2 Publications Policy

Hans Christian Larsen raised several questions for the SPPOC to consider on the publications policy. He proposed that the IODP would produce fully electronic online publications, printable only on demand, except for the successor to the *JOIDES Journal*. He described the plan as ready to implement and preferred by the new generation of scientists, though it required waiving the contractual obligation between the NSF and the USIO for printing a specified number of copies. Larsen also proposed that all post-expedition scientific papers would appear in the open literature to avoid the stigma of gray literature associated with program publications. He then described the proposed content and format of the online, expedition-based hybrid publication that would include the scientific prospectus, preliminary expedition results, regular expedition results (i.e., site chapters, expedition data, site-survey data, and expedition summary), peer-reviewed data reports, a continuously updated electronic bibliography of all expedition-based papers, and possibly synthesis papers arranged by the co-chiefs. Larsen also described a proposed new peer-reviewed electronic open access journal for publishing papers from all types of scientific drilling and related studies and following the principles of open-access publications (i.e., the Berlin Declaration), with the IODP and the ICDP sharing in underwriting the costs of contributed papers.

Delaney recognized the cost factor but believed that many scientists in the U.S. still preferred receiving the small printed volume that comes with the CD-ROM version. Larson felt uncomfortable with relying only on electronic publications because of their ephemeral nature. Tatsumi reported that a survey in Japan indicated a 50% preference for paper copies. Kudrass characterized the German community as totally split on this issue, and he inquired about the cost implications. Larsen responded that printed volumes would cost about \$100,000 per expedition. He added that the task force realized that it costs money now to convert old paper versions to an electronic format, and they regarded that as a sign of the inevitable direction. Tamaki viewed electronic publications as the best way to proceed. Pisiadis detected a reluctant consensus to proceed with fully electronic publications.

Larsen regarded the plan for publishing all post-expedition papers in the open literature as not very different from what has already happened. He asked if the new online publication would include a compendium of references. Larsen said yes and mentioned the possibility of publishing links to papers in online journals in the event of negotiating proper access. Tamaki sensed a consensus to proceed, and the committee accepted the proposed content and format of the online expedition-based hybrid journal without further comment.

SPPOC Consensus 0412-13: The SPPOC accepts the IODP-MI plans for implementing a fully electronic, Web-based, program publication encompassing scientific prospectuses, preliminary expedition results, expedition reports, data reports, synthesis papers, and continuously updated electronic bibliographies. The SPPOC accepts the principle that all post-expedition scientific papers should appear in the open literature, and we encourage the IODP-MI to pursue the idea of creating a new peer-reviewed, open-access, electronic journal for publishing papers from all kinds of scientific drilling and related studies.

13.2.3 COI Policy: SPC voting procedures etc.

The committee discussed this issue under Agendum 13.1 (see above) and took no further action here.

13.2.4 HSE Policy

Mike Coffin presented SPC Consensus 0411-1 on a health, safety, and environment (HSE) policy for the IODP.

SPC Motion 0411-1: The SPC approves the following health, safety, and environment policy as formulated by the EPSP in consultation with the IOs, and forwards it to the SPPOC for consideration. [25 November 2004]

Health, Safety, and Environment Policy

The Integrated Ocean Drilling Program (IODP) is an international research initiative for scientific drilling operations using specifically designed drill ships and other platforms. The purpose of the IODP is to improve understanding of natural processes on the planet.

The IODP is responsible for ensuring the health and safety of all personnel in the areas in which it operates and to minimize the impact of its operations on the environment. The IODP recognizes the importance of protecting the marine environment, its fauna and flora, and will take necessary action to minimize potential impacts.

The scientific research program operates around the world and is subject to international and host country health, safety, and environment (HSE) legislation. The IODP will ensure that operations meet internationally recognized HSE standards and comply with the requirements of host country legislation, standards, guidelines, and codes.

To achieve this, the IODP will:

- Provide HSE leadership for operations, with evidence of a positive HSE culture and training at all levels.
- Develop HSE specific policies and management practices that comply with international standards.
- Ensure that drilling programs undergo a pre-drill risk assessment prior to implementation to minimize environmental impact and maximize safety.
- Review and track the implementation and performance of the HSE policies and modify the policies as warranted with changes communicated to all relevant personnel.
- Assure that work is conducted according to the agreed upon HSE plan.

Coffin moved, Miller seconded; 15 in favor, 2 absent (Kato, Soh), 2 non-voting (MacLeod, Zhou).

McKenzie asked if the policy applied to workers on the platforms. Coffin explained that each IO has its own policy that covers everyone onboard the drilling vessels or platforms. Piasis recognized the importance of making such a statement to the community and regarded the proposed policy as acceptable for the IODP.

SPPOC Consensus 0412-14: The SPPOC accepts the IODP Health, Safety, and Environment (HSE) Policy as presented in SPC Consensus 0411-1 and forwards it to the IODP-MI and the implementing organizations.

14. Status of active proposals

14.1 ISP theme, ISP initiative, and IODP platform distribution

Mike Coffin summarized the status of the 125 active IODP drilling proposals. He noted that twenty-six proposals have shown no activity since inherited from the ODP in 2001, and the SSEPs have recommended giving the proponents one more chance before deactivating those proposals. Coffin illustrated how the active proposals distribute among the initiatives of the Initial Science Plan and noted the lack of any proposals for the 21st century Mohole initiative. He also showed how the proposals distribute geographically and among platform types.

Delaney noted that a simple comparison of numbers might not give a complete picture because individual proposals can involve different amounts of drilling time and program resources. Tamaki asked why the SPC leaves some proposals residing with OPCOM instead of ranking all available proposals every year. Coffin said that it avoids giving inconsistent rankings of higher ranked proposals and provides OPCOM with better options during a time of very uncertain operations. Le Pichon asserted that this procedure forces OPCOM to consider proposals without really knowing their relative priorities. He recommended making explicit the relative priorities of all proposals available for scheduling with OPCOM. Coffin explained that the SPC identifies groups of proposals that do not differ statistically in the rankings and then asks OPCOM to accept the grouping of the highest ranked proposals. Larsen preferred admitting that rankings can change from year to year and just let it happen. Humphris foresaw difficulties with the eventual pooling of proposals at OPCOM and suggested still providing relative rankings of the top-ranked proposals each year. Mayer believed that a way must exist for a proposal to exit from the top-tier at OPCOM if necessary. Coffin recognized the potential future problem of leaving too many proposals with OPCOM and noted that the SPC had solicited input from the SSEPs on how to address it.

14.2 Riser drilling proposals

Tamaki opened the floor for discussing riser proposals. Le Pichon suggested that the SPPOC should consider science plans as part of long-range planning. The committee offered no further comments.

15. SPPOC review of membership rotation

Tamaki reviewed the term lengths of the current SPPOC members. Larsen asked about the terms for alternates. Tamaki suggested two years.

16. Review of motions and consensus items

Tamaki noted that the SPPOC had approved the FY2005 program plan addendum and a revised science plan for FY2006. He indicated that he would review the other motions and consensus items and have a draft executive summary distributed as soon as possible after the meeting.

17. Any other business

Peggy Delaney reported briefly on the Eighth International Conference on Paleoceanography (ICP-8) held in early September 2004 in Biarritz, France, saying that she gave a keynote address on the IODP and the IODP-MI provided an exhibit booth. Delaney identified Pinxian Wang as the host of the next paleoceanography conference (ICP-9) in Shanghai in September 2007, and she encouraged the IODP to participate again with a strong presence.

Le Pichon proposed thanking Talwani for hosting the meeting. Tamaki proposed also thanking the three members of the committee who had rotated off since the last meeting.

SPPOC Consensus 0412-15: The SPPOC thanks Manik Talwani for hosting this meeting and the joint reception with representatives of the International Continental Scientific Drilling Program (ICDP). We also thank Stephanie Murphy and Therese Lowe for their very successful efforts in arranging a comfortable meeting venue and providing a convivial atmosphere for the reception.

SPPOC Consensus 0412-16: The SPPOC acknowledges Eric Barron, Motoyoshi Oda, and Akira Nishimura, all of whom rotated off the committee since our previous meeting in July 2004. We thank these three distinguished scientists for their valuable contributions to the IODP and wish them well in their future endeavors.

18. Future meetings

18.1 June/July 2005

Kensaku Tamaki announced the tentative scheduling of the fourth SPPOC meeting during the week of 12 June in Yokohama, Japan, depending on the availability of the *Chikyu*. He proposed holding a three-day meeting, including one day for touring the *Chikyu*. Kawamura added that CDEX could probably determine the exact days by the end of the year [N.B., CDEX subsequently scheduled the meeting for 15-16 June 2005 in Nagasaki, Japan, with an associated tour of the *Chikyu* on 17 June].

18.2 January/February 2006

Pisias proposed scheduling the fifth SPPOC meeting in early 2006. Rea asked the reason for changing away from holding meetings in December in conjunction with the AGU meeting. Pisias preferred avoiding the AGU meeting. Tamaki added that it would give more time for preparing the science plan. Malfait noted that it would reduce the time for turning the science plan into a program plan. Tsujii remarked that February would pose very inconvenient timing for the Japanese university calendar. Humphris preferred a mid January timeframe. Talwani preferred holding the meeting in Europe but said that the IODP-MI could also host the meeting in Washington, D.C. McKenzie agreed on the possibility of hosting the meeting in Switzerland. Pisias proposed 17-18 January 2006 in Switzerland or alternatively in Washington, D.C.

The committee adjourned the meeting at 17:45.