

JOIDES SCIENCE AND OPERATIONS COMMITTEES
19 - 20 March, 2002
Yokohama Institute for Earth Sciences
Japan Marine Science and Technology Center
Yokohama, Japan

DRAFT

SCICOM Consensus 02-01-01: SCICOM approves the meeting agenda.

SCICOM Motion 02-01-02: SCICOM approves the minutes of its August 2001 meeting in Portland.

Mayer moved, Salisbury seconded, 13 in favor, none opposed, 1 abstention (Austin), 1 absent (Herzig).

SCICOM Consensus 02-01-03: SCICOM has considered SCIMP recommendation 01-2-03 concerning data archiving, database mirroring, and the formation of a data legacy working group. SCICOM agrees with SCIMP that maintaining the integrity of ODP data in perpetuity, and assuring future access to this resource, is essential to the ODP legacy. SCICOM would also like to be sure that a functional database system is transferred to IODP as seamlessly as possible.

SCICOM therefore recommends that SCIMP plan for formation of a data legacy working group, including an evaluation of what expertise is needed and available (both within and outside SCIMP) and what the working group mandate should be. Issues to be addressed by this working group may include identification of (a) critical archiving gaps with present data sets, (b) challenges associated with storage of metadata, and (c) problems that could be avoided during development of IODP data bases, policies, and storage procedures. We ask SCIMP to consult with the interim director of JOI, who has considered many of the relevant issues, and (informally) with appropriate iSAS panels as necessary, and to report back to SCICOM by August 2002 with a plan for formation of this working group as part of the broader issues of ODP legacy and ODP-IODP database transition.

SCICOM Consensus 02-01-04: SCICOM reaffirms the importance of all ODP samples as an integral part of the ODP legacy. Therefore, SCICOM requests that the Science Operator take all necessary steps to maintain the integrity of the entire ODP sample collection as the ODP phase-out approaches. This includes the thin section collection as noted in SCIMP recommendation 01-2-11. In addition, SCICOM endorses SCIMP recommendation 01-2-9 encouraging host countries of Micropaleontological Reference Centers to underwrite costs of maintaining these centers.

SCICOM Consensus 02-01-05: SCICOM accepts the following SCIMP recommendations and applauds the efforts already made by the ODP Operators to address them:

SCIMP recommendation 01-2-01 concerning hard-drive support for digital core data
SCIMP recommendation 01-2-06 concerning the IESX Joint Pilot Study
SCIMP recommendation 01-2-07 concerning the legacy technical summary documents
SCIMP recommendation 01-2-08 concerning core resistivity measurements
SCIMP recommendation 01-2-12 susceptibility point measurement for AMST

In addition, SCICOM endorses SCIMP recommendation 01-2-04 concerning potential development of a high-resolution downhole magnetic susceptibility logging tool for ODP and IODP.

SCICOM Consensus 02-01-06: SCICOM accepts the Leg 210 contingency plans.

SCICOM Consensus 02-01-07: SCICOM records its approval and excitement at the progress being made by the joint JOI/IEODI effort toward implementing SCICOM's top-ranked proposal (Lomonosov Ridge, Arctic) as an IODP program.

SCICOM Consensus 02-01-08: SCICOM accepts Jamie Austin's invitation to host the March 2003 SCICOM/iPC meeting in Austin, Texas.

SCICOM Consensus 02-01-09: SCICOM expresses its great appreciation to Julie Morris for her extraordinary service as chair of ISSEP. ODP was fortunate to have the service of Julie's considerable talents at a particularly important time for the program. She worked not only to shepherd the last set of ODP proposals through the advisory process, but also helped lead the effort to plan for the IODP and to preserve the legacy of 17 years of ocean drilling. Julie, in partnership with Neil Lundberg, set an outstanding example of how to work cooperatively, collaboratively, and effectively across disciplines. She was always ready with thoughtful, clear, and insightful information about the proposals in her charge and about the concerns and desires of the SSEPs. It was a great pleasure for all of us to work with her and we look forward to her participation in the next phase of scientific ocean drilling.

They say Julie Morris lacks height,
But SCICOM doubts not her might.
At herding a SSEP,
She proved quite adept,
We'll all greatly miss her insight.

SCICOM Consensus 02-01-10: SCICOM thanks our hosts – Ishii-san and the ODP-Japan Office, Yamada-san and the OD21 Office – for the wonderful arrangements for the SCICOM/iPC meeting.

March 19 - SCICOM/OPCOM joint session, with iPC welcome as observers

A. Welcome and introductions

Becker welcomed all attendees to the SCICOM meeting. He noted that Brown, Karner and Oppo were substituting on a one-time basis for Fryer, Sarg and D'Hondt, respectively. He added apologies from Piasias, who was not able to attend the meeting due to a family medical situation.

B. Logistical announcements

Yamada-san welcomed the attendees and briefly outlined the meeting logistics and social events. This was followed by the welcome address by Ishii-san, who also encouraged everybody to sample the numerous excellent restaurants in Yokohama and enjoy the cherry blossoms, which were just starting to bloom.

C. Approval of SCICOM agenda

Becker recalled that the August 2001 meeting had been run strictly according to Robert's Rules of Order, but noted that no conflicts of interest were expected at this meeting so it could be run a little less formally. Becker announced two changes to the agenda. First, John Tarduno sent apologies, and his Leg 197 report will be deferred to the August 2002 SCICOM meeting. Second, added to the agenda was a preliminary discussion of an APL received three days earlier for the March 15 JOIDES proposal deadline. Copies were distributed and Becker asked the SCICOM members to read them that evening, so the review procedure and the APL could be discussed the following day. With those changes, the agenda was approved:

SCICOM Consensus 02-01-01: SCICOM approves the meeting agenda.

D. Approval of August 2001 SCICOM minutes

SCICOM Motion 02-01-02: SCICOM approves the minutes of its August 2001 meeting in Portland.

Mayer moved, Salisbury seconded, 13 in favor, none opposed, 1 abstention (Austin), 1 absent (Herzig).

E. ODP agency and prime contractor reports

NSF

Dauphin reported that the FY02 budget for ODP was approved on October 1st at the level of \$47.698M, consisting of \$46.198M plus \$1.5M carried over from FY01. The \$1.5M represents uncommitted funds left from FY01 budget due to the fact that the fuel costs did not increase as

much as originally projected and because some savings were realized on Costa Rica CORK purchases. NSF provides 65% of that budget, and the other members' financial contributions are as follows:

- Germany, Japan, UK – full
- ESF – 99.57%
- France, China – 2/3 and 1/6 (associate members)
- PacRim – not yet determined.

NSF anticipates a 1% increase in its total FY03 budget from \$4.796B in FY02 to \$5.0353B in FY03, and the final sum should be known by October. Dauphin then diagrammed the reorganized NSF-OCE program structure, in which the Division of Ocean Sciences is subdivided into 3 sections: the Marine Geosciences Section headed by Bruce Malfait, Integrative Programs Section, and Oceans Section. The Marine Geosciences Section is composed of two programs: Ocean Drilling Program and Marine Geology and Geophysics Program. Paul Dauphin is now Program Director of Ocean Drilling Program; the second ODP Program Director position is vacant with the advertisement for this position currently announced. Dr. Jim Yoder recently became the new director of the Division of Ocean Sciences.

Regarding the funding for final year of ODP operations and the ODP phase-out, JOI and the ODP Operators (TAMU and LDEO) have submitted the FY03 Program Plan and the FY04-07 Phase-out Plan to NSF, and these plans are now undergoing the review process.

Mayer asked if there was a contingency plan for excess carry-over funds (e.g. \$1.5 M), if there is no increase in the fuel costs. Dauphin answered that the funds would stay in program for other contingencies and would be carried forward. Fox added that \$450k is already targeted for hardware for the Costa Rica leg. (After the meeting, Piasias clarified that a significant portion (~\$0.6.M) of the \$1.5M is designated for the possibility that fuel prices will rise above the budgeted amount, and most of the rest is being used for FY03 purchases.)

JOI

Bohlen reported that Dan Weill resigned as an ODP Director due to health reasons and Nick Piasias agreed to act as Interim Director until JOI's future plans are clarified and a new Director is found. Bohlen added that conceivably Piasias could be Interim Director until the end of the program. JOI had asked for a budget increase in FY02 to cover the day rate increase and insurance costs, and this has been approved by NSF. (After the meeting, Piasias clarified that the FY02 budget adjustment approved by NSF was \$407k to cover increased insurance costs following September 11 and day rate issues.) The FY03 and FY04-07 budgets are being reviewed at NSF now. Bohlen added that after October 2003 the total cost of the program and phase-out activities will be provided by NSF.

Becker asked about JOI's plans for involvement in IODP. Bohlen answered that JOI BoG has decided to compete for the leadership of US national activities in IODP, and JOI will respond to NSF's RFP for science operations of the new non-riser ship. By August, any JOI institution that wishes to participate in management of ship operations will have submitted a letter of intent to JOI. The ship operation proposals will be reviewed by a committee of the corporation, which

will consist of present and incoming USSAC Chairs, 2 people from USGS, one individual from industry and one US senior oceanographer. The committee will meet in September 2002 to provide their assessment of the proposals to the JOI BoG. Subsequently, the JOI BoG will meet to provisionally select the successful bidder. That bidder will work with JOI to submit a proposal to the NSF in response to their RFP. Bohlen added that JOI will also compete for the successor program to the US Science Support Program.

Concomitantly with these activities are efforts by representatives from the JOI BoG to discuss with Japanese and European representatives the formulation of a legal framework for the development of the CMO. However, concluded Bohlen, at this point, more is unknown than known about the future.

Mayer asked for clarification as to whether or not the establishment of the legal framework for the CMO was JOI's responsibility. Bohlen explained that it is not JOI's corporate responsibility. Bohlen also said that we know from IWG that the CMO has to be run by an organization that is unbiased, neutral, a legal entity committed to IODP science, and therefore following those guidelines the world has to come to grips as to who, what, when, where, how, and why. Mayer asked if aside from those ad hoc efforts, is there a framework established? Bohlen said that neither he nor JOI BoG are aware of any framework.

F. ODP operator reports

ODP-TAMU Science Operator

Baldauf presented overview of the ship operations during Legs 198-201.

Leg 198 – Shatsky Rise

- Investigation of the abrupt climate changes in Cretaceous and Paleogene
- Successful APC, XCB, MDCB, XCB center bit and RCB coring at 8 sites
- Complete composite record from 140 Ma ago to present including numerous critical intervals: early Aptian OAE1a, MME, K/T boundary, LPTM, Eocene/Oligocene
- Geotek digital core images very helpful
- Logging at 2 sites
- Some problems with cherts and two storms

Leg 199 – Paleogene Equatorial Transit

- Investigation of development and change in Equatorial upwelling system
- Successful APC, XCB coring at 8 sites – 7 sites sampling Paleogene, and 1 site Eocene-Oligocene
- Development of improved biostratigraphy
- Core orientation at most sites and ADARA at 5 sites
- Logging at 2 sites
- Problems with core barrel at 3 holes

Leg 200 – Hawaii-2 Observatory

- ION Site 1224 - reentry and casing 30 m into basalts, the total hole depth 64 m
- Coring at Site 1223 to investigate of Nuuanu slide – several volcanoclastic intervals recovered

Leg 201 – Deep Biosphere (ongoing)

- Several sites along Peru margin and two deep sites
- Some sites – return to previously drilled holes (Leg 112 and 138) because of known geochemical environment
- Very new sampling program of microbial communities
- Radioisotope van installed on the ship
- Operations Manager departed at Galapagos for family emergency, replaced by DSD Manager
- Tools tested: FPR (Fugro Percussion Corer) – no pressure maintained, PCS – successful

Sager asked about details of HYACINTH tool testing and the implications for Leg 204. Baldauf said that no comments have been received yet from the HYACINTH consortium regarding the testing, but the general result was that core had been recovered although pressure had not been maintained. A May meeting is being organized in light of the results from Leg 201 to redefine strategy for Leg 204. Allan asked if the problem was lithology related; Baldauf responded that this was possible but environments and lithologies can't always be predicted. Salisbury wondered if there possibly was a problem with seals as in earlier HYACE testing. Fox said that Fugro Percussion Corer (FPC) had not been previously tested on the JR. During Leg 194 it was the other HYACE tool that was tested, and this could not have been tried again on Leg 201 because it was not ready yet.

Becker asked how the partnership with HYACINTH endorsed at the August 2001 SCICOM meeting was developing. Baldauf said that the cooperation is very positive and both ODP and HYACINTH are working hard to ensure the tools successful on Leg 204.

Austin inquired about ODP cooperation with the ION project and if ODP was going to receive a report from ION regarding the progress of population of the ODP holes with instrumentation. Becker noted that 4 sites have been already instrumented off Japan, and there are plans to instrument other sites drilled as ION holes. For example, in the Indian Ocean there are Japanese-French plans to for installing instrumentation at the NERO site. For H2O and the Equatorial Pacific ION site (Leg 203), Becker understood that Americans will propose to NSF to install instrumentation by wireline reentry. Austin said that would be useful to have a document summarizing those efforts. Becker agreed that was a good point and noted that some of that documentation is included in Kiyoshi Suyehiro's contribution to the Achievements and Opportunities legacy publication. Austin replied that a more extensive report is necessary.

ODP-LDEO Wireline Operator

Goldberg started with an overview of the 3rd party tools used during recent legs, e.g. the high-resolution gamma ray tool (MGT) used on Leg 198, and Gottingen 3-component magnetometer on Leg 197. Goldberg then reported on the logging highlights of completed and scheduled Legs 198-204, adding that lots of focus currently is being placed on preparation for the Gas Hydrates Leg 204.

Leg 198 – Shatsky Rise

- 2 Sites logged with standard logging and high-resolution gamma ray (3rd-party MGT)
- FMS worked well in detecting the chert layers and estimating the volume of chert missed by coring

Leg 199 – Paleogene Equatorial Transect

- Standard logging and high-resolution gamma ray (3rd-party MGT)

Leg 200 – Hawaii 2 Observatory

- Standard logging
- Synthetic seismograms calculated

Leg 201 – Peru Biosphere

- Standard Logging
- Recovery 50%, so some intervals not recovered were well imaged on logs
- HYACINTH (3rd-party) – 7 runs of Fugro with core barrel acceleration tool attached to help to diagnose what is happening with the tool

Leg 202– Southeast Pacific Paleooceanographic Transects

- Standard logging and high-resolution gamma ray (3rd-party MGT) planned

Leg 203 – Equatorial Pacific ION

- Standard logging planned

Leg 204 – Gas Hydrates

- Standard logging, VSP, offset VSP, density and imaging LWD, MWD, HYACINTH (3rd-party) plus DSA tool, RAB coring tool planned

Goldberg then reviewed the results of the Leg 196 active heave compensation experiment, showing significant decrease in downhole weight-on-bit variations when the heave compensator was on. The experiment will be repeated during Leg 204. Another ongoing project is the resistivity-while-coring tool developed jointly by TAMU and Anadrill, which was used as an LWD tool on Leg 196. Currently the tool is being modified, so the inner MDCB core barrel sleeve can pass through it. The field trial is planned for mid-May in Houston. If successful it will allow placement of the core at the correct depth and orientation. Goldberg also reported that 17 technical tool summaries have been posted online, the IESX Report has been accepted by SCIMP, and an interface has been installed between the ODP Log Database and the LDEO Multibeam Database allowing for example quick log plots and simple graphical site selection. Finally, Goldberg noted the 30% increase in the LDEO-ODP web access in the last year.

G. EXCOM report

Becker reported that EXCOM did not assign any major tasks to SCICOM during its January 30-31 2002 meeting in Santa Cruz, California, and then he briefly discussed the most significant EXCOM motions. He grouped them into 3 categories:

I – ODP Legacy

EXCOM Consensus 02-1-6: The JOIDES Executive Committee thanks the JOIDES Science Committee for excellent work done on the ODP Legacy Project. The Executive Committee waits with anticipation to see the final results of the various projects, including the Achievements and Opportunities publication, ODP's Greatest Hits vol. II, database of publications and technological summaries.

Becker noted that EXCOM is now quite happy about the progress made on ODP legacy issues.

II – FY03 Science Plan and FY03-07 Program Plan

Becker reported that FY03 Science Plan and FY03-07 Program Plans have been approved.

EXCOM Motion 02-1-8: The JOIDES Executive Committee approves the FY03 Science Plan
Silver moved, Orcutt seconded; 14 in favor, 1 abstained (Detrick).

EXCOM Motion 02-1-9: The JOIDES Executive Committee approves the FY03 Program Plan and Budget

Orcutt moved, Falvey seconded; 13 in favor, 2 abstained (Detrick and Silver).

EXCOM Motion 02-1-10: The JOIDES Executive Committee approves the FY04-07 Phase-out Program Plan and Budget.

Detrick moved, Opdyke seconded; 13 in favor, 2 abstained (Mutter, Prior).

Becker also noted that an article he had written after the August 2001 SCICOM meeting on the scientific plans for the final year of operation is now in press in EOS, with publication imminent.

III – ODP-IODP

EXCOM Motion 02-1-3: In the context of the transition from ODP to IODP, the EXCOM wishes to ensure a positive perception of scientific ocean drilling having both:

1. delivered important environmental and scientific outcomes through ODP, and
2. prepared for a new, and still more exciting phase of research through IODP.

EXCOM therefore asks JOI to work with colleagues in JAMSTEC and ECORD/JEODI to develop a transition plan for public affairs for the period 2002 to 2004. This strategy should target the scientific community, industry, the public, and funding agencies.

Orcutt moved, Silver seconded; 15 in favor.

EXCOM Consensus 02-1-5: Whereas the Central Management Office (CMO) must be an independent, legal entity committed to implementing IODP science, and whereas the Central Management Office must be prepared to execute the IODP by mid-2003 as directed by science planning from the Science Advisory Structure (SAS), international parties, other than the JOIDES Executive Committee, must act expeditiously and in concert to establish an international corporation, or its equivalent, to govern and operate the CMO.

Becker emphasized that EXCOM would like to make sure that transition between ODP and IODP would be perceived as a true transition and not merely as the end of the ODP. EXCOM also realized that for the greatest benefit of the future program, the CMO needs to be set up soon and in the proper way. Becker also reported that EXCOM applauded Japan for launching of *Chikyu* as a great IODP facility.

Finally Becker noted that EXCOM confirmed that it will cease to exist together with the JOIDES Science Advisory Structure September 2003. There will be two more EXCOM meetings, one in June 2002 in Granada, Spain and the last one in July 2003, most probably in Bermuda to coincide with one of the last port calls of *JOIDES Resolution*. Becker noted that, unless new matters arise, there probably would be three more SCIMP meetings, one more PPSP meeting, and at most one more TEDCOM meeting (in conjunction with the initial meeting of iTAP). The SSP did not meet in February, so its last formal meeting may have been in July of 2001.

H. Service Panel Reports

Becker presented the TEDCOM recommendation regarding the demobilization of JR and its possible use post-October 2003:

TEDCOM recommendation #01-2-1to SCICOM

TEDCOM urge SCICOM to take any steps necessary to defer demobilization of the JOIDES Resolution until such time as the outcome of the RFP for future IODP drilling is known.

Jeff Fox, ODP-TAMU, highlighted that the JOIDES Resolution could be completely demobilized immediately after October 2003. While contractually this is a possibility it should be considered as a last option until other factors are known regarding the new program. It is not in the interests of any party to embark upon an expensive demobilization until future program direction and non-riser vessel requirements are clearer.

Becker said that SCICOM probably does not need to respond immediately to this recommendation because the situation is currently beyond the SCICOM purview. Nevertheless, he noted that, for SCICOM information, such post-2003 possibilities for use of JOIDES Resolution would be discussed on the following day.

Regarding the time allocation for engineering development recommended for each leg by TEDCOM and SCIMP at the August 2001 SCICOM meeting, Becker noted that there are many development efforts already included in the operational plans for the final scheduled legs. For example: (1) Legs 206 and 210 will utilize advanced casing systems, and (2) Leg 209 will utilize the hard rocks reentry system and ADCB. Becker noted that TEDCOM was satisfied that the program is on track in fulfilling the TEDCOM recommendation for time for engineering development through the end of ODP operations.

Finally Becker reviewed the technical legacy tool summaries, which TEDCOM approved at its December, 2001 meeting. LDEO-BRG has 17 two-page tool summaries already posted on its website, and Fox added that the ODP-TAMU tool summaries are in process of being posted.

PPSP

Claypool reported that 4 legs (204-207) were reviewed during the last PPSP meeting in Miami and the discussion is in the PPSP minutes that are included in the Agenda Book for this SCICOM meeting. PPSP spent a lot of time on discussing recommendations to iPPSP regarding transition and the riser drilling safety issues. The recommendations have been prepared and transmitted to iPC, and will come up for discussion at the iPC meeting.

SCIMP (ODP matters only; IODP matters deferred to iPC)

Allan started with the report from the visit to the ship during the last SCIMP meeting in December 2001 in Hawaii. SCIMP found the ship in good shape, with laboratories in excellent condition, and noticed that more emphasis had been put on shipboard safety. The only minor problem was the lack of the sufficient counter space in some labs.

Allan then presented to SCICOM the SCIMP recommendations regarding ODP issues. The section below records the discussions in the order in which Allan presented the recommendations. Following the discussions, three SCICOM consensuses were drafted overnight and actually approved on the following day, but these consensuses are recorded in this section of the minutes.

SCIMP Recommendation 01-2-08

SCIMP recognizes the need for resistivity measurements on cores which are reliable, and preferably continuous and easy to make. SCIMP recommends TAMU facilitate a collaborative pilot study of the Geotek non-contact resistivity measurements system during Leg 204. We note Geotek has agreed to provide a sensor and technical specifications to TAMU prior to Leg 203 to enable integration with the MST to be completed prior to the start of Leg 204.

Becker asked if TAMU intends to facilitate this pilot study, and Baldauf confirmed that it will be carried out on Leg 204.

SCIMP Recommendation 01-2-07

SCIMP applauds the production of 1-2 page technical summaries by ODP operators in response to SCICOM's recommendation for the production of legacy documents.

SCIMP Recommendation 01-2-06

SCIMP congratulates ODP logging services and Site Survey Data Bank personnel on the successful implementation of the IESX Joint Pilot Study. SCIMP recommends acceptance of all the recommendations arising from the study.

SCIMP Recommendation 01-2-03

SCIMP recommends that a JANUS Mirror site be established at NGDC, and the JANUS database be transferred to NGDC as a collection of flat ASCII files as the official long-term archive. SCIMP further recommends that a data legacy working group, composed of both SCIMP and non-SCIMP members, be established to: assist TAMU in setting data migration priorities, assist TAMU in generation of the critical metadata, and determine the content and structure of the archive files.

Allan reported that since that last meeting the SCIMP responsibility regarding data migration has been clarified, but the recommendation still has merit. SCIMP discussed JANUS database transfer to archive and it was recognized that metadata issues were the most complex and that some descriptive data are still not in the database. Some questions remain to be answered, for instance what should be saved in terms of descriptive files and how electronic publications should be archived. The recommendation reflects that SCIMP feels that a working group should be established to oversee the archiving process.

Baldauf noted that this recommendation should be addressed in two separate steps, one dealing with the Janus mirror at NGDC and the other dealing with the details of archiving the metadata. Farrell noted that according to the content of the TAMU report in the Agenda Book, there is no need to mirror Janus in NGDC. Fox and Baldauf explained that there is already a mirror site in Japan, and that the UK and Germany are also engaged in discussions to host Janus mirror sites, so there is actually no urgent need for another mirror facility at NGDC. Farrell asked if NGDC had given any indication that it would provide a Janus mirror site. Fox was not sure about any commitments at this time, and he added that this was a somewhat controversial issue at NGDC.

Becker wondered how SCICOM should respond to this SCIMP recommendation, i.e., whether the working group should be set up now or whether SCICOM should wait until after the next SCIMP meeting at which more information would be gathered. Allan said that the core of the matter at this point is deciding what is worth archiving and what is not, which is a judgment decision that must be made carefully. He said that the best approach would be first, to decide if there should be a mirror site at NGDC, and second to gather information regarding the different aspects of metadata archiving, so an informed decision can be made at the next SCIMP meeting as to whether a working group is needed or not.

More discussion followed about the Janus mirror site at NGDC and Mayer said that Janus does not fulfill the NGDC requirements for the data archive because it is software dependent. Alternatively, when the data are output as flat files, they lose functionality as a database. Allan reminded SCICOM that data legacy is not limited to just Janus, and at this moment the priority is to solve the metadata issues. Fisher said that we should not delay a working group too near to the end of the program; the issues should be specified and the working group should start working on them as soon as possible. Bohlen added that Interim Director Pias, absent at this meeting, is strongly committed to the ODP data archive matters and could be expected to follow up actively; and that he (Bohlen) would prefer deferring forming a working group until after the next SCIMP meeting in order to give Pias some time to address the issues.

Discussion continued and Sager emphasized that SCICOM must distinguish the two kinds of data arrangements at NGDC – mirroring and flat archives. Fox also reminded that in the phase-out plan the relational database is to be handed over to the new program, so there will be seamless transition from the point of view of data users. Austin added that Fisher's comment was very important and SCICOM should recognize that we need to identify people to help with handover of Janus.

MacLeod wondered if the difficulties with establishment of a Janus mirror are due to resource limitations at NGDC and if perhaps ODP could provide those resources for them. Fox clarified that this is not built into ODP budget, and it is NGDC that is supposed to provide the fee for Oracle license and the hardware (server). It was restated that the flat files would be archived at NGDC. Mayer wondered if it would be possible to recreate the functional database from flat files. He also added that considerable thought needs to be put into those matters, but fortunately ODP has a very knowledgeable director.

Fisher, Austin and Mayer were asked by Becker to draft a potential consensus SCICOM response, which was approved the following day as follows:

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SCICOM therefore recommends that SCIMP plan for formation of a data legacy working group, including an evaluation of what expertise is needed and available (both within and outside SCIMP) and what the working group mandate should be. Issues to be addressed by this working group may include identification of (a) critical archiving gaps with present data sets, (b) challenges associated with storage of metadata, and (c) problems that could be avoided during development of IODP data bases, policies, and storage procedures. We ask SCIMP to consult with the interim director of JOI, who has considered many of the relevant issues, and (informally) with appropriate iSAS panels as necessary, and to report back to SCICOM by August 2002 with a plan for formation of this working group as part of the broader issues of ODP legacy and ODP-IODP database transition.

Allan continued with other SCIMP recommendations.

SCIMP Recommendation 01-2-05

SCIMP strongly supports the development of logging-while-coring technology for use in ODP and encourages its testing in remaining ODP legs.

Becker asked Goldberg if cruises post Leg 204 had been identified for possible utilization of resistivity logging-while-coring (LWC). Goldberg explained that LWC will be used for the first time on Leg 204, and if successful and if there is interest, future use could be on another LWD cruise, e.g. Leg 209. Becker reminded SCICOM that this should be decided before the Leg 209 pre-cruise meeting, and he asked for presentation of Leg 204 LWC results at the next SCICOM meeting in August. Goldberg agreed.

SCIMP Recommendation 01-2-01

SCIMP recommends that the Science Operator expand the hard-drive capacity of the Novell network used by shipboard scientists to access and manipulate digital imaging data so that whole-leg data are available and can be routinely accessed. The expanded disk capacity will not substitute for archiving.

Allan explained that during the Leg 199 the shipboard scientific party had run out of disk space to handle working files with the core images. Janecek had suggested during the December 2001 SCIMP meeting that adding more disc space would solve the problem, because these are working data and they don't need to be archived. Baldauf said that this recommendation is being addressed and will be implemented for Leg 202.

SCIMP Recommendation 01-2-12

SCIMP recommends that the susceptibility point measurement (for the AMST) be available on the ship, so that it can be used when needed, especially for paleoceanography legs.

Baldauf said that this recommendation has already been implemented on the ship.

SCIMP Recommendation 01-2-11

SCIMP believes that the current policy regarding borrowing of thin sections is generally adequate and appropriate. Thin sections may be borrowed for a twelve month period, and this loan may be renewed. The borrower is obligated to return thin sections when the research is completed or when requested to do so by the relevant Program manager.

SCIMP recommends that the thin section policy be amended such that failure to keep a loan current or to return a requested section may result in a hold on subsequent sample requests until the sections are returned or the loan is reviewed.

Allan said that some scientists keep thin sections on loan for up to 8 years and the return policy should be reinforced. Users could renew the loan without the thin section being returned. Baldauf explained that actually this is a current policy but the mechanism forcing scientists to return the materials is not strong enough. It is important because the longer the thin sections are away the higher the probability of destruction. Allan said that he understands that this recommendation is in the current policy but SCIMP recognized that the policy is not strong enough. Austin emphasized that the ODP thin section collection is an important part of the ODP legacy and it should be kept coherent.

Allan then presented the SCIMP recommendation dealing with Micropaleontological Research Centers.

SCIMP Recommendation 01-2-09

To support curation of MRC samples and to facilitate integration, documentation, and use of MRC collections, SCIMP encourages ODP member offices to help fund purchase of curatorial supplies and underwrite other MRC costs (e.g., shipping, travel) when possible.

Austin suggested that these two recommendations (SCIMP 01-2-11 and 01-2-09) could be addressed by SCICOM in one consensus. Becker drafted the following consensus that was approved the following day:

SCICOM Consensus 02-01-04: SCICOM reaffirms the importance of all ODP samples as an integral part of the ODP legacy. Therefore, SCICOM requests that the Science Operator take all necessary steps to maintain the integrity of the entire ODP sample collection as the ODP phase-out approaches. This includes the thin section collection as noted in SCIMP recommendation 01-2-11. In addition, SCICOM endorses SCIMP recommendation 01-2-9 encouraging host countries of Micropaleontological Reference Centers to underwrite costs of maintaining these centers.

Allan then presented a recommendation addressed to both ODP and IODP, regarding the need for the logging magnetic susceptibility measurement with resolution as good as core magnetic susceptibility measurements.

SCIMP Recommendation 01-2-04

SCIMP recognizes the scientific benefits of a high resolution downhole magnetic susceptibility tool capable of measurements at a similar resolution to those made on whole core (<10 cm). SCIMP encourages the development of such a high resolution magnetic susceptibility tool, to be available for potential use in ODP and IODP. This development could be a third party tool.

Austin said that as we enter the transition period, iPC will look into these capabilities.

The following consensus was drafted overnight and adopted the following day in response to six of the above SCIMP recommendations:

SCICOM Consensus 02-01-05: SCICOM accepts the following SCIMP recommendations and applauds the efforts already made by the ODP Operators to address them:

SCIMP recommendation 01-2-01 concerning hard-drive support for digital core data
SCIMP recommendation 01-2-06 concerning the IESX Joint Pilot Study
SCIMP recommendation 01-2-07 concerning the legacy technical summary documents
SCIMP recommendation 01-2-08 concerning core resistivity measurements
SCIMP recommendation 01-2-12 susceptibility point measurement for AMST

In addition, SCICOM endorses SCIMP recommendation 01-2-04 concerning potential development of a high-resolution downhole magnetic susceptibility logging tool for ODP and IODP.

Finally, Allan reported on the progress with hard rock description working group that will meet in College Station (May 9-10, 2002) and report to SCIMP at the June meeting. The members of the group are: J. Allan (SCIMP), J. Alt, S. Arai, S. Bloomer, G. Ceuleneer, H. Dick, P. Herzig, E. Kikawa (SCIMP), C. MacLeod, J. Miller, J. Natland, P. Robinson. The meeting agenda will include the following items:

- 1) Digital Image archive image?
- 2) 3-D context of information
- 3) Real-time graphical interface to database
- 4) Real-time annotation of images
- 5) Nature of description programs

Becker asked if just one meeting would be enough, as approved at the August 2001 SCICOM, and Allan said that this would be decided at the first meeting. Becker noted with approval that there are two SCICOM members in this working group.

Karner reported that there were problems with MST natural gamma radiation (NGR) measurements collection on the Leg 194, but Allan said that it has not been brought to the attention of SCIMP. This problem compromised most of the acquired MST-NGR data collected. Moore noted that during Leg 199 the MST-NGR generally worked well, but there were some occasional problems. Baldauf promised to follow up on that and report back to SCICOM during its next meeting in August. Allan added that during the SCIMP visit to the ship the issue had not been noticed or reported by technicians.

I. ODP Legacy

Achievements and Opportunities update

Becker updated SCICOM on the progress with the Achievements and Opportunities legacy document, now scheduled to be published as a special issue of the *JOIDES Journal* by June. A CD is also being prepared with pdf proofs of the 16 thematic contributions for distribution during the European ODP Forum in Tromso in April. The printed copies of the special issue should be ready for EXCOM in June 2002. Becker pointed out that the circulation of this particular issue will be higher than usual. Austin hoped that there would really be enough copies for all interested scientists. He also added that ODP should make sure that all the legacy items documenting the 17 years of the program accomplishments should be made as accessible to the public as possible.

When it comes to thematic syntheses beyond the Achievements and Opportunities publication, Becker suggested that these would require dedicated individuals, for example as for the *Ophiolites and Oceanic Crust* GSA Special Paper organized by Yildirim Dilek and colleagues, or an ocean crustal hydrogeology volume being organized by Earl Davis and Harry Elderfield. Becker emphasized that the JOIDES office would help in such efforts. He also asked that SCICOM and the JOIDES Office be informed if such initiatives are undertaken in other ODP themes.

Austin returned to the issue of ODP collaboration with ION project and wondered if perhaps we should have a one page legacy summary presenting where we stand with ION, and other programs like MARGINS and InterRidge, at the end of the ODP program. This would not be a thematic but a programmatic kind of legacy document. Becker acknowledged that this is a good idea and suggested such summaries could be published in the *JOIDES Journal*.

SSEPs report

Byrne briefly presented the recommendations of the SSEPs working group on legacy activities formed during the November 2001 SSEPs meeting in Japan:

- SSEPs note that it is desirable to develop legacy activities that can also broaden IODP constituency and participation, which will be necessary to staff a program that includes MSP, riser and riserless drilling.
- SSEPs recognize and appreciate the educational and outreach aspects of a web-based “Greatest Hits.” However, the SSEPs respectfully note that 100-200 contributions are unlikely to all be “Greatest”. The SSEPs recommend professional preparation of a high quality printed brochure containing selected contributions for funding agencies.
- SSEPs note that the “Achievements and Opportunities” volume overseen by SCICOM could be a great vehicle for outreach and education of the general public if also published in a place such as *Scientific American*.
- SSEPs recommend that IODP build a web-accessible library of high quality downloadable figures for geoscience educators to use.

- SSEPs recommend the links to the various legacy documents on JOIDES and iSAS websites.

General discussion about the legacy issues followed with Brown noting that downloadable figures would be great. It would be also useful, if the figures from the “Distinguished Lecturer Series” were published on the web for download as well. Bohlen said that lecturers were hesitant to publish preliminary data figures, but Brown clarified that he meant general figures from the lectures.

Finally it was also suggested that there should be a long-term plan to consolidate all the legacy documents on one website in the future. Becker noted that a plan to do so was discussed at the January “ODP Managers” meeting, and such a website would probably be consolidated at JOI after 2003.

Becker added that the JOIDES system of proposal review as part of the ODP legacy will be presented by the SSEPs co-chairs during the iPC meeting. He noted that all unscheduled JOIDES proposals (with only one exception) had been passed to iSAS, representing another key component of the ODP legacy.

Brown wondered about pore fluids since they are part of the sample legacy as well. Discussion followed about the quality of those samples that have been stored for a long time and probable chemical alteration. Brown agreed that some characteristic of the sample chemistry can alter with time but some other properties could still be measured even if the samples had been stored for a long period of time. Becker noted that this could perhaps be recommended to iPC.

J. Leg Science Reports

Leg 195

Salisbury presented the scientific results of the Leg 195 – “Seafloor Observatories and Paleohistory of the Kuroshio Current”. The leg three major objectives were:

- Site 1200 - Installation of the geochemical observatory (CORK) to sample fluids from the décollement below the Mariana forearc
- Site 1201 - Installation of the ION seismic observatory for the purpose of tomographic studies of the deep structure of the subduction zone.
- Site 1202 - Coring of the Kuroshio current sediments for paleoceanographic studies.

Site 1200 is situated in Chamorro Seamount, which is a serpentine mud volcano in the forearc of Mariana Trench that taps fluids coming from deep in the subduction zone. Recovered material included mud breccias composed predominantly of serpentine minerals and xenoliths of serpentinized peridotite. An extensive suite of geochemical measurements revealed pore water signatures indicating the upward flow of fluids from the top of the subducting slab. The installation of the CORK geochemical observatory was hindered by the difficulties in drilling through the ultramafic clasts together with hole collapse, but finally the observatory was successfully installed to about 200 mbsf.

The ION observatory was installed at the Site 1201 for world-wide tomographic applications but particularly to investigate whether the Pacific plate is penetrating into the lower mantle below the 670 km discontinuity under the Mariana Trench but not under the Izu-Ogasawara (Bonin) Trench. The cored material at that site included 50 m of pelagic sediments at the top and about 450 m of volcanoclastic turbidities originating from the Palau-Kyushu Ridge. The seismometer package was cemented in place at the depth of about 560 mbsf. The observatory was scheduled to be activated about a week after the meeting, during a visit with the ROV Kaiko to make the final underwater connections. Subsequent reports indicate that this operation was successfully conducted and the observatory is fully functional.

Site 1202 was situated under the Kuroshio Current in an area that is shallow compared to the CCD, allowing calcareous microfossils to be preserved. Coring recovered 410 m of calcareous silty clay, and preliminary dating indicated that this environment was characterized by very high sedimentation rates (>3 m/ky). Logging at the site was impossible because of the strong intensity of current-induced drill string vibration.

Farrell wondered who is working on the samples from Site 1202, and Salisbury responded that they include scientists from Taiwan, PR of China, and Germany. Ishii asked about the recovery at Site 1200; Salisbury explained that it was about 70% in the APC section, but was very low in the xenoliths. Fox noted that possibly the ADCB could have helped recovery.

Leg 196

Mikada and Becker presented the results of the Leg 196 – “Deformation and Fluid Flow Processes in the Nankai Trough Accretionary Prism: Logging While Drilling (LWD) and Advanced CORKs”. This leg was the second of a two-leg program (Legs 190 and 196) to investigate the inter-relationships of structure, tectonics, deformation and fluid flow in the Nankai Trough, a program which built on Leg 131 coring at Site 808 at the deformation front. Mikada presented the LWD results from Site 808 showing interpreted fractures and borehole breakouts indicating the *in situ* stress measurement. Becker then described the ACORK installation during the second segment of Leg 196. The specific objectives of the Leg 196 ACORKs included monitoring *in situ* pressures and determining large scale permeability across the décollement at Site 808, the stratigraphic projection of décollement at the reference Site 1173, and in basement at both sites. The installation went quite well in Hole 1173B, except for premature setting of the bridge plug. However, in Hole 808I deterioration of drilling conditions and under-reamer failure stopped the installation 30 m shallower than planned. This left about 30 m of casing unsupported above seafloor, and this section fell over after the drillstring was withdrawn. Most probably the ACORK data can still be retrieved successfully because the equipment fell to the seafloor in such position that the pressure-monitoring lines were not damaged and the submersible connector faces up. Fox admitted that the under-reamers were under-engineered, but noted that they were the best available on the market at the time. Becker concluded his presentation with interesting videos from the reentry and ACORK at Site 1173.

M. MARGINS Report (moved from next day to this afternoon)

Karner began by stating that MARGINS is an NSF-funded initiative, the goal of which is “to understand the complex interplay of processes that govern the evolution of continental margins.” The program strategy is to study the whole active system on multiple scales in multidisciplinary case studies that integrate observational, laboratory and theoretical aspects. The program currently focuses on 4 themes, each including two areas for comparative studies:

1. Seismogenic zone (SEIZE) – Nankai and CostaRica/Nicaragua
2. Subduction Factory (SubFac) – Izu-Bonin-Mariana (IBM) and Costa Rica/Nicaragua
3. Rupturing Continental Lithosphere (RCL) – Gulf of California/Salton Trough and Central/Northern Red Sea
4. Source to Sink (S2S) – New Zealand and New Guinea

Karner briefly discussed each of the initiatives and noted that MARGINS is planned as a 15 years program and currently it is in its 4th year. Some of the program activities include town meetings, workshops and theoretical institutes. An important component of MARGIN operations is the data policy that encourages scientist to make the data public as soon as possible in order to maximize technology transfer across the program, encourage integration of science, coordination of research, and the construction and testing of hypotheses. Finally Karner discussed IODP proposal preparation issues for drilling in the MARGIN focus sites.

March 20 - SCICOM/OPCOM joint session

K. OPCOM/SCICOM action items

- Leg 210 contingency plans (Aug 2001 SCICOM request)

Becker read the SCICOM watchdog letter prepared by Robertson that was sent to proponents of Leg 210 after the August SCICOM meeting requesting specification of a contingency plan. Further discussion was led by Austin, who presented the proponents’ response in the form of chart with detailed options. Following the discussion Becker suggested that it seems entirely reasonable to approve this contingency plan. Sager mentioned that SCICOM should avoid such situations in future in order not to set a precedent because normally SCICOM doesn’t specifically consider contingency plans for all legs. Becker generally agreed but also noted that the August 2001 SCICOM request was motivated because the success of Leg 210, at least as planned, depended on reaching basement at the bottom of an extremely deep hole. By asking for a fallback plan, SCICOM wanted to ensure a successful finale to ODP in case this couldn't be achieved.

SCICOM Consensus 02-01-06: SCICOM accepts the Leg 210 contingency plans.

SCICOM engaged in a discussion about APL 21, which was received at the JOIDES Office for the March 2002 proposal deadline but requested scheduling very shortly afterward, during summer of 2002. Baldauf suggested that from the operational point of view the program could be implemented at the ends of the either Leg 203 or Leg 204, with the first representing a better possibility for time becoming available.

Becker first asked for discussion of a suitable review procedure for this APL given the time pressures. He explained normal JOIDES policy, which states that APL's are first reviewed by SSEPs before being considered by SCICOM. The SSEPs co-chairs agreed to arrange for email review by SSEPs subcommittee review within a month, and Becker suggested that after this SSEPs email review, SCICOM could then discuss the APL and come to a scheduling decision by email. Austin concurred with that proposition, as did the rest of the committee. Becker then noted that, given the time pressures, he would circulate ground rules for the SCICOM email review of the APL, with a deadline imposed for responses to ensure a decision in timely fashion and a default assumed in the case of any non-responders.

- possibility of post-contract JR work - implications for ODP

As an information item only for SCICOM, Becker started a discussion about the possibility of using JR for scientific drilling charter work after the ODP contract ends. Bohlen said that JOI continues to pursue such opportunities, including some discussions with Canadian industry and Chevron, with emphasis put on the notion that the academic community must be fully engaged and the potential benefit must be clear to NSF. He noted that only the most preliminary discussions have occurred to date and cautioned against high expectations. Bohlen concluded that it would be good for JOI to catalyze good industry/academia partnership as a future model for IODP, and furthermore it would also help to maintain ODP/IODP focus.

Fox said that after October 1, 2003, ODP does not have a contract with ODL and so the program is not in a strong negotiating position for post-ODP work. Fortunately the ODP relationship with ODL is very good, and an additional advantage is that ODP has the drillpipe and the drilling equipment. Austin asked about possibility of using JR as future non-riser vessel in IODP and he wondered when ODL plans to start using the vessel for other purposes. Fox noted that time was limited, because the corporate discussions about future utilization of the vessel are going on now; obviously, ODL is interested primarily in its corporate goals, so ODP does not have any guarantees. Fox added that another advantage to using the JR for scientific drilling after October 1, 2003 would be to maintain the stability in the ODL crew. If the JR continues to conduct scientific drilling in the interim, then the experienced ODL crew could move later to play a role in a new IODP program.

Becker noted that if there is going to be any post-contract engagement for JR, it is not clear what effect, if any, that might have on the final days of the ODP contract, which now includes a transit and demobilization. He suggested that there might be a remote possibility that additional time could open up for ODP work before the end of the ODP contract, although he noted there is no budget available to support any possible ODP work after Leg 210. He added that, nevertheless, he wants to ensure that SCICOM is not surprised, but is ready with acceptable scientific options, should such remote possibilities come to fruition in the future.

L. JOI update on Lomonosov Ridge Project Management

Farrell reviewed progress made on Lomonosov Ridge Project Management since August 2001, when SCICOM endorsed the joint JOI/European initiative to set up a Lomonosov Ridge Project Management team (SCICOM Motion 01-02-18). In response to an international RFP, the Swedish Polar Research Secretariat (SPRS) (the only applicant) was endorsed, and in February 2002 NSF approved a JOI-SPRS contract, which was coordinated with JEODI. Farrell presented details of the contract management structure and SPRS planning progress. The most recent developments were: (1) a meeting of drilling, ice and weather management, vessel, and other operations experts in Calgary, March 4-6, 2002; and (2) a March 19th meeting with *Botnica* owner/operator and Russian colleagues. The field program is being planned on a timetable for summer 2004, to prepare for the possibility that iPC will approve it as an early IODP operation. Farrell concluded his presentation with details of another very successful Arctic expedition – AMORE 2001.

Oppo asked about the size of the shipboard scientific party for the *Botnica* operation as being planned. Farrell answered that according to the participants of the Calgary planning meeting, mostly logistical and operational experts, the smaller the better. Kinoshita asked if the costs of the operation have been revisited since originally set out in the 2001 DPG report, because there seem to have been some changes in the operational details. Farrell stated that the costs have not been revised, but are still estimated to be about \$9M. Kinoshita then wondered if the program could realistically be mobilized in 2004. Farrell confirmed that all indications are positive, and nothing has come to attention that would indicate it is not possible. Farrell and Ludden also reconfirmed that this is envisioned as a fully international IODP operation open to all scientists, with Europe planning to provide platform operating costs (POCs). Bohlen noted that much is known about the costs and the estimates are very robust. Kinoshita also indicated that some segments of the potential IODP community felt left out of the main communication stream about Arctic planning, so he encouraged distribution of information through a vehicle such as the iSAS office. Kinoshita particularly encouraged use of the iSAS Office in the case of the Arctic program, so all information about this potential early IODP program can be fully shared within the IODP community. Farrell stressed that full and open communication is the intention and the reason he was presenting the report at SCICOM with iPC observers. Becker thanked Farrell for the report on SCICOM's behalf, and suggested a consensus that SCICOM fully accepted:

<p>SCICOM Consensus 02-01-07: SCICOM records its approval and excitement at the progress being made by the joint JOI/JEODI effort toward implementing SCICOM's top-ranked proposal (Lomonosov Ridge, Arctic) as an IODP program.</p>

M. MARGINS (presented previous afternoon)

N. Next meeting, other business, final motions

SCICOM reconfirmed the plan made in August 2001 that the August 2002 meeting will be organized by ECOD and France in Belgium. Kenter indicated that the location will be in Ghent. The SCICOM session will occupy one day (26 August) prior to the a three-day iPC meeting 27-29 August.

For the March 2003 SCICOM/iPC meeting it is again the US turn to host, and Austin proposed to host at the University of Texas at Austin.

SCICOM Consensus 02-01-08: SCICOM accepts Jamie Austin's invitation to host March 2003 SCICOM/iPC meeting in Austin, Texas.

Bloomer then presented a consensus to thank Julie Morris, for her outstanding service as the ISSEP Chair.

SCICOM Consensus 02-01-0x: SCICOM expresses its great appreciation to Julie Morris for her extraordinary service as chair of ISSEP. ODP was fortunate to have the service of Julie's considerable talents at a particularly important time for the program. She worked not only to shepherd the last set of ODP proposals through the advisory process, but also helped lead the effort to plan for the IODP and to preserve the legacy of 17 years of ocean drilling. Julie, in partnership with Neil Lundberg, set an outstanding example of how to work cooperatively, collaboratively, and effectively across disciplines. She was always ready with thoughtful, clear, and insightful information about the proposals in her charge and about the concerns and desires of the SSEPs. It was a great pleasure for all of us to work with her and we look forward to her participation in the next phase of scientific ocean drilling.

They say Julie Morris lacks height,
But SCICOM doubts not her might.
At herding a SSEP,
She proved quite adept,
We'll all greatly miss her insight.

Before adjourning, Becker proposed a final consensus of thanks to the Japanese hosts for the first-rate organization of the meeting.

SCICOM Consensus 02-01-10: SCICOM thanks our hosts – Ishii-san and the ODP-Japan Office, Yamada-san and the OD21 Office – for the wonderful arrangements for the SCICOM/iPC meeting.

MEETING ADJOURNED