Report of the JOIDES Scientific Measurements Panel

The New Otani Kaimana Beach Hotel. Honolulu, Hawaii

December 17-19, 2001

Summary of SCIMP Recommendations to OPCOM/SCICOM

The following twelve recommendations resulting from the December, 2001 SCIMP meeting in Honolulu, HI are forwarded to OPCOM/SCICOM for comment and approval. All motions were passed unanimously.

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.
Passed 14-0-0

SCIMP Recommendation 01-2-02

SCIMP recommends that iSCIMP investigate using digital core images as the method for archiving core images in iODP.
Passed 14-0-0

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.
Passed 14-0-0

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.
Passed 14-0-0

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.
Passed 14-0-0

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.
Passed 14-0-0

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.
Passed 12-0-0

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.
Passed 14-0-0

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.
Passed 14-0-0

SCIMP Recommendation 01-2-10
SCIMP recommends that the role and maintenance of the MRC's in the IODP structure be addressed by iSAS. Specific topics of concern include adequately supporting curation of the collections and exploiting curator's taxonomic and stratigraphic expertise in advancing Program goals (*e.g.*, creation and vetting of dictionaries for paleontological applications, assembling reference sample sets, creation of digital image atlases, creation of stratigraphic databases). It is recognized that achieving these goals will not be likely under the current *ad hoc* funding of the MRC effort.
Passed 14-0-0

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.
Passed 14-0-0

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.
Passed 14-0-0

Additional Highlights

SCIMP Consensus 01-2-01
SCIMP thanks Mike Fuller for his extraordinary efforts in support of this meeting. It has been a complete success. Mahalo.
Passed 14-0-0

Action Items:

1) SSDB and BRG will provide revised digital data submission guidelines to SCIMP and SSP for review.

2) A set of Microbiology lab protocols should be documented during Leg 201, with coordination by Dave Smith.

Scientific Measurements Panel Member List

Jamie Allan	(US, Appalachian State University)
Christian Buecker	(Germany, RWE-DEA)
David Divins	(US, NGDC)
Javier Escartin	(France, CCR)
Mike Fuller	(US, University of Hawaii)
Eiichi Kikawa	(Japan, JAMSTEC)
Brad Linsley	(US, SUNY/Albany)
Mike Lovell	(UK, Leicester University)
Ken MacLeod	(US, University of Missouri)
Ellen Martin	(US, Florida)
Philip Meyers	(US, University of Michigan)
Peter Michael	(US, University of Tulsa)
Carlos Pirmez	(US, Shell)
Leonardo Sagnotti	(ECOD, INGV)
Min-Te Chen	(PACRIM alternate, National Taiwan Ocean University)
David Smith	(US, University of Rhode Island)

Liaisons

Brad Clement	(NSF)
Patty Fryer	(SCICOM)
Brad Julson	(ODP-TAMU)
Frank Rack	(JOI)
Mary Reagan	(ODP-LDEO)
Carl Richter	(ODP-TAMU)
Elspeth Urquhart	(JOIDES Office)

Guests

David Becker	(ODP-TAMU)
Susan Freeman	(ODP-TAMU)
Dave Goldberg	(ODP-LDEO)
Tom Janecek	(FSU)
Jimmy Kinoshita	(iPC Co-Chair)
Kaz (Kuru) Kuroki	(JAMSTEC)
Saneatsu Saito	(Japan, JAMSTEC)
Jeff Schuffert	(iSAS Office)
Peter Schultheiss	(GEOTEK)
Doug Schmitt	(Canada, Univ. Alberta)
Ken Takai	(Japan, JAMSTEC)
Yasushi Tsuritani	(JAMSTEC)

Regrets

Dae Choul Kim	(PACRIM, Pukyong National University)

A) Introduction
The meeting began at 9:00 AM on Monday, December 17 at the New Otani Hotel, Honolulu. After members and guests introduced themselves (with several guests representing iSCIMP members), Mike Fuller gave an overview of logistics of the meeting. This scribe notes that the view of the beach and ocean from the back of the meeting room was stupendous. The Co-Chairs noted that approval of the June 2001 meeting minutes had been already obtained by e-mail, with assent to this given by Panel. A review of the amended agenda followed, with a call for additional agenda items.

B) Update on Prior SCIMP Recommendations
Eiichi Kikawa gave an overview of SCICOM responses to SCIMP's recommendations from the June 2001 meeting. SCICOM endorsed all of the recommendations. Several of the SCIMP recommendations resulted in SCICOM Motions or Consensus that are detailed below.

SCIMP Recommendation 01-1-03 and TEDCOM Recommendation 01-1-01 resulted in SCICOM Motion 01-02-06: In recognition of critical importance of technological advancements in support of science, SCICOM recommends that the "nominal" drilling leg contain up to 48 hours dedicated to engineering developments. In this context, "engineering developments" are defined as those that are critical to high priority scientific ocean drilling and that cannot be made operational without appropriate testing at sea. The appropriate use of this time will be determined by OPCOM after consultation with TEDCOM, SCIMP, and the Operators and finally would be decided by SCICOM. Plans for use of this engineering time will be transmitted to the leg co-chiefs no later than the pre-cruise meeting.

During Panel discussion of the SCICOM motion, it was noted that no engineering developments had been presented to SCIMP for consultation.

SCIMP Recommendation 01-1-04 resulted in SCICOM Consensus 01-02-04:
In response to SCIMP Recommendation 01-1-4, SCICOM approves a small SCIMP working group to define the characteristics and requirements of a hard rock description methodology. This working group should have approximately 6 members representing volcanic, magmatic, metamorphic, and structural expertise, should be organized no later than the next SCIMP meeting, and should meet once at ODP-TAMU. The SCIMP co-chairs should be prepared to report on the working group findings at the next SCICOM meeting.

During Panel discussion of the SCICOM Consensus, Jamie Allan (who will lead the working group) noted that the meeting had been approved by JOIDES and JOI, and that the group will be somewhat larger with somewhat broader expertise than called for by SCICOM, with 6 US scientists and 6 member partner scientists invited. The meeting will occur in the April-June 2002 timeframe. Panel made recommendations that GIS experience and microbiology experience was needed. Dave Becker noted that he has GIS experience, and it was agreed that he will be appraised of meeting details so that his participation is ensured.

SCIMP Recommendation 01-1-8 resulted in SCICOM Motion 01-02-05:
SCICOM supports the intention of SCIMP Recommendation 01-1-08 and reaffirms that post-cruise research results are an important legacy of ODP. SCICOM therefore expects all shipboard scientists and all scientists who work with data, samples, and results from ODP to provide ODP/TAMU with a list of all papers produced using those results and data, and a digital copy of those papers if it is possible. In addition, SCICOM encourages ODP/TAMU to develop a standard metadata form that can be submitted by ODP researchers, which would facilitate the tracking of the types and locations of available data.

During Panel discussion of this SCICOM motion, it was observed that vigilance has increased from the science operators and funding agencies regarding the need to submit post-cruise data. It is a continuing problem, and a new AGI Georef database, soon to be online, will help to identify ODP-related data for the science community.

C) Review of Action Items from June, 2001 SCIMP Meeting

Core Description
a) TAMU and SCIMP watchdog Dave Divins to provide update on additional metadata tagging planned for core digital images.

Becker, Schultheiss, and Divins reported. The current Geotek digital system output is a BMP bitmapped image (approx. 40 mbytes/section). Metadata is carried with the original bitmapped data for calibration and other identification purposes. The on board imaging protocol uses a section identification label at the end of each core section which is imaged as part of the core section. The 'Mr. Sid' compression protocol used on the ship's network creates a compressed file of each core image at a compression ratio of approx. 40-1. A proposal is being developed between Geotek and TAMU for some software modifications that will automatically create companion XML metadata files with each image file created. It will also contain other features including concatenation routines to seamlessly join images (without labels) and create routine RGB data files. It is anticipated that these software developments should be in place for Leg 202.

b) ODP-TAMU explores options for developing a standard means of displaying digital core images analogous to the existing analog core photos.

Tom Janecek generously agreed to address the panel, despite freshly coming off Leg 199. He reported that the Digital Imaging system is perhaps the most well received tool on ship ever, from his recent experience on the cruise. The Leg 199 scientific party built standard core table composites using the images, using them immediately in integrative figures. The scientific party had no use for the currently produced black and white analogue photographs. Tom noted that scientific parties don't see the more useful leg color photographs at sea. Plotting of MST data next to the images proved really useful, and some of these plots were used for making drilling decisions. The scientific party would have liked to concatenate images and display them in core table format in an easy manner. At present, there is a need to manually add core-section-interval data in Adobe Photoshop or similar software, and a need to import the digital images to the barrel sheets. Tom felt that the JOIDES Resolution needs a few large capacity hard disks on the network to support these procedures. Dave Becker replied that several systems to upgrade disk capacity on the drillship are being looked at. It was further noted that the next version of Geoframe has enhanced capabilities for importing image data to enhance core-log data integration.

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.
Passed 14-0-0

With further discussion, a watchdog group to track digital image development was formed, with members Carlos Pirmez, Javier Escartin, Dave Divins, Mike Lovell, and Frank Rack serving as a liaison from JOI.

Frank Rack added that the SCIMP Hard Rock Working Group needs to consult with TAMU Publications to ensure its recommendations are consistent with publication realities if they were to be incorporated in the present program.

Discussion then centered on whether digital images should become the image archive in the current program. There are contractual and practical reasons, including data density, color resolution, etc. that make this difficult but this issue could be considered for the future program by iSCIMP.

SCIMP Recommendation 01-2-02
SCIMP recommends that iSCIMP investigate using digital core images as the method for archiving core images in iODP.
Passed 14-0-0

c) Digital Microphotographic Image Policy- TAMU to provide a comprehensive policy for shipboard acquisition and archiving.

As given in the ODP/TAMU report, SCIMP is pleased to see that a draft policy is being developed and implemented. The images are in TIFF.

Computers/Networks/Software/JANUS

d) TAMU to provide an update on prioritized JANUS work at next meeting. This will provide a context for consideration of adding value-added MST data (defined as processed MST data published in the IR volume) to the JANUS database, or else adding flags as to bad data.

Addition of value-added MST data to the JANUS database will be difficult to implement- see TAMU report. There is a basic lack of resources to accomplish this task. The employee doing the physical properties data migration quit, employee longevity is a problem with migrating data at this point in the program. ODP/TAMU has no data librarian at this time as well. Paleontology data is proving to be very high in demand in terms of web-based data requests, so ODP/TAMU is focusing its JANUS database migration efforts here. Migration of paleontology data alone for the ODP is estimated to require 75 total person months, or over 3 years for 2 employees available to migrate data.

e) Lab Working Team members to assess data file formats and content for conversion of JANUS datafiles to ASCII- what do we want to save, especially information that may not be in flatfield datafiles (like metadata). Dave Divins will give report.

David Divins provided a discussion of what is an archive from a data center prospective and what is needed in order to archive the legacy data of ODP. An archive is composed of the data in a database, it is software independent, and the data in it are accessible now and in the future. Currently, ODP data are accessible through, or are expected to be accessible through, the Janus user interface. The Janus database is extremely complex in its design and is built using an Oracle search engine. For this reason the JANUS database as it exists today is not a suitable format of an archive. Before the data can be transferred to NGDC for long-term archiving it must be reassembled outside of the Oracle table structure such that the data and its associated metadata can stand on their own. Each primary data type collected by ODP will need to be "dumped" from JANUS into a flat ASCII file. This ASCII file will then serve as the official archive. However, there are many issues to deal with before this can take place. These issues include: the population and migration of data into the database and whether or not all data were migrated; the preparation of the necessary metadata; and the identification of what information should comprise the flat ASCII file for each primary data type. Perhaps the most significant of these issues is the generation of the critical metadata. TAMU should begin the preparation of this information as soon as possible so that SCIMP can determine if all the necessary information and data are to be archived.

Basic questions arose in the Panel regarding what do we archive. There are deep hurdles that hinder SCIMP's ability to make cogent recommendations regarding archiving of specific data. First amongst them is a relative lack of easily available documentation regarding the JANUS data structure, as well as myriad and not easily available information regarding data details (such as why data based on the DEC Pro 350 platform is not migrateable into JANUS). Susan Freeman noted that the ODP database is an afterthought, important only in the last few years. There is also a need to track hardware and software systems that were used in the past. Patty Fryer, the SCICOM liaison and former Chair of the old Information Handling Panel, noted that it took over a decade to archive the DSDP data after that program had ended, and what was really needed was a resurrection of the IHP with several of its former members. From Panel experience in initial examination of the JANUS migration issues, it was felt that competence and knowledge of the current SCIMP was inadequate to complete the task in the time available.

Panel felt that any group tasked with overseeing JANUS data migration and archive issues requires that a currently unavailable documentation of the state of every single set of ODP data needs to be compiled before it can move forward in identifying and ranking data to archive. Panel also agreed with Patty Fryer's suggestion of a need to take advantage of the expertise of the original JOIDES group that defined the data model of the JANUS system.

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.
Passed 14-0-0

Downhole Tools
f) Need for high-resolution magnetic susceptibility tool? Christian Buecker and Mike Lovell to report.

Partially based on previous discussion from several SCIMP meetings that have detailed the need for such an instrument, Panel agreed with Buecker's and Lovell's recommendation for encouragement of the development of a high-resolution magnetic susceptibility tool.

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.
Passed 14-0-0

Miscellaneous
g) Mike Fuller will examine the new Shipboard Scientist Handbook.

Mile Fuller forwarded minor comments regarding handbook organization to ODP/TAMU, otherwise noting it was in fine shape.

h) TAMU will produce a spreadsheet documenting current lab equipment, which will include a listing of equipment by lab, schematics and vendor manuals, potential uses for the new program, service contracts, and tech reports.

This spreadsheet was provided in the ODP/TAMU report, and is a useful document.

D) Operator updates from TAMU, JOI, NSF, JOIDES, and BRG

TAMU report
Please refer to the very comprehensive and excellent ODP/TAMU report. Panel noted some frustration that it was not distributed until immediately before the meeting, so that it could not be reviewed prior to the meeting if a panel member attended AGU. Carl Richter further highlighted a few issues. He noted that no more general public tours of the JOIDES Resolution were to take place because of security concerns; private tours can still be arranged. He further reported that scientists now can use Visa/MasterCard on the drillship.

Dave Smith related a negative experience regarding the length of time needed for him to get his sample request fulfilled; Carl noted that this was unusual and requested further feedback if other sample requests have taken more than a few weeks

JOI Report
Brief highlights from Frank Rack's extensive report are as follows:
1) Dan Weill is the new JOI Director; unfortunately, health problems have subsequently caused him to resign. This is a real loss to the ODP.

2) SCICOM/OPCOM produced the last schedule for the JOIDES Resolution in the current ODP, with the FY03 program plan being developed. The FY04-05 closeout plan is also being developed. A prime concern of JOI for the latter is planning for the preservation of the ODP data legacy.

3) A DOE award has been given to JOI (Frank was the PI) for Legs 201/204 deployment of gas hydrate-related equipment and science. This work involves in-situ gas hydrate sampling and characterization, with the total award being about $1M with a 20% cost share from a variety of sources. Hardware highlights of the award include a memory upgrade to the Davis/Villinger tool, acquisition of gas-injector seismic guns, improvements to the Pressure Core System and acquisition of a PCS gas manifold, and adding memory to a variety of ODP tools (DVTP, DVTP-P, APC Methane, APC-T). The Peru Margin (Leg 201) will be the first dedicated microbiology leg.

4) Frank reported on the HYACINTH cooperative agreement with JOI/ODP, with the associated addendum agreement with Fugro and Geotek. The agreement covers deployment of the Fugro Pressure Corer (FPC Hyacinth) along with the Pressure Core Sampler (PCS) on Leg 201 (with 24 hours testing on shallow sites in the early part of cruise). The agreement also covers Leg 204 (Hydrate Ridge), where the Hyace Rotary Corer (HRC) will be used together with the FPC and PCS. Note that bottom motors drive the HYACINTH corers whereas the PCS is driven by the top drive. Frank also described the Lab Transfer System for HYACINTH cores, and highlighted an operational challenge for Leg 204, in that the radioisotope van and engineering van for support of the PCS and other coring tools cannot be deployed at the same time.

Concerns were expressed regarding the correctness of Leg 204 deployment, testing, and development of potentially commercial tools not owned by ODP. Frank replied that ODP is getting scientific benefit from these tools that would not be otherwise available, as well as future benefits regarding limited transfer and licensing of technology knowledge and tools. Contractual agreements regarding the use of HYACE coring tools in the future were between ODP, Fugro and Geotek and not between ODP and the academic institutions within the HYACINTH group.

5) Frank stated that NSF now requires an acknowledgement statement for studies that used ODP material or data in publications resulting from NSF-funded research.

NSF report
Brad Clement gave the report, highlighted by reportage of the 8% budget increase for the NSF for FY 2002. The FY2002 Ocean Sciences Division budget increase is not yet known. Jim Yoder is now installed as the new OCE division director. Bruce Malfait is acting as the Section Head of the new Marine Geosciences Section, with Brad the new rotator in charge of Grants Program at the NSF Ocean Drilling Program. Brad then reviewed recent NSF/ODP awards, and noted that budgets are healthy for the NSF/ODP Grants program. Brad noted the Request for Proposals for the non-riser portion of the new IODP will be going out early next summer.

JOIDES Report
Elspeth Urquhart gave a report bringing the panel up to date on recent JOIDES activities. Recent JOIDES panel meetings (i.e. those since SCIMP last met in June 2001) have been: EXCOM June, UK; SSP July, Palisades; OPCOM/SCICOM August, Portland; SSEPs November, Japan; PPSP December, Miami; TEDCOM December UK

The minutes for EXCOM, SSP, SCICOM are posted on the JOIDES web site as pdf files. At this time (12/17/01) the Minutes from the December meetings of PPSP and TEDCOM are pending. The draft agenda for the January 2002 EXCOM meeting is on the JOIDES Office web page.

Selected highlights from these meetings included:
SCICOM – the scheduling of 5 legs through Leg 210. At the meeting 23 proposals and 4 ancillary program letters were ranked. There are highly ranked proposals for Mission Specific Platforms (MSPs), including the Arctic Lomonosov Ridge proposal, again ranked in first position. These MSPs were ranked but not scheduled for the *JOIDES Resolution*. SCICOM endorsed the Arctic DPG report and recognized the potential for Lomonosov drilling early in IODP, possibly before the other 2 vessels are active.
PPSP - A consensus was reached amongst Pollution and Prevention Safety Panel (PPSP) members that it was a recommendation of PPSP that a five-year term was appropriate for iPPSP membership.

TEDCOM – it was discussed at the recent meeting (December 3/4 01) that there had been no selection of iTAP (iTAP = interim Technical Advisory Panel =TEDCOM) members to date but that the iTAP mandate would be up for approval at the IWG meeting in January, after which staffing could proceed.

With regard to the transfer of proposals to IODP, all proponents of the proposals within the JOIDES system have been contacted and asked for permission for the JOIDES Office to transfer their proposals to IODP. There have been no refusals but some proponents have not yet answered and are being pursued. These amount to only two or three now outstanding as three others are being transferred today (12/17/01). In September Nobu Eguchi from the iSAS office and JoAnne Reuss visited Miami and the bulk of the proposals were transferred. Nobu also transferred some additional proposals after the PPSP December meeting in Miami. All materials transferred were copies of originals.

On the subject of Legacy/Archive issues the following points were reported:
1) Original proposal archives at JOIDES office will all be transferred to JOI in September 2003.
2) Achievements and Opportunities Document – this publication involves the four main themes from the Long Range Plan. Submissions are almost complete with only one paper missing (this submission was received in early January 2002). When complete it will be published in the next JOIDES Journal, i.e. winter 2001/02. The papers already received are due to be posted on the web in the very near future (these have since been posted in early January 2002).
3) JOIDES Journal - The current issue of the JOIDES Journal (vol. 27[2]) is being mailed this week (12/17/01).
4) Greatest Hits 2 (resulting from EXCOM Motion 01-1-8) - Contributions consist of one page articles including diagrams and figures. The articles are aimed at an educated but not scientifically or technically literate audience. Most contributions for this volume have now been received for the November 30 deadline. It will probably be produced on the web in February 2002. SSEPs agreed to review the articles. Dr. Jimmy Kinoshita has raised the question of translation into member country languages, but this issue has not yet been addressed.

The interim panels, - iTAP (=iTEDCOM) and Industrial Liaison Panel are still to be staffed.

Future meetings of the JOIDES advisory panels are to be approved only when truly justified for JOIDES business. There has been a request from TAMU that the joint TEDCOM/SCIMP meeting, scheduled to be held in College Station in June 2002, be held instead in the week of July 22. This is due to a port call in early June and other meetings to be held during the remainder of June/July. Other JOIDES meetings scheduled in 2002 are PPSP in Barcelona on June 10/11, EXCOM in Granada on 25/26 June. SCIMP will be the only JOIDES panel with a full meeting schedule through to Sept 2003.

Borehole Research Group (BRG) Report
Please see the submitted report, which Dave Goldberg and Mary Reagan gave highlights from. An overview of results from the resistive logging while drilling (LWD) for Nankai was given. One can easily see borehole breakouts, from which the stress regime can be mapped. Fine-scale sediment bedding was imaged by the resistive LWD as well. This system will be run again on Leg 204. Logging while coring is also planned as a backup strategy for Leg 204, although minor modifications of existing tools need to occur. These modifications include making a new button sleeve for the Anadrill portion of the LWD tool, and making a new landing sub for the core barrel that will be used (originally, a MDCB core barrel). This back-up system is less capable than the primary planned LWD, as the operator cannot stack logging tools-logging while coring will nonetheless allow use of the Resistivity at the Bit tool. Panel was excited by this possibility, resulting in the following recommendation:

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.
Passed 14-0-0

Regarding other recent cruises, Dave reported that the Gottingen Magnetometer deployment on Leg 197 went well, producing continuous and high-resolution data- essentially mimicking full recovery and showing

magnetic inclination variation very well. The overlap with Schlumberger magnetic tool is remarkable. Of interest to all future legs, Dave reported that the active heave compensation (AHC) reduces downbit weight by a factor of about 2.6.

Mary then gave an overview of the IESX Joint Pilot Study Final Report from the ODP Logging Services and Site Survey Data Bank (SSDB)- please refer to this fine report. IESX is a data integration software package within the Schlumberger GeoQuest GeoFrame software that integrates seismic, logging, and physical properties data. She discussed the IESX pilot projects involving shipboard use on Leg 194, and pre-cruise onshore use of the IESX system for Leg 196 data. Mitch Lyle did an IESX project on Leg 199. An IESX cookbook exists, with training of scientists on the system a responsibility of the ODP Logging Services; the ODP Databank will provide support for future IESX projects. In support of this development, new Unix workstations have been installed in the JOIDES Resolution downhole lab. Mary noted that the ODP Databank has received digital data for 11 proposals, some of them already drilled.

***Action Item**: SSDB and BRG will provide revised digital data submission guidelines to SCIMP and SSP for review.*

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.
Passed 14-0-0

Finally, Dave reported that technical summaries had been produced by for all ODP specialty and certified third party logging tools and software for the ODP Legacy project.

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.
Passed 12-0-0

E) New Techniques/Measurements/Other

HYACINTH update/deployment on Leg 204
Peter Schultheiss and Frank Rack gave a history of the development of the HYACE coring systems and the plans within the HYACINTH program. The primary purpose of HYACINTH is to put the HYACE system, developed for the sampling and study of gas hydrates, to operational use. The Fugro Pressure Corer (FPC) will only be used on Leg 201 as more work is needed on the HYACE Rotary Corer (HRC) before deployment on Leg 204. If the coring tools are not working properly prior to the leg, they will still be tested as planned for developmental purposes. Peter (and up to 4 'HYACINTH' engineers) will be sailing on Leg 204 and co ordinate the HYACINTH activities.

Peter then gave an overview of the integrated HYACINTH systems that will be used on Leg 204, including the use of the autoclave corers, the core transfer mechanisms, storage and logging chambers and the core preservation system. The cores when transferred under pressure will be logged using a vertical multi sensor core logger (MSCL) that infers the sediment properties through the high-pressure core logging chamber using gamma density, p-wave velocity and amplitude.

Geotek is investigating the potential for taking standard ODP cores (APC and XCB) and pressurizing them rapidly after retrieval. In this way some information regarding pertinent properties of sediments containing massive hydrates could be obtained without the use of pressure corers.

Other aspects of the HYACINTH program will include; the development of advanced techniques for the preservation of hydrate cores under pressure, the development of resistivity imaging of hydrate cores under pressure and methodologies for sub sampling cores at in situ pressures. This sub-sampling is to enable

subsequent chemical, microbiological and petrophysical studies to be conducted at pressure (for example to study barophilic micro-organisms)

Geotek Inductive Resistivity System Report
Mike Lovell gave a background to resistivity systems used on the JOIDES Resolution, focusing on problems regarding measurement density and variability between operators with contact resistivity techniques, the latter leading to a significant lack of quality control regarding ODP resistivity measurements. Mike and Peter Schultheiss then discussed the Geotek non-contact (inductive) resistivity system, initially designed jointly by the British Geological Survey and the University of Leicester (including Mike) and more recently developed by Geotek into a commercial system. Mike proposed that a sea-trial of the non-contact system would be the best means of determining whether or not the system meets the requirements of ODP scientists.

Bill Mills noted that it would be easy to integrate the Geotek system into the current ODP MST system; it provides analogue signal that could be integrated into MST software, requiring a minor amount of MST software modification. The sensor is small and can fit below the core next to the magnetic susceptibility loop without interference with any MST instrumentation. The spatial resolution of the instrument is about 3-4 cm, providing effectively continuous measurements along the core. Core resistivity depends partly on the amount of seawater in interconnected pores. The non-contact resistivity measurements would provide data over the full volume of core and would be suitable for pore-water chemistry and physical properties needs. The sensor can be rotated to give a 3-D resistivity image of the core although this would generally be a secondary development. The obvious leg for use of this instrument is Leg 204, which Bill Mills and Brad Julson believe provides plenty of time for software modification and instrument installation (during Leg 203 when Bill is out). Although the instrument cost is about $25K, Peter Schultheiss said that Geotek would be willing to provide the instrument for installation on Leg 203 with subsequent trial use as a demonstration pilot project on Leg 204. It should provide also compelling data regarding the presence or absence of gas hydrate in Leg 204 cores.

There is a need to define a "hero" on Leg 204 to provide an independent analysis before instrument purchase can be recommended by SCIMP. SCIMP nonetheless acknowledges with gratitude the generous offer by Geotek to provide the instrument on a trial basis.

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.
Passed 14-0-0

Micropaleontology Reference Center (MRC) meeting report
Ken MacLeod reported on the MRC curator meeting held in Berlin in October, 2001. Ken went in support of an ODP Action Item from the 12/00 meeting. The minutes from this meeting are available at www-odp.tamu.edu/mrc/reports.html.

Short-term goals from this meeting include having a common data format for all MRC's within a year, with a simple, searchable, web-accessible database covering the 4 fossil groups represented by MRC collections. Also, sampling for the MRC's through the end of ODP will focus on defining intervals of importance and intervals from core that may be depleted.

Intermediate term goals of the MRC's focus on carry-over into IODP, with an expansion and integration of stratigraphic database efforts. Several workshops have been held regarding these goals. In addition to ongoing tasks, there is a wish to enhance the long-term legacy value of the MRC's.

On decade and longer time-scales these Centers provide stable, long-term repositories housed at multiple, geographically-dispersed sites (including National Museums) where taxonomic expertise is rich. The

MRC's provide an important sample-based legacy of ocean drilling housed with relevant specialists at a time when overall community expertise and knowledge in taxonomy is decreasing. In this spirit, MRC's could also serve as a home for returned ODP residues.

Ken then discussed shortcomings of the PAL paleontology input application in Janus, especially regarding the need for expansion of the reference dictionaries. MRC curators provide willing and appropriate expertise for maintenance and expansion of these dictionaries. The need for reference collections/image atlases was also discussed at the MRC curator meeting. The one created for Radiolarians is really good and available on the ship with documentation. The Nannofossil collection on ship has become degraded and has been removed to the shore, but Jamie Allan and Patty Fryer remembered that Woody Wise was contracted to make a CD nanno image library for ODP/TAMU. Subsequent investigation confirms that a Cenozoic image database was delivered and used as recently as Leg 198. No specimen or image-based reference collection has been made for foraminifers.

To further MRC goals Ken asked the SCIMP to continue to episodically endorse MRC efforts and encourage member nation support (ownership of MRC collections is by NSF). He noted that sample accession (transfer of ownership) may be possible and could be considered on a case by case basis (MRC's exist in national museums on permanent loan basis). The role and maintenance of the MRC's beyond 2003 will be taken up by iPC; Frank Rack noted that the MRC's could become an annex to a repository system.

As a result of Ken's report, the following SCIMP recommendations were adopted:

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.
Passed 14-0-0

SCIMP Recommendation 01-2-10
SCIMP recommends that the role and maintenance of the MRC's in the IODP structure be addressed by iSAS. Specific topics of concern include adequately supporting curation of the collections and exploiting curator's taxonomic and stratigraphic expertise in advancing Program goals (*e.g.*, creation and vetting of dictionaries for paleontological applications, assembling reference sample sets, creation of digital image atlases, creation of stratigraphic databases). It is recognized that achieving these goals will not be likely under the current *ad hoc* funding of the MRC effort.
Passed 14-0-0

Status of Thin Sections
Ken MacLeod led a discussion about the recent SCIMP action item regarding thin section return policy. Panel decided to only slightly amend the current thin section policy, noting that TAMU is making efforts to retrieve thin sections that have been checked out for over a year. Much good-natured derision was aimed at one of the panel's co-chairs, who has 53 overdue thin sections. This poking of fun proved productive, as Panel realized that there was no point in having thin sections returned to core repositories if they were still being used and could thus be checked out for an additional year. If another researcher requests checked-out thin sections, current policy allows for the ODP Curator to require their return.

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.
Passed 14-0-0

F) SCIMP Lab Working Group Assignments
In light of significant SCIMP turnover and the need to inspect the shipboard laboratories on the second day of the meeting, new Lab Working Group assignments were made and are given in the table below:

Chemistry	Phys Props	Computers
P. Meyer	M. Lovell	L. Pirmez
E. Martin	C. Buecker	J. Escartin
D. Smith		
Downhole	Paleomagnetics	Janus
M. Lovell	E. Kikawa	D. Divins
C. Buecker	M. Fuller	J. Allan
C. Pirmez	L. Sagnotti	
Microscopes/Paleo/TS	Microbiology	Core Description
D. Smith	D. Smith	P. Michael
J. Allan	P. Meyer	J. Allan
K. Macleod		C. Pirmez
		J. Escartin
Curation	Underway	Publications
P. Michael	J. Escartin	J. Allan
K. Macleod	D. Divins	D. Divins
E. Martin		P. Meyer

G) SCIMP Lab Working Group Review
On Tuesday, December 18, the SCIMP met aboard the JOIDES Resolution. The morning was spent in ship tours, followed by inspection by the SCIMP Lab Working Group members of the respective labs in their charge. The afternoon was spent reviewing the shipboard labs in the new meeting room in the labstack. SCIMP is grateful to both the Science Operators and the Ship Operator for their assistance in these efforts. Panel agreed that the shipboard labs were overall in great shape and commend the Science Operators for their efforts in continuing to move forward with lab development at a time of increased personnel turnover. There also seemed to be additional safety awareness and increased safety procedures aboard the ship, evidenced by both shipboard modification (such as a new walkway to one of the cranes) and by an increased number of hazard and safety signs in public passageways.

Review of Lab/Services Status

Core Description
Lab looks very good, but Panel notes that it is cramped with a lack of counter space (from installation of new instrumentation, such as the new digital imaging system).

Chemistry
Looks very good, but again with a lack of counter space.

Physical Properties
Looks very good, but with a lack of counter space. There are some MST reliability issues associated with the high-voltage power supply for GRAPE; these are being addressed by ODP/TAMU. The digital line scanner camera works very well.

Paleomagnetics
The Lab has stabilized. Panel notes that the magnetic point susceptibility meter has been taken off the archive multisensor track.

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.
Passed 14-0-0

Ancillary rock magnetic data is currently not being taken into JANUS; Panel notes that this is not likely to be considered a high-priority item. Panel understands that standards for magnetic direction and strength are now out on the ship. Panel also gave a laboratory wish list unlikely to be implemented in the current program but that should be implemented in IODP. First, a magnetically-shielded room should house all magnetometers and demagnetization devices and related equipment. In the case of the JOIDES Resolution, there are potentially serious problems due to remagnetization, which could be mitigated by a shielded facility. Second, an additional, small diameter access SQIUD cryogenic magnetometer, controlled by LabView that sequentially analyzes multiple discrete samples, would be very useful for rock magnetic measurements. This would run automatically and would not interfere with other work of the paleomagnetists. Third, a modern tabletop VSM would run automatically and should replace the present antiquated spinner magnetometer. These instruments would be of general interest, but are particularly valuable on hard rock legs.

Underway Geophysics
Looks good, other than the 12.5 PTR amplifier which needs replacement. ODP/TAMU is encouraged to contact oceanographic institutions that may have this amplifier in surplus.

Downhole Tools
The ADARA tool is heavily used, and needed for safety, yet of the 9 tools, 4 are out of commission with irreplaceable and broken Tattletale data loggers. This is an issue that needs to be dealt with in the future program. The Davis Villenger tool can be used as a substitute for the ADARA tool for temperature measurements but takes extra deployment time and may affect the quality of the following core. Otherwise, the lab is in good shape.

Shipboard Computers/Networks
Panel really liked the abundance of new flat computer monitors, which opens up much-needed counter space.

Paleontology/MRCs/Thin sections
The labs look good. Panel notes that one of the thin-section polishing machines is unsupported by the manufacturer, but based on prior reliability, does not recommend replacement in the current program

Microbiology
The lab looks very good. The new microscope needs to be in a dark location. Panel notes that the cradle is in place to accept the radioisotope lab van. Panel would like more information regarding the lab microscope (especially regarding available filters) to be available on the web, as well as more lab documentation in general.

***Action Item**: A set of Microbiology lab protocols should be documented during Leg 201, with coordination by David Smith.*

Other Shipboard Issues
Inspection of the shipboard library led Panel to conclude that sailing scientists cannot expect to have key references kept on board, and should bring them.

H) Future Meeting Date and Place.
Joint Meeting with TEDCOM and iTAP in College Station looks unlikely.
Possible meeting dates:
May 13-15 worst (4) best (7) (impossible for J. Allan)
June 17-19 (5) (3)
July 22-25 (4) (4)

I) Thanks to Mike Fuller
Panel noted that the meeting went as smoothly as could be expected. The meeting venue was nothing short of spectacular, the group banquet featured spectacular food and even more spectacular native Hawaiian entertainment, and the logistical support for the meeting itself and the pre-meeting field trip to the Big Island was outstanding.

SCIMP Consensus 01-2-01
SCIMP thanks Mike Fuller for his extraordinary efforts in support of this meeting. It has been a complete success. Mahalo.
Passed 14-0-0

The meeting adjourned on Wednesday, December 19, at noon.