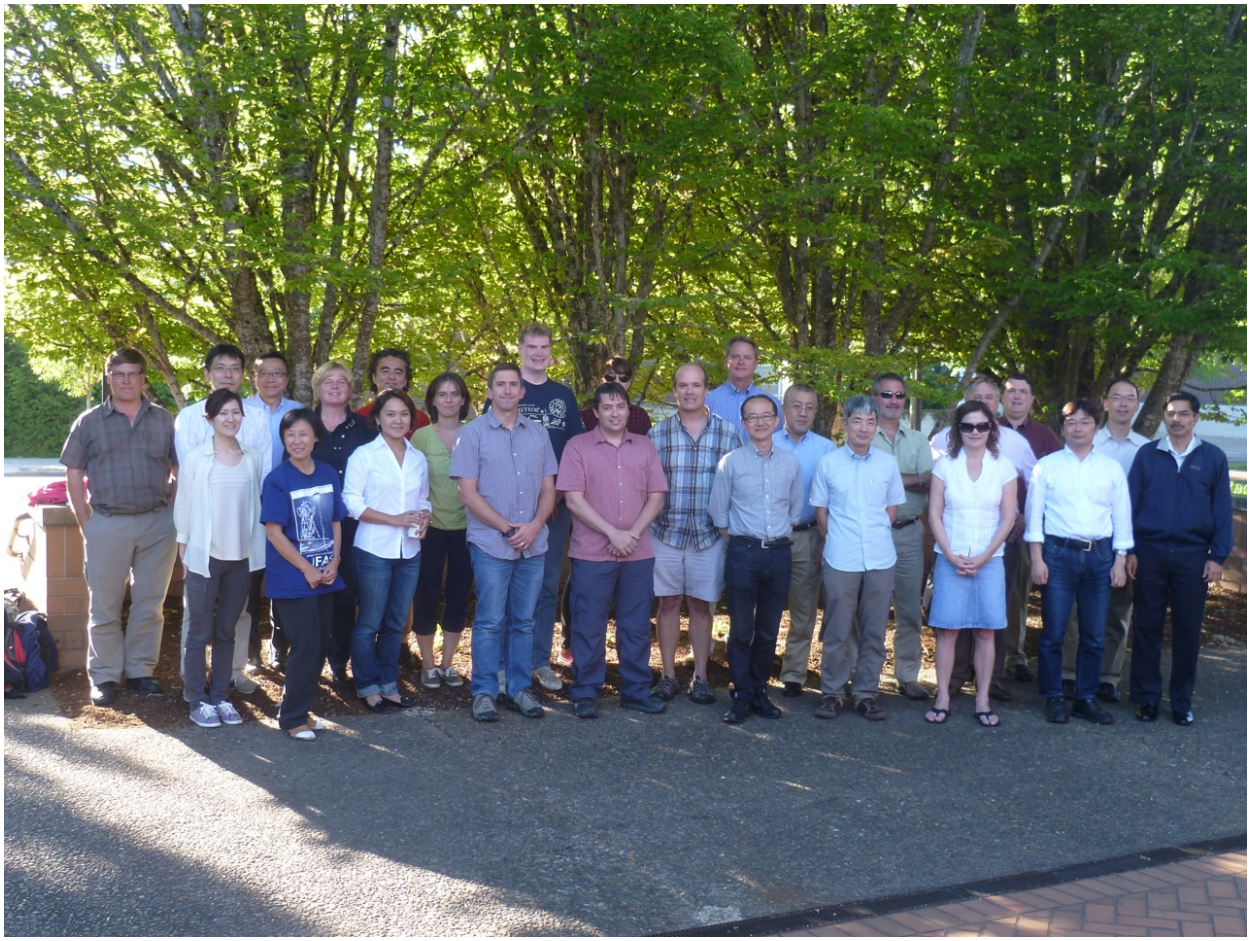
IODP Scientific Technology Panel (STP)

2nd Meeting, 4 – 6 September 2012

Oregon State University
Corvallis, USA



The 2nd IODP Scientific Technology Panel meeting was held at the Oregon State University (OSU) for a full agenda 3-day meeting. The meeting was hosted by Dr. Joe Stoner of the OSU and supported by the Ocean Leadership. The meeting resulted in 20 Consensus Statements and 5 Action Items. 12 of the full complement of 18 members attended the meeting. Kevin Johnson attended as an alternate for David Boutt, Marty Young for Denise Kulhanek. Sangmin Hyun, Weidong Sun, Sathia Narayanan, and Cedric John were not able to attend the meeting and no alternates attended for them. One of the main discussions during this meeting was to consider the scientific technology and standardization toward the new program. No Conflicts of Interest were identified by the membership at the start of the meeting.

STP Consensus Statement 1209-01: Scientific Technology and Standardization in the New Program

The Scientific Technology Panel (STP) was established by the Integrated Ocean Drilling Program (IODP) to provide international, interdisciplinary scientific and technical advice and expertise to the Program on a wide range of topics pertaining to all of the drilling platforms as well as many shore-based activities. The intent was to establish uniform and consistently high-quality cross-platform procedures and protocols for handling of IODP samples, data and information, downhole measurements and experiments, QA/QC, sample description, curation, analyses, laboratory design, and observatories that enable all participating scientists to collect, analyze, and compare samples and data following standard guidelines. STP serves a critically important function in the Science Advisory Structure (SAS) of IODP as a primary advisory body to the Proposal Evaluation Panel (PEP), the Science Implementation and Policy Committee (SIPCOM), and is a bridge between the Implementing Organizations (IOs), IODP-MI, and scientific drilling community scientists. The recently revised framework for IODP and the new International Ocean Discovery Program (IODP) has eliminated STP from the SAS. STP believes that eliminating the panel will remove vital quality control and cross-platform standard practices and procedures that arguably define and validate this highly successful international program. In the new model, the functions performed efficiently and effectively by STP will be inserted within the ever-expanding tasks of the IOs and will require considerable extra effort and additional cost to replicate the activities that are contained in the Terms of Reference for STP. It will require designation of a lead IO to coordinate all ad hoc scientific technology committees from the other IOs and will arguably be more expensive and vastly less efficient than retaining the standing STP. STP strongly disagrees with this action and fervently recommends continuing the STP as an essential service panel within the new IODP.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IWG+, SIPCOM, IODP-MI, IOs

Background to STP Consensus Statement 1209-01: *In the revised framework for IODP, platform providers (PPs) will be responsible for convening STP-like entities as needed and at their own expense and discretion to address scientific and technological issues that may arise, to assure cross-platform QA/QC, to standardize data collection and dissemination and to produce publications. Interactions between these entities from different PPs will have to be arranged as time and finances permit. This model may force the elimination of regularly scheduled meetings to discuss, assess and establish standard, independent, cross-platform technological advice and procedures for shipboard practices over a comprehensive topical range. The ad hoc committees will be convened by the PPs and will be supported from their internal budgets at the expense of other competing platform-specific needs.*

IODP Science Advisory Structure Terms of Reference – Revised 1 September 2011

Scientific Technology Panel (STP)

1. General Purpose. *The Scientific Technology Panel (STP) advises PEP, the IOs, and the CMO. The STP may communicate directly with IOs and other panels and with SIPCOM in matters directly involving data and publications policies or other policy issues. The panel shall contribute information and advice with regard to handling of IODP data and information, methods and techniques of all IODP measurements, sample handling, curation, laboratory design, downhole measurements and experiments, and observatories. The STP shall also advise PEP on the technological feasibility of selected proposals as requested by the PEP chair.*

2. Mandate. *STP recommendations shall be sent to the CMO, PEP, and IOs as deemed appropriate. The STP shall provide advice on scientific measurements made onboard IODP platforms, within and around boreholes, and on samples collected by the IODP and associated programs. The STP shall develop guidelines concerning said measurements and shall furnish advice about scientific measurements, equipment, and on certain policies and procedures in the IODP. Specific responsibilities for the panel shall be to advise on databases, sample handling, curation, shipboard equipment usage and needs, as well as borehole and observatory measurements, equipment, usage, and needs. In addition, STP will conduct QA/QC reviews of data collection procedures on IODP platforms to ensure consistent high quality data across the program. The panel may also advise on specific questions of publications and data dissemination policies and procedures and provide feedback to the SIPCOM, CMO, and IOs.*

3. Decisions. *Decisions shall be made either by consensus or voting, as decided on a case-by-case basis. Votes shall be decided by a simple majority of all members present and eligible to vote. A quorum shall consist of at least two-thirds of the voting members. Voting records shall be kept and reported in the meeting minutes.*

4. Meetings. *The panel shall convene at least once annually, and additional subcommittee or electronic meetings may be held as appropriate.*

5. Membership. *STP members shall normally serve for terms of three years and shall have expertise in areas required to adequately cover the panel mandate. With CMO approval, the panel may augment the expertise required to address its mandate by setting up ad hoc advisory committees.*

6. Liaisons. *The STP chair or alternate shall be liaison to the PEP. Representatives from the IOs and IODP-MI shall attend the STP meetings.*

STP Consensus Statement 1209-02: Continuation of Existing Measurement and Sampling Policies into the New IODP

STP strongly advises the leadership of the new IODP to continue to enforce the current IODP cross platform measurement and sampling policies regardless of the structure of the new IODP SAS.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI, IOs, Funding Agencies, IWG+, SIPCOM

Background to STP Consensus Statement 1209-02: *Minimum and standard measurements, and Sample, Data, and Obligation Policies have been instrumental in the success of the existing IODP, and to the utility of the samples and data continuing into the future. STP and its precursor panels have developed and have guarded the collection of basic minimum and standard measurements across the platforms. To reiterate the existing policy "Minimum measurements are to be conducted in all boreholes and on all cores collected in IODP. Standard measurements are those which are practical and appropriate to be obtained across all platforms." STP strongly recommends that these policies be continued in the new IODP.*

STP Consensus Statement 1209-03: Development of LDPHI

The STP greatly appreciates the information provided about the development of the Large Diameter Pipe Handling Infrastructure (LDPHI) by the USIO. The STP requests the USIO for further reporting on the development and testing of the LDPHI on the *JR*. STP encourages continued developments of large diameter pipe systems.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI and IOs

Background to STP Consensus Statement 1209-03*: It has been recognized by the STP and EDP that large diameter drill system enhances the applicability of standard logging and borehole tools many of which have been designed and manufactured for outside diameter of 6-5/8-inch pipe. The large diameter core system can achieve higher resolution core sampling/analysis and reduce contamination during core recovery. The two panels have identified the development of the large diameter drill system as one of the most prioritized engineering developments (ST Roadmap: B1-2, EDP Technology Roadmap: B-1). The importance of development of large pipe system has been also highlighted in the INVEST Mtg., 2009 (Science Implementation Sessions (CT6)).*

STP Consensus Statement 1209-04: Acknowledgement of Progress with the Multisensor Magnetometer Module (MMM)
The Multisensor Magnetometer Module (MMM) that is now in development represents a potentially transformative technology. STP is pleased to hear about the progress that is being made and strongly encourages its continued development and readiness for the South Alaska Expedition 341 that represents an exceptional opportunity both for testing this tool and for the objectives of this expedition.

Vote: 13 Yes, 0 No, 1 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI and IOs

Background to STP Consensus statement 1209-04: *The Multisensor Magnetometer Module (MMM) could have a significant impact on IODP science by allowing full vector magnetic measurements of a formation even in intervals where core is not recovered. The tool is presently targeted to have its first deployment during Expedition 341 (South Alaska). Primary scientific objectives of the South Alaska Expedition, presently scheduled for May–July 2013, require dating of material around reflectors that may be difficult to continuously recover. These lithogenic materials when recovered undisturbed are likely to be favorable for magnetic stratigraphic development, therefore an optimal test of this tool's capability when recovered (comparison between sediment and tool results) and the potential to facilitate a primary expedition objective that otherwise could not be met when cores are not continuously recovered.*

STP Consensus Statement 1209-05: Acknowledgement of KCC's Response to STP's Recommendations
STP is impressed that KCC responded quickly to almost all recommendations made during the visit of the panel at the last meeting. STP commends the progress made to facilitate core description, RMS handling, and allowing access to the facilities by broader IODP community. STP encourages KCC to protect this important investment from potential earthquake and tsunami damage. STP further endorses the use of the name Deep BIOsphere Sample (DeBIOS) rather than the current name of Routine Microbiological Sample (RMS).

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI and IOs

Background to STP Consensus Statement 1209-05: *This consensus statement follows up STP Consensus Statement 1203-01. During the previous meeting, STP visited Kochi Core Center*

(KCC) and was very impressed by curation and sample handling. STP made several recommendations for improving core description:

1. *To allow for the laying out of one or several full cores at a time for description and sampling purposes.*
2. *To provide additional light and magnification options for use during core description.*
3. *To investigate the feasibility of taking a low-resolution photo/scan of each core section after sampling to allow scientists to observe the state of the remaining core material prior to submitting a sample request.*
4. *Curation of cores should be maintained as it is, i.e., in a 4°C-refrigerated repository.*

Regarding the Routine Microbiological Sample (RMS) procedure, the STP recommended the following:

1. *Maintain stratigraphic context of sedimentary cores (top/bottom) of split and residual sample material.*
2. *Consider renaming the RMS to encourage sample requests from scientists in addition to microbiologists. RMS have considerable value in geomicrobiology. The name change would foster collaborative research between microbiologists and inorganic and organic geochemists.*
3. *Publish the results of the fluorescent bead contamination test in the RMS manual or literature, and consider additional contamination tests that are relevant to other disciplines (e.g., trace elements or organic geochemistry).*

Regarding the track systems available at the KCC, if additional time is available STP recommends that the KCC be opened up to the broader community, especially those from non-IODP countries as a form of outreach.

Two members of STP took advantage of their presence in Kochi to carry out sampling after the STP meeting, both were very impressed with the hospitality of the staff and the efficiency with which they were able to carry sampling.

STP Consensus Statement 1209-06: Review of USIO QA/QC Reports

STP appreciates the quick response and detailed reviews provided by USIO of the QA/QC reports requested in Consensus Statement 1203-13 and Action Item 1203-6. STP acknowledges that technical issues with the handheld XRF and thermal conductivity have been resolved. Solutions have been identified to correct precision of IC measurements and a web-based report for DESClogik core description data is in development. Improvements with the NGRL (Natural Gamma Radiation Logger), user data editing, and DESClogik are still in progress. STP would like USIO to share results of these solutions and ongoing improvements. STP stresses the importance of continued support for data management systems for descriptive and interpretive information, such as DESClogik, in the new IODP.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI and IOs

Background to STP Consensus Statement 1209-06*: The USIO provided a detailed update on QA/QC issues identified in STP Consensus Statements 1108E-09 and 1203-13 and Action Item 1203-6. STP thanks the USIO for their thorough review of the technical issues and their efforts made to resolve the problems. The STP considers these issues as either completed, to be completed, or in progress.*

1. Completed projects:

a. Precision and accuracy issues with the handheld XRF spectrophotometer identified during Exp. 336 have been resolved. The XRF will be calibrated by taking discrete samples of representative lithology, determining the chemical composition by ICP onboard or XRF onshore, and creating calibration curves of known sample matrices. Researchers should recognize that this is a reconnaissance tool and should not expect high precision results.

b. Thermal conductivity issues observed on Exp. 327 and Exp. 342 have been resolved. Data quality improved when the core was isolated from air temperature fluctuations. Signal instabilities were also due to corrosion of the internal wire connecting the data cable to the needle of the sensor. The manufacturer has been notified of the corrosion problem.

2. Issues to be completed:

a. A strategy to solve poor precision of the IC measurements (c.a. 5-10%) observed during Exp. 334 has been identified by USIO. A carbonate stripping device has been purchased to remove dissolved carbon dioxide, which will lower the baseline and improve detection. Measurement error may also be caused by the autodiluter. USIO plans to upgrade the autodiluter. STP would like USIO to share results of these changes.

b. A web-based report for downloading DESClogik core description data is currently under development and will be available later this year.

3. Solutions in progress:

a. Edge effects with the Natural Gamma Ray Multisensor Logger (NGRL) were identified during Exp. 340. Modeling of the edge effects can be improved by determining the exact position of the core section inside of the logger.

b. Exp. 342 scientists requested a more efficient graphical-interface tool to make it easier to enter data into DESClogik. This is an improvement previously identified in Consensus Statement 1203-09. The graphical-interface is still in development. In the interim period, STP recommends that Expeditions consider optimal strategies to enter all the data into DESClogik in order to achieve more consistent core descriptions.

STP Consensus Statement 1209-07: Taxonomic Name Lists and the PCG
The STP reviewed an update on the status of the TNLs and concerns of the PCG during the 2nd STP meeting, and would like to thank IODP-MI for their continued support of both the PCG and the TNLs project in the current program. The STP also encourages IODP-MI to continue coordinating with the IOs to integrate the TNLs into the shipboard data-entry systems. As the TNLs will require regular updates by experts to ensure they remain a useful resource, the STP encourages IODP to continue funding the development and management of the TNLs and the PCG in the new IODP.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI, IOs, PCG

Background to STP Consensus Statement 1209-07: *The STP received an update on the now completed TNLs from Jamus Collier (IODP-MI) for review during the 2nd STP meeting. As noted in the numerous prior recommendations, consensus statements and action items (see SciMP CS 03-12-01, SciMP AI 04-06-07, SciMP Rec 04-06-05, SciMP AI 0502-02, SciMP Rec 0502-04, STP Rec 0507-08, STP CS 0612-06, STP CS 0708-21, STP CS 0802-11, STP AI 0908-27, STP AI 1008-29, STP CS 1108E-04), the development of the TNLs has been a very high priority. The TNLs were developed by micropaleontology subject matter experts under contract to IODP-MI and in coordination with the Paleontological Coordination Group (PCG), and were finalized at a PCG meeting in October 2011. At this meeting, the PCG also developed a wish list for the future, with the highest priority item the development of extended TNLs, which would include age information, biogeography and paleo-depth for benthic groups.*

The TNLs used a number of input sources (e.g., JANUS, NEPTUNE/CHRONOS, etc.) to generate comprehensive lists of more than 17,000 genus and species names within 5 taxa (radiolarians, diatoms, foraminifera, dinoflagellates, and calcareous nannofossils). The TNL database is hosted by IODP-MI (Linux/PostgreSQL) and lists are exported for use by IOs (e.g., DESClogik, J-CORES, DIS), approved micropaleontological data systems, and working groups.

During the 2nd STP meeting, Collier mentioned that IODP-MI will coordinate with the IOs to deliver updated TNL databases and TNL lists during FY13 as part of the transition process to the International Ocean Discovery Program. The lack of formal integration in the area of data management for the International Ocean Discovery Program poses a challenge for the IOs in maintaining synchronized TNL lists.

PCG members expressed willingness to coordinate the maintenance of the TNLs if funded with small (~3k/yr) contracts to justify the project to their employment institutions. However, the new IODP Framework may not provide the resources to enable the PCG to meet and/or to serve as curators of the TNLs. Future funding to ensure the TNLs remain up-to-date and useful is seen as being vital.

STP Consensus Statement 1209-08: Evaluation of Smear Slide Reference Material Package
STP (John and Kutterolf) evaluated the first digital draft of a smear slides catalogue for sedimentological analyses set up by Kathy Marsaglia and Kitty Milliken. Progress in this project was introduced at the meeting by IODP-MI and was complemented by comments from Kutterolf and John who are very impressed by the quality and further implications of this project also for other scientific fields in IODP science and outreach. The interactive mode of the introduced document is a milestone in teaching inexperienced scientists at IODP expeditions regarding smear slide observation and interpretation and will help to achieve standardized sediment description across platforms and expeditions. STP recommends continued funding for maintenance and for at least a second phase (carbonates) beyond the current project. STP also recommends that the material be published on-line.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI, IOs, and the funding agencies

Background to STP Consensus Statement 1209-08: *This consensus statement is a follow-up of STP Action Item 1203-03. It follows up issues on cross platform consistency and goes back to a topic brought up by STP regarding the development of digital as well as physical reference material for smear slide analysis for sedimentology. This project is at the moment financially supported by IODP-MI. Kathie Marsaglia, Kitty Milliken and Linda Doran developed a digital and physical reference material catalogue for sedimentological analyses to be used as a guide by untrained participants and early career sedimentologists and also to establish a comparable descriptive basis for all platforms during expedition sedimentological work. Complete packages (6) will be given to the three IOs for distribution to the platforms and the repositories. The current version introduced to STP comprises part 1 with an introduction to smear slide production, and analyses as well as an interactive atlas for siliciclastic and volcaniclastic sediments. Further implementation of carbonate sediments (part 2) is planned but, due to financial issues, not scheduled.*

Evaluation of STP members has been very positive and enthusiastic. It should be emphasized that STP sees a broad potential in this innovative project also for other scientific fields in IODP research (e.g. sedimentological structures, structural geology structures, petrology, thin sections) to standardize descriptive data during expeditions but also for education outreach. Questions from the project to the panel can only partly be answered. The recommendations of the last STP meeting are still valid: 1) Maintenance, 2) High resolution images as back up, 3) back up sample material should be provided. Priority enhancements are 1. The implementation of part 2, 2. Future maintenance, 3. An on-line version, 4. Providing this "teaching" tool to the other descriptive shipboard relevant methods/tasks. STP suggests publication of the Guide and atlas in an IODP Technical Report since this may be the most appropriate platform to communicate this to interested scientists. The question about financial support and scientific

guidance/maintenance beyond this current phase of the project and the lifetime of this STP panel cannot be answered.

STP Consensus Statement 1209-09: Development and Sea Trial of SCIMPI and MDHDS
The STP thanks IODP-MI and USIO for their report on the status of the development of the SCIMPI and MDHDS. The STP endorses a sea trial of the SCIMPI system during Expedition 341S in 2013. The STP recommends minor technical issues of the MDHDS, which have been identified in the sea trial during Expedition 342, be addressed prior to Expedition 341S and further sea trials be conducted.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI and IOs

Background to STP Consensus Statement 1209-09: *The STP has endorsed a sea trial test of the MDHDS (STP CS1205E-01), and results from the test were reported by USIO and IODP-MI. They have reported that the core functions of the MDHDS, decoupled motion of the tool and remote deployment, have been successfully demonstrated through the test. However, problems in the Electrical RS System (ERS) resulted in latching and data telemetry.*

Following the STP CS 1203-06, USIO and IODP-MI reported current status of the development of the SCIMPI. It has been reported that the tool will be ready for sea test in the Expedition 341 in 2013 after some modifications in the ERS and battery that will be completed within 2012.

STP Consensus Statement 1209-10: Magnetic Susceptibility Standard
The STP applauds CDEX for the initial development and testing of magnetic susceptibility standards using rare earth metals. These tests are very encouraging as they show little or no degradation of the standards over a 2-week period. To be fully useful, STP recommends a longer test, ideally of at least 1 year at suitable time increments. STP encourages the development of whole round standards that could be used for loop systems. STP also encourages that this information from these test be shared with other IOs and the wider community.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI and IOs

Background to STP Consensus Statement 1209-10*: Magnetic susceptibility is measured in different ways, but at present is incompletely calibrated. Requirements for standardization and calibration between equipment (discrete sample, whole round, logging tool) and platforms (Chikyu, JR, MSP) were previously raised (STP Action Item 1102-27). The usefulness of rare earth metals for absolute calibration of magnetic susceptibility has now been clearly demonstrated (Fukuma and Torii, 2011). As a response, CDEX reported on progress made toward development of a magnetic susceptibility standard. STP commends CDEX's leadership in developing this standard and their willingness to share both know-how and the standards. STP notes that such a standard is likely to be of considerable interest outside the IODP community, too.*

Reference: Fukuma, K. and Torii, M., Absolute calibration of low- and high-field magnetic susceptibilities using rare earth oxides, Geochem. Geophys. Geosyst., 12, Q07Z28, doi:10.1029/2011GC003694, 2011.

STP Consensus Statement 1209-11: Continuation of the SEDIS Portal in the New IODP
The STP finds that SEDIS is a very useful portal for accessing data and publications from all the IOs and IODP-MI. STP had a very positive evaluation of the system and strongly recommends that the SEDIS portal be maintained by the support office of the new IODP.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI and IOs

Background to STP Consensus Statement 1209-11*: SEDIS is a portal designed to access data and publications from the legacy programs (DSDP and ODP), as well as the current IODP. This portal is the only site that allows access to data from all of the IOs and IODP-MI at one time and has been developed in three phases since 2006. During the last meeting, the STP members evaluated the portal following its demonstration and posed questions about its functionality. STP recognized that SEDIS is a well-established portal to access data from DSDP, ODP and IODP. STP recommended that SEDIS be finalized as soon as possible, with some minor changes to the system. Furthermore, STP strongly recommended that SEDIS be maintained by the future support office of the International Ocean Discovery Program beyond 2013.*

STP Consensus Statement 1209-12: Advice Regarding the Continued Publishing of *Scientific Drilling* Journal beyond FY13
The STP thanks Jamus Collier for reporting the status of *Scientific Drilling* journal. STP recognizes that *Scientific Drilling* journal is a unique venue for distribution of information to the

scientific drilling and wider geoscience communities. STP strongly supports continued publishing of *Scientific Drilling* beyond FY13. STP also recommends that financial support for publishing and digitally archiving *Scientific Drilling* should be identified and maintained by the future support office(s) and/or (co-)publisher(s) of the new IODP.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI and ICDP

Background to STP Consensus Statement 1209-12*: IODP-MI report "Issues on cross platform consistency" raised the issue in regard for publishing Scientific Drilling journal after FY13. IODP-MI has published and distributed Scientific Drilling journal. NSF has informed IODP-MI that it will withdraw financial support for Scientific Drilling journal and will remove responsibility for publishing the journal from the IODP Support Office contract. Although International Continental Drilling Program (ICDP), a current financial contributor and co-publisher, has indicated a willingness to increase financial support for Scientific Drilling, new partners that provide additional financial support will be necessary to maintain the publication and distribution. If NSF, MEXT, EMA or another entity agrees to serve as co-publisher and/or provide financial support for Scientific Drilling by September 2013, IODP-MI will assist in transition of Scientific Drilling to the new entities.*

STP Consensus Statement 1209-13: Formation Factor Measurements
Upon weighing the available evidence, the STP determined that the difficulties associated with making consistent measurements of saturated rock electrical resistivity preclude shipboard determination of the Formation Factor as a standard routine measurement.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI and IOs

Background to STP Consensus Statement 1209-13*: The formation factor (F), the ratio between the resistivity of a liquid saturated rock to the resistivity of the pure fluid, is often used by the microbiological community to quantitatively determine chemical diffusivities through the porous medium in order to assess rates at which nutrients can be supplied to microbes. The microbiological community consequently requested that F be a standard routine core measurement and this consensus statement deals with this request.*

Measurement of F requires that both the saturated sediment resistivity and the saturating fluid resistivities be measured. Often the fluid resistivity is assumed to be that for seawater. Both

USIO and CDEX have experimented on ship with such measurements. The USIO made the measurements by using a noncontact sensor on the MSCL instrument but found the results to be noisy and not repeatable. CDEX continues to make this measurement on the Chikyu but they are not confident that the results are robust. A microbiologist on the panel also indicated that such routine measurements would not be trusted and would prefer to make their own measurements on the core material to ensure quality.

The difficulties of making consistent measurements together with some uncertainties in the interpretation of F in sediments containing clays led the STP to conclude that F determination should not be included as a standard routine measurement but should be carried out as needed by the interested scientists. The STP considers this topic to now be closed.

STP Consensus Statement 1209-14: Third Party Tool Documentation
The STP thanks Yoshi Kawamura for his presentation on the revised version of the Third Party Tool Guideline. STP endorses the new version and asks IODP-MI to forward it to SIPCOM for approval.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI, SIPCOM, and IOs

Background to STP Consensus Statement 1209-14: *This consensus statement is a follow up to STP Action Item 1203-04. During the second STP meeting Yoshi Kawamura presented current status of the TPT Guideline. The process flow for approval of TPT laboratory equipment was revised properly. The new version will be effective until the end of the current program.*

STP Consensus Statement 1209-15: Deep Exploration Biosphere Investigative Tool (DEBI-T)
The STP thanks Katrina Edwards for her presentation on preliminary results from DEBI-T, Expedition 336. STP recognizes that DEBI-T is a very useful tool for detecting and mapping microbial communities in the borehole. STP encourages further use of the DEBI-T.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI and IOs

Background to STP Consensus Statement 1209-15*: This consensus statement is a follow up to STP Consensus Statement 1108E-06 (Measurement plans for Exp. 336/339). In STP Consensus Statement 1008-10, STP requested a post expedition report on how the DEBI-T instruments performed in producing the non-standard IODP measurements.*

Katrina Edwards reported the preliminary results from DEBI-T, Exp. 336. The DEBI-T is a wireline tool that uses Deep UV native fluorescence to access the distribution of microbes in a borehole environment. The results clearly indicated that microbial signal was detected in the legacy borehole, which has worked like a giant incubator. STP members recognized that the instruments performed well and should be applied to detect and map microbial communities in other boreholes.

STP Consensus Statement 1209-16: Approval of Measurement Plans for CDEX and the USIO

The STP approves the measurement plans presented by CDEX and the USIO for Expeditions 338, 344 and 345. The STP recommends that CDEX reports to the panel the results of the measurements using third-party tools to be deployed on Expedition 338. This will allow STP to assess the value of the third-party tools.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to CDEX, the USIO, and IODP-MI

Background to STP Consensus Statement 1209-16: *During the 2nd STP meeting the STP reviewed three measurement plans presented by the IOs. The USIO presented the measurement plans for Expeditions 344 and 345. In addition to minimum and standard measurements, Expedition 344 will deploy three Third-Party Tools that have been used repeatedly in the past expeditions. Expedition 345 is limited to minimum and standard hard rock measurements. CDEX presented third-party tools (Agilent network analyzer) that will be deployed for electrical conductivity measurements during Expeditions 338. This will be the first physical property measurement of cuttings using Third-Party Tools. The results of the measurements should be reported back to STP after the expedition to evaluate the method. Based on the information presented, the STP does not see any potential issues for Expeditions 338, 344 and 345 and approves the measurement plans.*

STP Consensus Statement 1209-17: Term of STP Members

STP recommends that all current STP members remain on the panel with their current responsibilities until September 30, 2013.

Vote: 14 Yes, 0 No, 0 Abstentions, 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

STP suggests this be forwarded to IODP-MI, SIPCOM, PMOs

Background to STP Consensus Statement 1209-17: *Due to the deactivation of STP, STP should properly summarize and archive and close STP activities, issues, and products. STP sees no reason to change the membership to carry out this work.*

STP Consensus Statement 1209-18: Acknowledgements to our Local Host, Dr. Joe Stoner
STP wishes to thank Dr. Joe Stoner, his graduate students, and the staff at Oregon State University for their superb organization and planning of this IODP STP Meeting #2.

Vote: 13 Yes, 0 No, 1 Abstentions (Stoner), 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

Background to STP Consensus Statement 1209-18: *The best-organized events are those that work so well that one does not notice the organization or see the efforts put in by the hosts. This is one of those very well organized events that allowed STP to meet in an efficient way to get our work done. As well, the social atmosphere in Corvallis and particularly at the barbecue held at Avery Park with barbecued planked-salmon, corn on the cob, and sausages was held in a particularly relaxing venue and was enjoyed by all. Thanks very much to Dr. Stoner!*

Barbecue party on 5 Sept., 2012

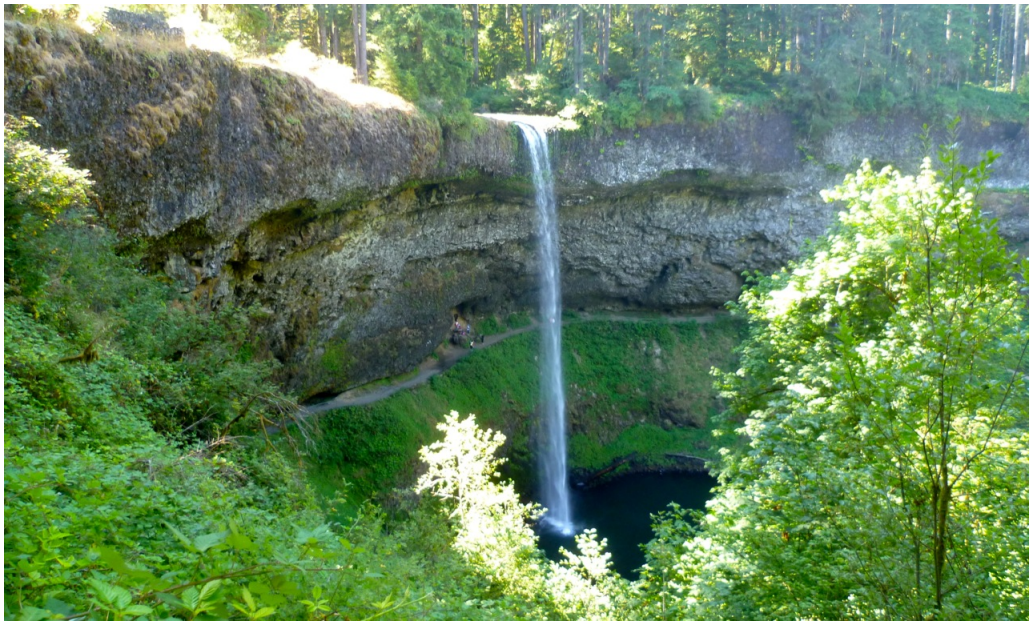
STP Consensus Statement 1209-19: Silver Falls State Park Field Trip
The STP wishes to thank Dr. Joe Stoner (STP Panel member and local host) for his effort to organize and guide this field trip, and to Ph.D. students, and staff from the Oregon State University for their help as our drivers and photographer on this field trip. During the field trip we enjoyed observing the Miocene basaltic lava flows, beautiful waterfalls, as well as taking a comfortable walk along the Silver Creek Canyon trail. After the trip we also visited a local vineyard and very much enjoyed tasting delicious wines.

Vote: 13 Yes, 0 No, 1 Abstentions (Stoner), 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

Background to STP Consensus Statement 1209-19: *During the #2 STP meeting in Oregon, Dr. Joe Stoner organized an excellent pre-meeting field trip for us to beautiful waterfalls in the Silver Falls State Park and the Columbia Flood Basalts, which extend to Oregon, Washington, and Idaho. We looked around traces of the geological history through the basalt outcrop along the Silver Creek Canyon trail and by tall and beautiful waterfalls. The history of the canyon's formation begins about 26 million years ago to the Oligocene age and the voluminous basaltic lava flows called the Columbia River Basalt Group erupted about 17 million years ago to the Miocene age. They told us dynamic and incredible geological activities on the Earth. We had*

lunch at a nice, comfortable space in the park. In the afternoon we moved to a local vineyard and enjoyed tasting delicious wines, as well as watching beautiful scene of vineyard.



Silver Falls State Park field trip on 3 Sept., 2012

STP Consensus Statement 1209-20: Acknowledgement of Dr. Saneatsu Saito's Contribution as Chair of STP

STP wishes to acknowledge the diligent and organized contributions of Dr. Saneatsu Saito to IODP beginning with his membership on the iSciMP in 2001 and leading through IODP SciMP to 2004 with a return to the successor STP in 2008 and culminating in his leadership as first Vice-Chair and then Chair.

Vote: 13 Yes, 0 No, 1 Abstentions (Saito), 4 absent (Hyun, John, Narayanan, Sun)

Priority: High

Background to STP Consensus Statement 1209-20: *Dr. Sanny Saito is a tireless supporter and contributor to scientific drilling and has been for a long time with many Legs and Expeditions under this belt. He has been a major contributor to the SAS structure for over a decade now with his participation first with iSciMP transitioning to the IODP SciMP and with a short break before returning to the STP. He has provided solid leadership for the group over the last four years and has been particularly dedicated during the last two years as Chair. Even though he will continue in this role through the dissolution and will likely be key in some form of reincarnation of STP-like functions in the new International Ocean Discovery Program, because this may be our last full gathering, STP would like to take the opportunity at this time of acknowledging Sanny's hard work and dedication and we wish him the best of luck. Should* ちきゅう (Chikyu) never eat another of your logging tools again!

Geneva meeting in 2010

Expedition 334 in 2011

Kochi meeting in 2012

STP Action Item 1209-01: Establishing a Protocol for Grain Size Measurement Sample Preparation (Laser Particle Size Analyzer)
The STP will initiate the development of a standard sample preparation procedure for laser particle size analyses that than can be used to facilitate implementation of new instruments and standardized routine measurements of already installed instruments on board the platforms.

Priority: Medium

Leads: STP Members, outside scientists

Deadline: April 1, 2013

Background to STP Action Item 1209-01: *Before the platforms can provide standardized grain size measurements a protocol must be established that defines how individual sample species are treated before the measurements since sample preparation has fundamental impact on measurement results and quality. Generally accepted and consistent sample preparation procedures across scientists and platforms are therefore a prerequisite before routine standardized grain size measurements onboard the platforms can be implemented.*

STP Action Item 1209-02: Follow up of Special Sampling Proposal
STP considers that the proposal to conduct examination of biological processes during storage is an important matter. STP action item is to contact the PI (Dr. Heath Mills) to encourage him to provide a revised version of the proposal (following recommendations made by STP).

Priority: Medium

Leads: Saito

Deadline: October 1, 2012

Background to STP Action Item 1209-02: *Dr. Heath Mills submitted a proposal requesting special sampling to conduct examination of biological processes altering core material during standard IODP storage for STP review in late March 2012. They are planning to request a series of 1.5-m-long whole-round sections from cores to be recovered during Expeditions 342 and 344 to conduct their project. The STP electronically reviewed this proposal in May 2012. The STP recognizes the importance of the proposed study of the alteration that may occur during storage; however, STP identified a number of issues that need to be addressed by the PI. In particular, the proposal does not explain clearly why 1.5-m long whole-round sections are required and how the requested cores will be analyzed. The STP strongly recommended that the proponents address these questions and strengthen the sampling/scientific plan before formal submission of their sample request to the sample allocation committees of any given future expeditions, or for an APL proposal. Despite the fact that STP noted that it would be happy to*

review the revised version, the PI of this project has yet to provide a revised version of the proposal.

STP Action Item 1209-03: Scientific Roadmap Version 2.0
STP will revise the Scientific Technology Roadmap as version 2.0 to be uploaded to the IODP webpage.

Priority: High

Leads: Saito, Schmitt

Deadline: October 1, 2012

Background to STP Action Item 1209-03: *Based on the inputs from the IOs, STP members updated the current version of Scientific Technology Roadmap (v. 1.1) during #2 STP meeting.*

STP Action Item 1209-04: Recommendation Letter to SIPCOM
STP will submit a letter to SIPCOM regarding scientific technology and cross platform standardization for the new IODP. STP asks the IOs to provide recommendation letters to support the STP communication. STP will also seek support letters from previous members of the panel and the wider IODP community.

Priority: High

Leads: Saito, Schmitt

Deadline: December 1, 2012

Background to STP Action Item 1209-04: *The January 2013 SIPCOM meeting will be the last opportunity for STP to bring forward STP's concerns regarding scientific technology and standardization in the new program (STP Consensus Statement 1209-01).*

STP Action Item 1203-05: STP Wrap-up Project
To summarize and archive all STP-related activities and products during the current IODP phase (2003-2013), the STP chair and vice chair define wrap-up project working groups and assign leader(s) and members of each working group. The STP chair will request that IODP-MI hold a full STP meeting, or at least a working group leaders' meeting, to develop working group reports. The working group reports will include summaries with recommendations, and then be integrated into a single white paper.

Priority: High

Leads: Saito, Schmitt

Deadline: March 1, 2013

Background to STP Action Item 1209-05: *According to a notice from the IWG+ regarding deactivation of STP, the STP members discussed what the remaining tasks and issues are until and beyond September 2013. The key questions at #2 STP meeting were:*

1) *What is the most essential element to maintain high scientific standards for the IODP and how to maintain it?*
2) *What must be transferred to the International Ocean Discovery Program?*
3) *Do IO-based smaller panels and/or ad hoc working group, which replace the current STP recommended by IWG+, work?*
4) *What is alternative mechanism/function to facilitate communication between IOs and science community?*
5) *What are STP's actions be taken during this transition period?*

For the questions 1) and 2), the STP briefly summarized two statements regarding scientific technology and standardization in the new program (STP Consensus Statement 1209-01) and continuation of existing measurement and sampling policies into the new IODP (STP Consensus Statement 1209-02). In addition, the recommendation letter will be sent to SIPCOM (STP Action Item 1209-04). For the questions 3) and 4), the STP will identify issues and suggest ideas after the #2 STP meeting. For the question 5), the STP identified the following actions to be taken within the current program even if there are no physical STP meetings:

a) *Routine tasks for FY13 expeditions such as approval of measurement plans and third-party tool deployments/sea trials and review of QA/QC report.*
b) *All STP activities and products, including Scientific Technology Roadmap, should be summarized and archived to pass on to the next program.*

To conduct the task b), the STP organizes 'wrap-up project' working groups. Four potential working groups were proposed:

1. *Policies/guidelines/standardization documentations (ex. Sample/data, third-party tools, depth scale, minimum/standard measurements)*

2. *Common science systems across all platforms (ex. SEDIS, publications, smear slide references, taxonomic name lists).*
3. *Third-party/certified tools and technology/engineering developments*
4. *Scientific Technology Roadmap*

Attendee's list of 2nd STP Meeting

Family	First Name	Institute	Country
Asanuma	Hiroshi	Tohoku University	Japan
Boutt	David	Univ. of Massachusetts Amherst (Not attending)	USA
Edwards	Katrina	Univ. of Southern California	USA
Gilhooly	William	Indiana University Purdue University Indianapolis	USA
Hirose	Takehiro	Kochi, JAMSTEC	Japan
Hyun	Sangmin	KORDI (Not attending)	Korea
John	Cedric	Imperial College London (Not attending)	UK
Johnson	Kevin	University of Hawaii (Alternate for Boutt)	USA
Kulhanek	Denise	GNS Science (Not attending)	New Zealand
Kutterolf	Steffen	GEOMAR	Germany
Narayanan	Sathia	National Institute of Ocean Technology (Not attending)	India
Saito*	Saneatsu	IFREE, JAMSTEC	Japan
Schmitt**	Douglas	University of Alberta	Canada
Stoner	Joseph	Oregon State University	USA
Sun	Weidong	Guangzhou Institute of Geochemistry (Not attending)	China
Tominaga	Masako	Michigan State University	USA
Vigier	Nathalie	CRPG-CNRS	France
Yamanaka	Toshiro	Okayama University	Japan
Yoshioka	Hideyoshi	AIST	Japan
Young	Marty	CSIRO (Alternate for Kulhanek)	Australia
Eguchi	Nobuhisa	CDEX	Japan
Gupta	Lallan P.	CDEX/KCC	Japan
Houpt	David	USIO, TAMU	USA
Igarashi	Chiaki	CDEX	Japan
Iturrino	Gerry	USIO, LDEO	USA
Kawamura	Yoshi	IODP-MI	Japan
Kido	Yukari	CDEX	Japan
Miller	Jay	USIO, TAMU	USA
Morgan	Sally	ESO	UK
Roehl	Ursula	ESO	Germany
Tanaka	Tomoyuki	MWJ	Japan

* Chair, ** Vice chair

Agenda for the 2nd IODP STP Meeting

Day 1: 0830-1700

1. Welcome, meeting logistics, safety, introduction, Robert's Rules, COI
2. Approval of meeting agenda
3. Approve Minutes from #1 STP Meeting
4. Review status of previous meeting action items and consensus statements
5. IODP program updates and SAS report [Kawamura, Saito]
6. Overview & wrap-up of STP activities, Part I
7. IO Reports [IOs]
8. Report from recent ORTF meetings and identify new issues [Kawamura]
9. Review of expedition QA/QC reports: Exps. 336, 339, 340, 342, and 343 [IOs]
10. Issues on cross platform consistency, Part I
    a) Taxonomic Name Lists and Paleontological Coordination Group [Saito]
    b) Evaluation of smear slide reference [Saito, Kutterolf]

Day 2: 0830-1700

1. Approval of Measurement Plans for the upcoming expeditions: Exps. 338, 344, and 345 [IOs]
2. Finalize action items and consensus statements from previous meetings
3. Issues on cross platform consistency, Part II
    a) SEDIS updates and evaluation [Saito]
    b) Scientific Drilling journal [Saito]
    c) Formation factor measurements and interpretation [Schmitt]
    d) Review and modification of third party tool policy [Kawamura]
    e) New Publication Format [USIO]
4. Review of Chikyu Lab instrumentation for future operations [Igarashi]
5. Revision of STP Roadmap
6. Overview & wrap-up of STP activities, Part II

Day 3: 0830-1200

1. Panel Rotation and Select Meeting Location
2. Finalize Recommendations/Consensus Statements and Action items

IODP Scientific Technology Panel
2nd Meeting, 4th -6th September 2012
Corvallis, OR
Minutes

DAY 1 (0830-1700)

Welcome, meeting logistics, safety, introduction
#2 STP meeting DAY 1 was convened by Saito. Joe Stoner introduced logistics and safety in Corvallis, OR, and OSU campus. Two new STP members and six absent members were introduced by Saito. Self-introduction of members. Minute takers were assigned (Day-1: Tominaga; Day-2: Gilhooly, Day-3: Kutterolf, backup-minutes: Schmitt).

Robert's Rules, COI, and Approval of meeting agenda
Saito introduced Roberts Rules of Order, conflict-of-interest. No conflict of interest was identified by the membership at the start of the meeting. Saito explained detailed agenda of the meeting. Collier could not make it to come to the meeting, so Saito would present some of the items on his behalf. The agenda was approved.

Approve Minutes from #1 STP Meeting
Approval of the minutes of the STP meeting #1 (Kochi, 2012), including post-meeting approvals of two consensus statements (1205E-01 and -02) voted via e-mails. Saito presented a couple of minor changes in the minutes: (changes from HS to H2; request to ESO to add URL for QA/QC). The minutes were approved.

Review status of previous meeting action items and consensus statements
Saito reviewed status of a series of consensus statements (1203-01 to -18) and action items (1203-01 to -06) that would be discussed in the next two days of this meeting. In addition, two additional consensus statements (1205E-01 and -02) that were prepared after the STP meeting #1 were updated.

IODP Program Updates
Kawamura (IODP-MI) introduced IODP program updates and future framework of the IODP. Kawamura noted that the program would be run with "independent partnerships (independent funding system for each platform)". Three platforms; Science Advisory Structure (PEP, EPSP, SCP); Support office will conduct proposal processing and SAS support; project partnership office (by MEXT/JAMSTEC) will be a "large-scale IODP initiatives"; and IODP Forum: international body for monitoring and advising platform providers (currently "IO"s). Major change in post-2013 IODP will be platform provider management: (a) independent funding for each platform and associated facilities; (b) yearly subscription of project-by-project participation; (c) Scientists, funding agencies, operator, scheduling, long-term planning will be overseen by Facility Governing Boards; (d) core archives (core repository and curation will remain as they are in the current program); and, (e) publications and tech development, E&O. Science Advisory Structure will be comprised of PEP and essential service panels, in which STP is identified as platform-dependent panel; and hence, recommended its termination. HOWEVER, if MEXT/JAMSTEC will NOT take this suggested SAS structure, management of Chikyu

operation may NOT have to follow the system. New SAS will be internationally staffed and be available for use by any Platform Provider. Proposals from PEP will be forwarded to Facility Governing Board(s). SIPCOM will be terminated after FY2013. Project Partnership Office (PPO (it was formerly indicated as "Chikyu Project Planning Office" in a presentation) will be contracted through a bidding process, and will have mandate for development of partners/collaborators/co-founders of large-scale IODP initiatives, and associated banking role; logistics related to riser project proposals evaluation/nurturing by SAS/other necessary tasks. MEXT/JAMSTEC will consider financial support for the office. No Chikyu management plan has been discussed yet. What's NOT going to be changed in the new program: proposals can be submitted for any platform; internationally staffed SAS; scientific community involved in scheduling and long-term planning for all platforms; US scientists will be able to sail on any platform; Program member offices still nominate scientists; Funds available for salary support at sea and for post-cruise research.

Saito summarized the STP activities so far, including Notices from the IWG+. Saito pointed out the latest (Aug. 15th) notice: "Both the STP…will be deactivated at the end of the current program and…smaller panel and *ad hoc* working groups run by the individual IOs dealing directly with platform specific items" is contradicting to "The IOs will work with each other to ensure standardization". Task of STP can be summarized as "to ensure high scientific standards". This panel is identified to handle: data and publications policies or other policy issues, data and information, methods, and techniques of all IODP measurements; sample handling, curation, laboratory design, downhole measurements and experiments, and observations; both short-term tasks (e.g. third party tool deployment/sea trial; and long-term tasks (maintain program policies, guidelines, review lab design/equipment and program functions; developing scientific technology).

Remaining tasks/issues until September 2013 (dissolution of STP) would be: Short-term routine tasks should be conducted within the current program period (-approval of measurement plans/TPT deployment; -review QA/QC report); (-all STP activities should be summarized and archived to pass down for the next program ("Wrap-up Project") to be done by WGs about – policies/guidelines, -standardization/QA/QC, - TPT and technology development, -Roadmap etc.). In addition, until 2013, STP panel membership recommended that all current panel members stayed in the panel until Sept. 2013. Details of the "Wrap-up Project" will be defined during this meeting (Agenda item 7, Day-2).

Question from Saito: Any updates from IO about "IO-based smaller panel and/or ad hoc working groups"? Answer from Itturino: People will be US-centered "USIO technical panel (UTP)", currently under Ocean Leadership/USIO, and in future, under Facility Governing Board. There is no replacement of STP under USIO at this moment.

Question from Johnson: Is there any hope/desire to share the engineering/technology development with other platform even the UTP is US-centered? Answer from Itturino/Eguchi: Cross-platform things seem to fall into the cracks right now. Itturino indicated that "Information transferring" amongst Platform Providers can be beneficial. But engineering development is highly platform dependent compared to the lab development – even so, communicating the development amongst platform providers is imperative. If STP-like technology panel will be

consisted by just ad hoc gathered platform-providers, it may lose the big picture nature of the current panel, and may suffer from prescribed details by each platform provider (budget depending). Measurements should be standardized across the board to maintain IODP-program standard.

Question from Saito: How about current status of ESO about its own technology panel? Answer from Roehl: ESO is having a first ESO-technology panel meeting (still an international workshop) to discuss about technology development (specifically for the fluid/microbiology sampling of the seafloor). But nothing like STP-like structure established in ECORD system yet.

Miller addressed what Johnson is concerned about. Dissolution of STP and EDP because of the platform-independent nature, there is concept of minimum/standard measurements that will stay as a common concept; and each platform provider should maintain it. If we will have the across-the-board thing, then we will lose the "independency".

Question from Vigier: Where is the report from this "local" STP? Answer from Itturino: The report is at funding agency and meeting attendees but not distributed; and hence, there is no feedback from peers. If there will be no STP, it will mean no feedback from scientists. Feedback from scientists on the development must be obtained.

Houpt commented that STP's tasks should be forming consensus statements; having said that, STP can recommend to have all the IOs saying all IODP minimum standard measurements will be maintained.

Saito mentioned that after the discussion part-II, we make a consensus regarding this issue. In addition we will carefully craft a letter to make these suggestions to SIPCOM. Asanuma commented that from EDP experience, we urge to form this letter before it is too late.

Saito noted that a concept and goal of STP "wrap-up project" (3-5 working group with designated working group leader to produce report) should be discussed during this meeting. Asanuma commented that it is important to designate TO WHOM we are sending this "wrap-up project".

IO reports

ESO Report (Roehl/Morgan**)**

Roehl and Morgan provided ESO updates, including (a) potential schedules for Future MSP, (b) planning status of proposal 672 (IODP Expedition 347. Currently ESO is in contract negotiations with a preferred drilling contractor), (c) Proposal 548, Chicxulub Impact Crater; (d) Proposal 758, Atlantis Massif Seafloor Processes, (e) Status of ESO QA/QC web interface, and (f) outreach activities held by ECORD.

USIO Report (Miller)

Miller presented USIO updates, including (a) JR expeditions held in past 6 months; (b) a full suite of logging and VSP operations during Expedition 340T; (c) Expedition 340 (Lesser Antilles); (d) Expedition 342 (Newfoundland Sediment Drifts); (e) Motion Decoupled Hydraulic Delivery System deployed during Expedition 342; (f) Upcoming expeditions (Costa Rica, Hess

Deep, South Alaska, and Asian Monsoon), including a maintenance period at Victoria conducting SCIMPI test; (g) non-IODP work (1 Aug. ~ 23 Oct.) to conduct contract work for coring and logging; (h) A number of TPTs will be used during Expedition 344 (Costa Rica Seismogenesis Project-A2); (i) sub-bottom profiler (cf. Leg 200) to detect the thickness of sediment to be used during Expedition 345 (Hess Deep); (j) SCIMPI expedition; (k) Asian Monsoon, Expedition 346; (l) FY14 projects will include Large Diameter Pipe Handling Infrastructure (LDPHI) that can handle different pipe sizes and increase drill string strength and updated logging tool strings for deep water drilling; (m) multisensory magnetometer module (MMM): 3-axis fluxgate magnetometer; (n) FY14 budget is awaited – NSF has not provided on this update yet; (o) USIO education and outreach.

Miller responded to a question by Saito that Hess Deep drilling will be probably targeting the gabbro on the fault block. Material is historically identified as easy to drill, but maybe the regional topography would make it slightly challenging.

CDEX Repot (Igarashi/Kido/Gupta)
Report from Igarashi including (a) JFAST, Expedition 343; (b) Hybrid-pressured coring (Non-IODP operation); (c) Deep coalbed biosphere off Shimokita, Exp.337, where two TPTs were used (gas monitoring tool); (d) Expedition 338; (e) installation of helium free SQUID; and outreach activities.

CDEX logging report by Kido, including (a) LWD (geoVISION and arcVISION) during Expedition 343 (JFAST); (b) wireline logging plan for Expedition 337; (c) LWD and wireline logging plan for Expedition 338.

KCC-CDEX responses to STP consensus statements were presented by Gupta, including (a) lighting enhancement on the core description tables was implemented; (b) core description tables were improved by laying more core trays at a time; (c) low-resolution scan of working-half core sections can be implemented in near future, as KCC is developing a new database for this; (d) feasibility study on storing cores in higher temperature (20° C) by monitoring various physical property parameters; (e) RMS (Routine microbiological sample) curation procedure modified to maintain stratigraphic context of the RMS subsample/residue; (f) the abbreviation “RMS” will be changed to Deep BIOsphere Sample (DeBIOS); (g) RMS manual is now available online; (h) some of the KCC equipment available for a broader community (beyond IODP); (i) core summary and catalogue are now available online; (j) efforts to strengthen reefers against earthquakes and tsunami; (k) efforts to expand the core repository capacity; (l) RMS contamination tests relevant to other fields of science; (m) core section ID to be simplified by avoiding core type information like H, X, R, etc. (discussed later on); and, (n) shipping cost for samples taken during a sampling party at an IO different from platform providing IO should be paid by the platform providing IO ?

Saito commented that STP was impressed that KCC responded quickly to almost all recommendations made during the visit of the panel at the last meeting. (See Consensus Statement 1209-05)

Report from recent ORTF meetings and identify new issues

Kawamura (IODP-MI) presented recent ORTF reports.
(a) Expedition 335: The 335 ORTF cannot identify a definitive problem that caused the failure of the drilling. In the course of implementing coring, drilling, cleaning of the hole, if possible, the IODP-MI should share with the IOs any valuable outcome of an ongoing 2012 engineering assessment aimed at addressing similar drilling and coring issues for BEAM (Borehole into Earth's Mantle). Casing plan also needs to be reconsidered. Also, the 335 ORTF recommends consideration of applying spot coring approaches or non-standard coring technique.

(b) Expedition 330: The 330 ORTF recommended that IODP should undertake a review of all IODP downhole operations at a program level in conjunction with the IOs to determine appropriate technology and protocols that scientists requiring to IODP. Itturino (USIO) clarified that the Goettingen tool was TPT, so there was no control at USIO to do the QAQC for the operation of this specific tool. Because it was TPT, despite the PI and the IO communicated prior to the expedition, servicing the IO can provide would be inevitably limited (e.g. IO can conduct bench test and logging operations, but IO cannot conduct QAQC, data acquisition, etc.) The 330 ORTF recommends to USIO that DESClogik graphical interface to provid for core annotation and data entry into the LIMS database should be high priority item for development and implementation.

Review of expedition QA/QC reports: Exps. 336, 339, 340, 342, and 343
USIO QAQC report was presented by Houpt.
(a) Handheld XRF could not work on igneous rock where Mg number was thought to be used for identifying lava flow sequences. It is difficult to obtain homogeneous rock sample to calibrate the handheld XRF. By the Victoria tie-up period (Feb-May 2013), USIO will attempt to obtain a larger set of well-characterized rock for further calibration.
(b) Thermal conductivity measurements: Issue on *TeKa Berlin thermal conductivity half-space needle probes* (Action Item 1203-06) was resolved, as it was a manufacture's problem.
(c) Poor precision of Ion Chromatography remains as an issue and USIO will continue tackling this problem. A third-party tool will be brought for Expedition 344 as an alternative to this.
(d) Core description. A project is underway to create a web-based report for DESClogik data, allowing users to download spreadsheets containing all of the descriptive data or a given template. Probably it will be done by the end of the calendar year.
(e) Characterization of the synthetic U standard has been completed and the USIO is awaiting the final report from the scientist in regard to its concentration and homogeneity.
(f) User data editing project has been started. Detailed requirements and specifications having been defined. The tool will allow technicians and scientists to cancel erroneous tests and to perform quality assurance activities without having to call an applications developer.
(g) An issue on edge effects of the NGR measurement. Precision of the data depends on positioning of samples, 10 mm difference of which can make 1 % of error.
(h) Color reflectance measurements during Expedition 340. Calibration and stability of the color reflectance system was improved. USIO purchased a set of diffuse color standards to improve data quality and to check the stability and reproducibility of the measurement.
(i) Core description during Expedition 342. An efficient graphical-based entry tool for DESClogik was suggested.

Saito and Houpt summarized this report as:

(1) To be fixed: chromatography, core description, NGR, user data editing
(2) Fixed: TeKa
(3) Difficult: XRF

No report from CDEX regarding QAQC, except for the mechanical problem on thermal conductivity measurement that easily loses the signal. CDEX asked the vendor about the issue and was recommended to purchase the new sensor. Houpt suggested to Igarashi that if TeKa probe has a signal problem, needs to be repurchased.

No report from the ESO regarding QAQC. Previous QA/QC reports become available online.

Issues on cross platform consistency, Part I
Based on Consensus Statement 1203-08, updates on Taxonomic Name Lists (TNLs) was provided by Collier (IODP-MI) and presented by Saito. SMEs generated comprehensive lists of more than 17000 genus and species names within 5 taxa. The TNLs project was completed but current issue is how the IOs adopt this into JANUS, J-CORES, and CHRONOS. USIO's intention is to make some effort to connect the database. TNLs does not have any age data (unfunded part of the project) nor explanatory note, and these parts should be addressed. Due to lack of formal integration in the area of data management for the new IODP, maintaining synchronized TNL lists is a challenge for the IOs. In the current program, paleontological coordination group (PCG) members volunteered their time/effort and IODP-MI supported travel and meeting. The new IODP framework may not provide resources to enable the PCG to meet and/or to serve as curators of the TNLs. Some PCG members are in discussion regarding potential mechanisms, such as NSF EarthCube, to continue to improve micropaleontological resources for IODP and the micropaleontological community. Young will summarize a consensus statement that recommends continuous effort to keep updating the database, etc. (See Consensus Statement 1209-07)

Physical and digital reference materials for smear slide analysis (Action Item 1203-03): IODP-MI funded a project for the development of physical and digital analysis of sediment smear slides based on multiple recommendations and consensus statements from the STP. The goal of the project is to produce reference materials to promote standardization in identification and description of sediments on IODP platforms. Deliverables of the project include: sets of reference materials collected at IODP core repositories, guide to creating smear slides, a digital atlas of sediment smear slides. The scope of this phase of the project was limited to siliciclastic and volcanogenic sediments due to funding constrains. STP reviewers (Kutterolf and John) were positive and enthusiastic about these resources. The resources should be expanded to include additional sediment types. The authors expressed interest in developing the Guidelines and atlas into citable reference. Kutterolf presented the Atlas of smear slides. This could be a learning Atlas, so the revision will be dynamic, but maintenance and completion should be continued. Houpt pointed out that IODP-MI should provide the actual samples that were used to make the smear slides for reproducibility of the slides. Johnson noted that the quality of this incomplete version of the Atlas maybe attractive enough to funding agencies to continue/complete/maintain the work. In fact, giving the fact that STP will be terminated, probably NSF could fund to continue this work.

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DAY 2 (0830-1700)

Saito re-visited STP Consensus Statement 1205E-02 (Review of a proposal for examination of biological processes during standard IODP storage). Although Saito noted that STP doesn't need to take further action on DAY 1, the proposal itself is a good idea and need to contact PI about status of revision. STP makes an action item to contact the PI and encourage them to clarify and revise the proposal (see Action Item 1209-02).

Approval of Measurement Plans for the upcoming expeditions: Exps. 338, 344, and 345

USIO (Miller; Expeditions 344 and 345)
All minimum measurements and three third party tools will be conducted during Expedition 344. No issues were identified with the third party tools. Handheld XRF and whole core imaging are requested as non-standard measurements for Expedition 345. USIO will ship Accusonic Pinger that will help drilling decisions for Expedition 345 although the funding has not been approved for the tool yet. It has been in storage at Scripps since ODP Leg 200. The pinger is placed close to the bottom of JR. Even if it is not successful, this method doesn't require additional efforts on the part of USIO. If it works, the information will be valuable. Miller (USIO) encourages endorsement of this profiler.

CDEX (Igarashi; Expedition 338)
Igarashi (CDEX) explained about dielectric measurement equipment to be used during Expedition 338 as a third-party tool. The purpose of the tool is to measure the dielectrics and electrical conductivity in the frequency range of 30 kHz to 6 GHz. The instrument is setup at least a day before the measurements. Calibration is done on 4 standard materials and the calibration is repeated four times for each material. A 40 g of cuttings will be taken for each measurement. Date QC protocol and calibration are done with standards and each sample is measured multiple times.

STP approved the measurement plans for Expeditions 338, 344 and 345. Saito noted that STP requests QA/QC report for the dielectric method after expedition because it is new to IODP.

Finalize action items and consensus statements from previous meetings
Follow up of CS 1203-06 (Testing of SCIMPI). Kawamura (IODP-MI) explained the basic concept and configuration of the SCIMPI system. The sea trial has been planed for 25-29 May 2013 before Expedition 341, Southern Alaska Margin on JR. The tool is ready for deployment and the hardware and manuals have been received by USIO. The SCIMPI ERS (V2.1) is still being modified. The SCIMPI battery might need to be replaced.

Kawamura provided updates on the Consensus Statement 1205E-01 regarding the status of MDHDS. Kawamura explained the diagram of the tool and layout of the devices. The test was

done on Expedition 342. They successfully unlatched the inner MDHDS subassembly and drove the T2P into the formation. Tool was remotely deployed and completely decoupled from drill string. Problems with ERS resulted in poor latching and no telemetry. They demonstrated good coupling with the formation and did not damage the penetrometer. In summary, even though they didn't accomplish all they wanted to, they learned more about the steps needed to fully perform the system. Yoshi noted that the basic function of the MDHDS is good but some functions need to be improved. The electronic tether should not be utilized at this point. The ERS is not ready to be adopted but the work to correct issues with the tool have been funded and planed.

Saito noted that we see the SCIMPI is well prepared and STP would like to endorse the sea trial. STP reviewed the sea trial results of MDHDS and basic function worked well but some modifications might be needed and a subsequent sea trial would be important to do.

Saito asks Miller to provide updates on CS 1203-07 **(Stratigraphic Correlator/Splicer Software)**, 09 **(Improvements to DESClogik)** and 03 (Shipboard Paleomagnetism).

Stratigraphic Correlator/Splicer Software: Miller noted that programmers in USIO will need to learn the software. The data after the Med Outflow have been forwarded to the program owner. It's clear that scientists are finding other ways to get correlations done by writing Excel file or write their own scripts. Correlator was not used on 342. It comes down to the experience of the stratigraphic correlator. Correlator has not been used this year. USIO continues to build and update capabilities of Correlator. Inexperienced users will be a challenge with Correlator. They will need to learn the software on their own.

DESClogik Improvements (CS 1203-09): Miller mentioned that the improvements are taking a secondary importance to the primary responsibilities of scheduling expeditions. IO has a long list of improvements but not enough time to do this. IO is prioritizing different components of the improvements. All of the bug fixes were put into one package. Since then IO has done two more enhancements: one allows a more user-friendly data export method into an excel-like workbook. These major projects take up to a year to complete. 60% of our developer time on the ship is spent correcting data input into the database. Initially they centralized the capability to remove data to developers but now recognize that scientists can quickly accomplish this. Another major goal is to have a graphic data entry module but they had to focus on the background data acquisition setup first. IO has three modules they want to complete: graphic data entry template, age depth modeling, and a database backfilling lithologic interpretation tool. These projects take a lot of time. The Graphic Data Entry Module will take an estimated 18 months from time of approval and producing a beta module. It will take 6 people and a few hundred hours of programmer time and time to test it. IO wants to make the GDE module but need to find the time. There is not a commercially available package that has the flexibility to describe any type of materials. Commercial software options are not as flexible or rigorous. The fiscal realities are another issue. At some point the IO will need to consider the reduction of services. The amount of time spent upgrading DESClogik is higher than user appreciation of the software. Lots of shipboard and land based technician time spend on DESClogik. Abandoning the need to put these descriptions into the database and go back to using Excel and Illustrator to make barrel sheets will help save a lot of money, but the report generation will be like it was in the 80s (pencil and paper). Users request the Graphic Data Entry tool but not everyone is using it. The

age-depth plot module might take less time, ~6 months. The backfilling interpretation tool is a distant goal. There are limited resources and several legitimate projects but we can't do everything at the same time. STP recognizes updates on DESClogik and asks IO to report on the progress.

Shipboard Paleomagnetism (Consensus Statement 1203-03): Miller mentioned that USIO is creating a database and have a biweekly status report. He doesn't have a statement on the taskforce that is beyond our responsibility. They have passed along the information not to use and have made steps to get matrix-matched standards. Stoner mentioned that it is great that the IO is doing what can be done about these issues. He agreed that the taskforce should come from the pmag community. If pmag people assembled we would ask IO to host our workshop. Stoner also noted that we should enter into the minutes that these items are being listened to and will be addressed as resources allow.

Magnetic Susceptibility Calibration and Standardization (Consensus Statement 1203-12): CDEX has substantial updates on this. CDEX/MWJ made three different paramagnetic materials (Gd-oxide, Fe-SO4-NH4-hydrite, CuSO4) and tested. The data look good. It shows that the magnetic susceptibility does not change over time in these materials.

Houpt (USIO) noted that both the Kappabridge and MS2B are small sample chamber meters. How do these help calibrate the whole round core scanner on the JR? I would be happy to discuss the details offline but the problem is there are proximity effects with the meter. A disk or cylinder would be a better way to calibrate the instruments on the JR. Igarashi noted that CDEX will continue to test the standards through the year. Saito noted that STP is happy with CDEX's quick response. The tests look good. The materials are usable. Stoner noted that expand the testing period from a week to months and developing a whole round test sample would be the next step (See Consensus Statement 1209-10).

Saito asked IOs to report updates regarding Magnetic Freezing Technique Cells Alive System (Consensus Statement 1203-10). CDEX is welcome to try on expedition because KCC has the system. Houpt (USIO) noted that the background says future tests will be done to test if CAS affects microstructure. Hirose mentioned that Dr. Morono probably has the samples to be tested. Hirose will present updates at the next meeting.

Issues on cross platform consistency, Part II

a) SEDIS updates and evaluation

Saito introduced IODP-MI report provided by Collier (IODP-MI) regarding the SEDIS (Scientific Earth Drilling Information System) that was developed to be the integrated portal for IODP data and IODP related publications. The IODP framework states that the responsibility for data management will be transferred to the Platform Providers but the strategies for coordination of these efforts are not clear. Does IODP need technical coordination of data management issues among the Platform Providers? Does IODP need a data portal for all data from all IOs is easily accessible? IODP-MI does not know there is future support for SEDIS or not. It is important to have a common data portal for all drilling data but there is no plan to support this system. Eguchi noted that the program tried the increase the number of members. There could be a lot of new comers to IODP and hope we can keep SEDIS for the next program. Kawamura mentioned that

IODP-MI can support this but the new program structure is becoming independent. It depends on what the NSF and JR members think about the system. Saito noted that STP doesn't need to identify the entity that can support SEDIS but it should be kept in the new program. (See Consensus Statement 1209-11)

b) Scientific Drilling journal

Saito presented IODP-MI report provided by Collier about Scientific Drilling (SD) journal. Saito noted that the SD is a journal published by IODP with the International Continental Drilling Program (ICDP). NSF has informed IODP-MI that it will withdraw financial aid for SD. ICDP has indicated willingness to increase financial support for SD and IODP-MI is coordinating with ICDP to find additional funding to publish SD. If NSF, MEXT, EMA or other entities agree to serve as co-publisher for SD by Sept 2013, IODP-MI will assist in the transition. If not, the final issue of SD will be March 2013. Kawamura noted that currently IODP-MI pays 60% and ICDP pays 30% but this doesn't cover indirect costs like human resources to do editing. Tominaga mentioned that it's important to have the SD journal for science not industry. It's good coffee table material for science departments. Saito noted that this journal is very useful because it is a unique journal for science drilling and it should be continued and maintained. We don't need to identify specific organization to support this but it should be supported. (See Consensus Statement 1209-12)

c) Formation factor measurements and interpretation

Schmitt presented formation factor report (Action Item 1203-05). The motivation for this comes from the microbiology community who requested that these become routine measurements, which are not easy to make. The IOs have attempted to measure this but results are inconsistent. Clays can make it difficult to measure. Archie's Law is the basic idea that relates porosity to electrical conductivity. This measurement will allow one to measure the tortuosity that depends on the complexity of the pathway between particles. Conductivity of the rock depends on porosity and tortuosity. Archie in the 40s and 50s determined the formation factor. Microbiological and chemical reactions in a porous medium depend on diffusion (Fick's Law; flux = porosity x diffusion coefficient x the concentration gradient). The effective diffusivity is the diff coefficient in a pure fluid divided by the formation factor. There are several ways to measure the formation factor: DC measurements that have polarization issues, AC measurements that had frequency dependence, inductance measurements. But measuring electrical conductivity can be difficult to do even in controlled conditions of the lab. The major issues are: the measurements are difficult and impractical to do, this is a ephemeral property which challenges the reliability of the measurement, and the presence of clays (which are very conductive) in the sediment can complicate the interpretation. Schmitt is not convinced that the formation factor is something that can be done as a routine measurement. These measurements could be done for specific expeditions or scientists. Houpt noted that USIO have known for a long time about the challenges. Cracks in the sediment can completely change your number. USIO has the equipment on board for those who want to make these measurements. USIO will help scientists to do this and have space in the database but USIO hasn't instituted these measurements because of the complications. Tanaka (CDEX/MWJ) noted that impedance is a regular measurement on the Chikyu. The data quality is difficult to say because the numbers easily change. Schmitt's conclusion is that given the difficulty of the measurement and the uncertainty of the

measurement should not be a routine measurement but a case-by-case basis. (See Consensus Statement 1209-13)

Thermal conductivity measurement on lithified materials

Tominaga noted about thermal conductivity (TC) measurement (Action Item 1203-06). Problems with previous TC were due to unstable electrical current and resolved when using a different electrical circuit on the ship. Air currents around the water bath also cause variability. This effect was fixed by covering core with enclosure. Corrosion of the wire was also a major issue. This problem was pointed out to the manufacturer. Tominaga thinks this action item is closed because this issue is ongoing and will be fixed very soon.

d) Review and modification of third party tool policy

Kawamura (IODP-MI) reported regarding review and modification of 3rd party tool policy (Action Item 1203-04). There are some very small changes with the policy and guideline. A PI makes the request to the IO who work together about implementation issues. They then forward to IODP-MI and SAS. OTF then reviews the methods results. Following a pre-cruise meeting they establish whether sea trial is required or expedition related deployment. These are small changes that will likely be reviewed under the new program. Saito noted that STP endorses minor-revised policy and forward SIPCOM for approval and express the importance of keeping this policy in the new program. (See Consensus Statement 1209-14)

e) New Publication Format

Saito reviewed Consensus Statement 1203-14 (New Publication Format). Miller (USIO) noted that an article promoting the publication survey was published in US drilling journal. The survey will begin later this month. Distribution by DVD will be discontinued but reports will be available online. Scientists and libraries rarely request the DVD. Saito noted that the survey should be international and should be sent message to all PMOs

DEBI-t report

Report from Edwards regarding the DEBI-t. The DEBI-t was deployed during Expedition 336. The goal was to understand microbial communities in the rock below the sediments. Fluorescence is the tool for detecting microbial life but rock is also fluorescent. The DEBI-t excitation below 250 mm is specific to microbes (not rock). Deep UV native fluorescence can thus be used to probe for microbial life. This was deployed downhole with a tool in 395A during Expedition 336 to see if they could detect biomass. One can see there are a lot of ferric hydroxide particles in the borehole. Protein-like structure has a specific signal; calibrated to microbial biomass it's about 10^7 that is more than what is found in seawater. They think some water was entrained into the hole and the microbio counts were lower in the upper part of the hole which increased to the bottom. (See Consensus Statement 1209-15)

Review of Chikyu Lab instrumentation for future operations

Igarashi (CDEX) presented the status of Chikyu lab instrumentation for future operations (Action Item 1203-01). She noted that there would be a workshop to discuss the ten year plan for research on Chikyu, "CHIKYU+10" to be held during April 21-23, 2013. Eguchi mentioned that at the last STP meeting the panel was asked to review Chikyu instrumentation, but the top management thought it was better to have the workshop and then the review at the next meeting.

The workshop will address what people want to do with riser drilling. Saito noted that this Action Item should be postponed for the next meeting held after workshop.

Revision of STP Roadmap

Saito reviewed history and status of the roadmap. STP has developed over the last 5 years a technology roadmap to improve science conducted by IODP. Roadmap 1.0 was released on the web. We will work on Version 2.0 during this meeting. Saito explained layout of spreadsheet and Roadmap top 10. STP asked IOs to review roadmap and we've received input from CDEX USIO and ESO (Consensus Statement 1203-15). Actions to be taken during this meeting is to update roadmap items and status. Kutterolf leads Core description (CD), Stoner leads petrophysics and physical property (PPP) and Gilhooly leads chemistry and microbiology (CMB) breakout sessions. All liaisons are welcome to participate in all working groups.

Report from CD breakout session (Kutterolf)
A2-2: Automatic age-depth model. It has high priority and is on the DESClogik development list.
A2-4: Digital catalog of smear slides and thin sections. This is in development. It would be good to find funding to develop this for carbonates. The tool would also be valuable for teaching. But who can maintain this catalog and fund it?
B1-2: Large diameter pipe. Updates have been shown during this meeting. Eguchi noted that Chikyu can handle larger diameter pipe up to 6.5".
B2-1: Enhanced core recovery. No current actions.
B2-3: Oriented Cores. There is an updated tool called FLEXIT. This is good for soft rock but not for hard rock. Miller noted that it wouldn't take a lot of money but it needs to be stated as a directive. The expensive part is shipboard testing.
B2-4: Non-magnetic core barrel. Stoner noted that non-mag core barrel works really well but stronger core barrel is needed.

Report from PPP breakout session (Stoner)
C1-6: Slim line loggers
C2-1: Compressive or shear strength: there is new technology and strength can be measured in real time
C2-2: Stress measurements. There was an ED proposal for this. The first proposal has been accepted.
C2-3: Formation pore pressure. CDEX is able to deploy it on Chikyu but too large for JR.
C2-4: Collection of formation fluids. CDEX is able to deploy it on Chikyu.
C3-1: Downhole borehole sensors for long term monitoring in high T. New materials allow much higher working temperature up to 500˚C. The hottest logged temperature in IODP is 312˚C.
C1-9: Logging while pulling pipe. This is now an option.

Followed by a report from CMB breakout session (Gilhooly). Detailed updates to the roadmap by three groups are submitted to the chair by the end of the meeting. Saito will integrate all the updates to the roadmap and complete ver. 2.0 (See Action Item 1209-03)

Overview & wrap-up of STP activities, Part II

Saito led a discussion regarding overview and wrap-up of STP activities. According to a notice from the IWG+ regarding deactivation of STP, the STP members discussed what the remaining tasks and issues are until and beyond September 2013. The key questions at #2 STP meeting were: 1) What is the most essential element to maintain high scientific standards for the IODP and how to maintain it? 2) What must be transferred to the International Ocean Discovery Program? 3) Do IO-based smaller panels and/or ad hoc working group, which replace the current STP recommended by IWG+, work? 4) What is alternative mechanism/function to facilitate communication between IOs and science community? 5) What are STP's actions be taken during this transition period?

For the questions 1) and 2), the STP briefly summarized two statements regarding scientific technology and standardization in the new program (STP Consensus Statement 1209-01) and continuation of existing measurement and sampling policies into the new IODP (STP Consensus Statement 1209-02). In addition, the recommendation letter will be sent to SASEC (STP Action Item 1209-04). For the questions 3) and 4), the STP will identify issues and suggest ideas after the #2 STP meeting. For the question 5), the STP identified the following actions to be taken within the current program even if there are no physical STP meetings:

a) Routine tasks for FY13 expeditions such as approval of measurement plans and third-party tool deployments/sea trials and review of QA/QC report. b) All STP activities and products, including Scientific Technology Roadmap, should be summarized and archived to pass on to the next program.

To conduct the task b), the STP organizes 'wrap-up project' working groups. Four potential working groups were proposed:

1. Policies/guidelines/standardization documentations (ex. Sample/data, third-party tools, depth scale, minimum/standard measurements)
2. Common science systems across all platforms (ex. SEDIS, publications, smear slide references, taxonomic name lists).
3. Third-party/certified tools and technology/engineering developments, and
4. Scientific Technology Roadmap

Saito note that all WG reports will include summary with recommendations that can be integrated into one white paper. STP activities since 2003 need to be summarized. Kutterolf pointed out that this activity requires a face-to-face meeting for interactive discussion. Kawamura (IODP-MI) asked the individual IOs to take care of the technology we've developed. Saito noted that during this meeting we write a consensus statement about what should be transferred from the current program to the new program and how to maintain cross platform exchange. Two action items should be written. One is about recommendation letter from STP and the IOs to SIPCOM. The other one is definition and timeline for the wrap-up project. (See Consensus Statement 1209-01 and -02, Action Items 1209-04 and -05)

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DAY 3 (0830-1200)

Panel Rotation
All members should stay since it makes no sense to rotate STP members now. STP recommends that all current members stay. It makes also no sense to change chair and co-chair at this moment therefore STP suggests that S. Saito and D. Schmitt should continue their work until September 2013. STP members approved the suggestions and also the skipping of chair and vice-chair rotation. (Consensus Statement 1209-17)

Finalize Recommendations/Consensus Statements and Action items
STP members reviewed all draft consensus statements, discussed, edited, and voted.

- 1209-01 (changed to -03): This statement should be sent to all IOs for information. STP emphasizes the further development of testing and deployment of large diameter pipes.
- 1209-02 (changed to -04): USIO emphasizes that this is not scheduled for Expedition 341 It would be better to say targeted since there is currently no one directly delegated to this.
- 1209-03 (changed to -05): A comment is included that KCC has been very helpful in the sampling conducted by some panel members soon after the Kochi STP meeting, and that the Kochi staff performed immediate implementation of the recommendations made during the Kochi STP meeting. The consensus statement has been complemented by a paragraph stating that the new name Deep BIOSphere Sample (DeBIOS) for Routine Microbiological Sample (RMS) has been approved by the STP.
- 1209-06 (changed to 08): One comment has been included stating that STP also recommends that material will be published online.
- 1209-10 (changed to 12): It has been added that this is a unique venue for distribution of information to scientific drilling and wider geoscience communities. STP raised the question how the former and future issues will be archived beyond the current phase when funding is questionable.
- 1209-4 (changed to 06): Wording has been changed from recommendation into consideration of optimal strategies for consistent DESClogik entries. Anything that this panel can do to improve the implementation of core descriptive data into the data system is highly recommended and appreciated from USIO. Commercial software's can only provide part of what is recommended by the scientists. So USIO needs continuous input and support from scientists, not only critics, to justify future development on DESClogik. The importance of further development and continuous support of DESClogik in the new IODP has been included in the consensus statement.
- 1209-14 (changed to 01): The quality of standardized data acquisition must be ensured in future which has been the fundamental concept behind the STP. This must be continued in the one or other way. This is one of the most important things for the future IODP and a minimum requirement.
- New consensus statement 1209-15 (changed to 02) about "Continuation of minimum and standard measurements in the new IODP" following up the previously discussed item.

Sampling, data and obligation polies should be included.
- 1209-17: New consensus statement regarding the term of STP members.

STP members reviewed all draft action items, discussed, edited, and finalized.
- Action item 1209-04: Seeking for support to express the concerns with deactivating STP. Letters should be sent to Saito at first of December.
- Action item regarding STP Wrap up Project: deadline 6 month from now, 4 working groups. Saito and Schmitt will nominate group leaders.
- Action item for Scientific Roadmap Version 2.0: Updates will be delivered based on the updates of the 2nd STP meeting.

STP members reviewed all draft consensus statements regarding acknowledgements, and voted.
- STP Consensus Statement 1209-18: Acknowledgement to local host.
- STP Consensus Statement 1209-19: Silver Falls State Park field trip.
- STP Consensus Statement 1209-20: Acknowledgement of Dr. Saneatsu Saito's Contribution as Chair of STP.

Working group leaders meeting must be ensured as a minimum, ideally the entire panel should be meeting. Two possibilities for the next meeting location: French (Nancy) or Germany (Kiel). Saito closed #2 STP meeting.