

**Information Handling Panel, September 9th – 11th, 1992,
Marseille, France.
Draft Minutes**

Attendees: Ian Gibson, Patricia Fryer, Brian Funnell, Michael S. Loughridge, Adrian Richards, William R. Riedel, William W. Sager, Tsunemesa Saito, John B. Saunders, Andre Schaaf, Volkhard Spiess, G. Wadge, Sherwood W. Wise.

Liaison: Yves Lancelot, Ronald C. Chaney, David Goldberg, Russ Merrill

Guests: Guests: John Coyne, Jorg Erzinger

Executive Summary

Review of actions by PCOM in relation shipboard computing and data acquisition The Chairman noted that in September 1991, IHP had recommended to PCOM that urgent action was required to upgrade the ODP shipboard computing/database environment. Notwithstanding the establishment and report (March 1992) of the Data Handling Working Group and a detailed set of proposals from the Operator (the ODIN proposal), PCOM and the JOIDES community, although more sensitive to the issue, were unwilling to divert scarce resources to rectifying the situation. The Chairman regretted that he had not been more effective in initiating action on this important matter.

After discussion, the Panel decided to continue to urge PCOM to press ahead with plans to implement changes to the shipboard and shore-based computing/database environments as set out in the report of the DHWG Report of March 1992. This continues to be the first priority of the panel and the changes should be implemented as a matter of urgency, perhaps in a step-wise fashion, as soon as funds are available.

Report of the TAMU/ODP Data Base Group. In presenting his report, John Coyne noted that database requests to TAMU/ODP for copies of particular datasets were declining, perhaps because of the increasing availability of some ODP digital data on CD-ROM. Progress on the VCD, Core-log, and age-profile datasets was also reported.

In discussion, IHP noted with concern that notwithstanding a protracted development program, the VCD datacapture package was still under development and sedimentary core description data was NOT being added to the formal database. The panel also urged the immediate evaluation of the BugWare software package as the standard paleontology data acquisition package on the JOIDES Resolution.

John Coyne agreed that at present little data was being added to the formal IHP mandated datasets that constitute the heart of the ODP database structure. Such information exists, but is being kept as an unstructured set of separate datasets at TAMU/ODP. The panel regarded this as an unsatisfactory state of affairs and noted that significant improvement would only come with the renewal of ODP shipboard computing/database environment.

Report of TAMU/ODP Publications. The panel commended ODP/TAMU for its work in the preparation of the Proceedings volumes. The timely production of the volumes continues, with the maintenance of a quality product. IHP considers this progress to be very satisfactory.

The IHP considered, briefly, alternate styles of publication of the scientific results. The motivation for this discussion was to address the impression that ODP continues to produce 'gray' literature. IHP urges PCOM not to make changes in the publication policy at this time. The present volumes are being well produced in an effective manner and appear to be serving the community well. Changes do not appear to be warranted.

Report of the TAMU/ODP Computer Services Group Since the last report the changeover to UNIX has begun. Four SUN workstations had been purchased with the intention of placing two on the JOIDES Resolution.

It was emphasized that the main operational objective of the Group was to present users with a friendly, robust system that they would actually want to use. The panel noted that this was not being achieved. Parts of the data-acquisition software were perceived as being unfriendly and out of date. Again significant improvement would only come with the renewal of ODP shipboard computing/database environment.

Report of the TAMU/ODP Curator. IHP considered the results of a June 1992 Survey on the possible establishment of an additional core repository outside of the United States. IHP considered that there was no pressing need to establish a new core repository at this time.

Logging Group Report The first trial BRG CD-ROM (Leg 139) is in preparation. It is hoped that the first 'production' CD-ROM to be included in the Initial Report Volumes will be for Leg 143. This disk will replace the micro-fiche used in earlier volumes. Work is also in progress to archive all standard logs predating Leg 129 in ASCII format.

Paleontological Matters. The panel reviewed the present status of the Micropaleontological Reference Centers and strongly supported their work and the plan to hold a meeting in Basel in mid-1993 for the curators and users.

IHP suggested that to improve stratigraphic coverage on legs, more specific advice needed to be given to future Co-Chiefs prior to Leg staffing and agreed to liaise with the operator on this matter.

Review of Recent ODP Volumes. Reviews of the Initial Report and Scientific Results volumes for ODP Legs 119 through 125 were made by individual panel members. Overall the reviews were complimentary, and some of the concerns expressed have already been addressed by ODP as a result of in-house assessments.

The Panel noted that although some Scientific Results volumes do contain contributed chapters that are either second class or simply data reports, these often contribute by helping maintain a balanced account of the achievements of specific legs.

Co-Chiefs Report. W. Sager, Co-chief, Leg 143, and Jorg Erzinger, Co-chief, Leg 140, both commented in their reports that the shipboard database/data-acquisition computer system, although outdated, was not stressed during these legs because relatively little core was recovered. The panel noted that high-recovery, paleo-oceanographic legs were a different matter.

Recommendations to PCOM

1. IHP continues to urge PCOM to press ahead with plans to implement changes to the shipboard and shore-based computing/database environments as set out in the report of the DHWG Report of March 1992. This continues to be the first priority of the panel and the changes should be implemented as a matter of urgency and perhaps in a step-wise fashion. (Agenda item #3)
2. PCOM is again warned that the present shipboard database environment is perceived by shipboard scientists as being user-hostile and outdated. As a result little new data is being routinely added during legs to the structured ODP datasets. There is a danger that information is being lost and it is very difficult to ascertain whether all possible information has been even gathered at the end of a leg. A large, ever-growing backlog of database work is developing at ODP/TAMU. (Agenda item #4)
3. IHP has recently reviewed a multi-leg sample of recent Initial Report and Scientific Results Volumes and considered these in the light of possible changes to the ODP Publication Policies. It is the view of the Panel that ODP/TAMU is doing a good job in relation to the preparation and production of the volumes, which appear to be serving the project well. IHP urges PCOM not to make changes in the publication policy at this time, with the exception of suggesting that micro-fiche be eliminated from the volumes and replaced by some combination of electronic (CD-ROM?) and conventionally printed media. (Agenda item #5)

Suggestions to the TAMU/ODP Operator

1. The panel re-iterates its suggestion to the operator of April 1992, that the usefulness of the BugWare software package should be investigated, and if satisfactory, implemented as the standard paleontology data acquisition package on the JOIDES Resolution as soon as possible. If the BugWare software is considered by the operator to be unsatisfactory or inappropriate, input from the paleontological members of IHP should be sought without delay (i.e., well before the next IHP meeting) (Agenda item #4).
2. The concept of a "lead stratigrapher" for each leg appears to the panel to be useful and IHP again urges the Operator to impress on future Co-Chiefs the importance of identifying such a shipboard scientist who would be charged with assuring that an appropriately complete biostratigraphic coverage for the leg appears in the scientific results volumes (Agenda item #9).
3. The panel re-iterates its request of April 1992 that brief synoptic tables indicating the status of the ODP datasets be prepared and provided to IHP prior to panel meetings every six months. The lack of this information is inhibiting the work of the panel in assessing progress and problems in the database area. (Agenda item #4)
4. The panel suggests to the operator that every effort be made to eliminate micro-fiche as a publication medium from future Preliminary Report and Scientific Results volumes. CD-ROMs should be used for logging data and other large numerical and graphical data sets. Smaller datasets should be printed in the conventional way. (Agenda item #8)
5. IHP urges the operator to proceed with all possible speed in the preparation of a trial CD-ROM to allow the evaluation of the concept of an on-line illustrated catalogue of important microfossils to assist shipboard paleontologists in their work. (Agenda item #9)

6. IHP again stresses to TAMU and the Logging Group its support for the concept of distributing data to the user community in the CD-ROM format. (Agenda item #8)
7. Periodic maintenance and calibration checks of the shipboard GRAPE are clearly required to insure that the device is working correctly and generating valid results. This review should also include an examination of the associated software, calibration factors, and isotope source. (Agenda item #4)

1. Words of welcome and Review of Agenda.

The Chairman welcomed members, liaisons and guests to Marseille and thanked Dr Yves Lancelot for hosting the meeting. The Chairman noted that the excellent facilities at Luminy would make for a pleasant and yet effective meeting. There were no additions to the agenda.

2. Review of Action Items from the April 1992 IHP Meeting.

In reviewing the action items from the minutes:

- The Chairman agreed to submit to the JOIDES journal a formal obituary notice for Dr Nicholas Rock, the former CanAus panel member, who died in Australia earlier in 1992. ACTION
- The Chairman agreed to write to Jack Baldauf (TAMU/ODP) about the duties of the shipboard 'lead stratigrapher' ACTION
- M. Loughridge will inquire as to the status of the RIDGE database to avoid duplication of efforts. ACTION
- The Chairman and the representative from TAMU/ODP agreed to continue efforts to ensure that minutes were distributed promptly following meetings. Enquiries relating to 'missing' minutes should be addressed to Fabiola Burns at TAMU/ODP.

3. Data Handling Working Group Report (Ian Gibson), review of actions by PCOM in relation to earlier IHP recommendations, and PCOM Report (Yves Lancelot).

The Chairman noted that in September 1991, IHP had recommended to PCOM that urgent action was required to upgrade the ODP shipboard computing/database environment. PCOM accepted that recommendation in December 1991 and established the Data Handling Working Group (DHWG) to recommend appropriate changes. The Report of the DHWG (March 1992) was reviewed by IHP at the April meeting and accepted by PCOM in April 1992. At this time PCOM chose to mandate a subcommittee of the DHWG to work with the operator to prepare a detailed proposal and cost estimates for the implementation of the March Report of the DHWG. The operator accepted both this mandate and the March DHWG recommendations. The Operator met with the subcommittee of the DHWG in June and July this year. The resulting 'ODIN' proposal was submitted to PCOM for consideration at their August 1992 meeting.

Yves Lancelot reported on the August 1992 PCOM meeting and noted that only limited funds were available in financial year beginning October 1992 (FY93), partly as a result of the Soviet Union leaving the program. As a result the ODIN proposal was considered with a parallel competing proposal from the operator to continue DCS development and a second outline proposal for the renewal of the computing

environment from SOEST. PCOM recognized, in a formal motion, that both the DCS and the upgrade of the computing system are of great importance to ODP science, and that any overflow funds in FY93 (perhaps several hundred thousand dollars) would be devoted to the computing upgrade. However in view of the wide disparity in the budgets of the ODIN and SOEST proposals, PCOM requested in a second formal motion that the Science Operator issue a formal RFP to the ODP community for the renewal of the shipboard and shorebased computing/database environments.

The draft RFP was prepared by the operator and, at the time of the IHP meeting, was being considered by an 'Evaluation Committee' prior to being issued to the community. IHP members noted with concern and irritation that US Government regulations appeared to prevent them examining the RFP prior to its distribution. Members also noted that none of the technical experts on the DHWG subcommittee had been asked to examine the draft RFP. IHP also noted that the operator had decided to temporarily abandon the ODIN proposal and not to bid on their own RFP to upgrade the computing environment.

After discussion, the Panel decided to continue to urge PCOM to press ahead with plans to implement changes to the shipboard and shore-based computing/database environments as set out in the report of the DHWG Report of March 1992. This continues to be the first priority of the panel and the changes should be implemented as a matter of urgency and perhaps in a step-wise fashion.

In drawing the discussion to a conclusion, the Chairman noted that one year after alerting PCOM to the problems with the shipboard computing environment, there was little progress to report. PCOM and the JOIDES community were perhaps more sensitive to the issue but not to the extent of being willing to divert scarce resources to rectifying the situation. The Chairman regretted that he had not been more effective in this matter.

4. Report of the TAMU/ODP Data Base Group

In introducing this agenda item, the chairman thanked John Coyne, the Database Supervisor, for coming to Marseille to report to IHP, notwithstanding the very significant demands recently placed on his time. In presenting his report (Appendix A), John Coyne noted that database requests to TAMU/ODP for copies of particular datasets were showing signs of declining, perhaps because of the increasing availability of some ODP digital data on the recently released CD-ROM. Progress on the VCD, Core-log, and age-profile datasets was also reported.

In discussion, IHP noted with concern that notwithstanding a protracted development program, the VCD datacapture package was still in a 'beta' phase and would not reach version 1.0 until Leg 147. Sedimentary core description data was NOT being added to the formal database and the program was primarily of value in helping with the production of art work for the Initial Report Volume.

The panel again suggested that the usefulness of the BugWare software package be investigated. If satisfactory, the program might be implemented as the standard paleontology data acquisition package on the JOIDES Resolution. In the interim the panel suggested that the operator NOT issue an RFP for a paleo data-acquisition program. If the BugWare software is found lacking, the paleontological members of IHP agreed to provide further advice on request.

John Coyne agreed that at present little data was being added to the formal IHP mandated datasets that constitute the heart of the ODP database structure. Such information exists, but is being kept as an unstructured set of separate datasets at TAMU/ODP. The panel reiterated its suggestion of April 1992 that brief synoptic tables indicating the status of these datasets be prepared and provided to IHP prior to panel meetings every six months. The panel noted that the lack of this information is inhibiting

the work of the panel in assessing progress and problems in the database area and advising PCOM on these matters.

R. Chaney noted that investigations by SMP members suggested that the Operator needed to perform periodic maintenance and calibration checks on the GRAPE and that there was a possibility that some of the distributed data on the ODP CD-ROM was significantly in error. The panel agreed that this was a potentially serious problem and agreed to review the matter at the February 1993 meeting with SMP.

The panel noted that IHP had largely failed in its attempt to initiate its own formal review of the internal structure of the IHP mandated datasets. This matter would be raised by the SMP liaison member at the upcoming meeting of SMP in Victoria in September 1992, and considered again by both panels at a possible joint session with SMP in February/March 1993 at College Station.

5. Report of TAMU/ODP Publications

The panel commended ODP/TAMU for its work in the preparation of the Proceedings volumes. The timely production of the volumes continues, with the maintenance of a quality product. IHP considers this progress to be very satisfactory. The graphs shown in the report (Appendix B), relating to the production of the various volumes highlighted the review process as the main stumbling block to rapid publication.

The IHP also commended ODP/TAMU for its production of the new brochure for the Micropaleontology Reference Centers. The distribution of the brochure would clearly raise the profile of the Centers.

The Panel noted that considerable savings had been realized by TAMU/ODP by the use of alternate vendors and competitive tendering for the printing/typesetting of the Proceedings volumes. Nevertheless the quality of the product has been maintained. The efforts of the operator in this regard are much appreciated.

The IHP considered, briefly, alternate styles of publication of the scientific results. The motivation for this discussion was to address the impression on the part of some of the community that the ODP continues to produce 'gray' literature. Nevertheless IHP urges PCOM not to make changes in the publication policy at this time. The present volumes are being well produced in an effective manner and appear to be serving the community well. Changes do not appear to be warranted.

6. Report of the TAMU/ODP Computer Services Group

Russ Merrill presented this report (Appendix C), on behalf of Jack Foster. Since the last report the changeover to UNIX has begun. One SUN was now at TAMU and another had been ordered for the ship. This latter machine was seen as a general purpose resource for the shipboard scientists, who would be canvassed for suggestions for software to be mounted. Two further SUNs were on order for Science Operations. Several further 386- and 486-PCs were being obtained as development platforms.

The panel was given a listing of developments in software applications including the successful use of WSTP and the development of SHIPSAM. A listing of commercial software generated some discussion and the lack of Word for Windows was noted.

It was emphasized that the main operational objective of the Group was to present users with a friendly, robust system that they would actually want to use. The panel noted that this was not being achieved. Parts of the data-acquisition software were perceived as being unfriendly and out of date with the result that users were falling back on their own software and hardware. However, it was

stressed that despite the unpopularity of some of the data-entry software such as HARVI and HRTHIN there had to be some rigidity in the shipboard protocol of data handling. The prime responsibility of the Group was to the application software and secondly to maintaining the network. Help given to scientists with their own software came at the bottom of priorities. This was endorsed by the panel, particularly as the use of unsupported software was partly instrumental in undermining the proper entry of data into the ship's databases. The '*data-entry first, interpretive fun later*' edict should be impressed on the scientific crew by the co-chief scientists

7. Report of the TAMU/ODP Curator

The report (Appendix D) was presented by Russ Merrill, along with data on the number of samples distributed per year from both the ship and shorebased repositories. He emphasised the progress with recuration of older cores to prevent deterioration.

Figures presented during discussion suggested that the percentage incremental cost of maintaining the cores in refrigerated storage was relatively small relative to room-temperature storage. As the scientific benefits of such cold storage are very significant, IHP recommends that refrigerated storage be continued for all ODP cores until a satisfactory alternative method is found.

IHP endorsed the efforts of the Curator to complete the Geriatric Core Study to monitor long-term deterioration of refrigerated cores. Work on paleomagnetism, diatoms, radiolaria, nannofossils, and index properties is in progress. Volunteers for six other topics are being sought at the present time.

The results of a June 1992 Survey of the ODP Community on the possible establishment of an additional core repository outside of the United States were presented by Russ Merrill. IHP considered that there was no pressing need to establish a new core repository at this time, particularly as recent correspondence from G.P.Eaton indicated a firm commitment on the part of Lamont-Doherty to the continuation and expansion of the East Coast Repository to accommodate all cores from Atlantic cruises through FY 1994, and probable/possible cores through FY 1996.

The Curator asked for further guidance on the shipboard demagnetization of cores. In discussion IHP recommended that the current 15 mT limit on AF demagnetization of the archive half be relaxed. Most shipboard paleomagnetists find this restriction limits the quality and reliability of shipboard cryogenic magnetometer measurements: the drill-string magnetic overprint may not be removed by demagnetization at this level. Furthermore considering the ephemeral nature of sedimentary paleomagnetism, the restrictive policy on sampling the archive half, and the very few whole-core pass-through cryogenic magnetometers available, it is unlikely that better whole-core paleomagnetic measurements will be carried out post-cruise. IHP recommends the following policy be adopted, subject to the agreement of SMP:

Shipboard scientists may AF demagnetize core archive halves to as high a level as is necessary to isolate the characteristic remnance. The maximum demagnetisation step size shall be 15 mT.

The maximum step size is intended to prevent the destruction of core magnetization without the recording of intermediate data. The stipulation 'as is necessary to isolate the characteristic remnance' is intended to give the scientist leeway to increase the level of demagnetisation as shipboard equipment improves. However, it is appreciated that demagnetisation at levels higher than those necessary to remove the overprint will be possible under this policy. A prudent paleomagnetist will only use the minimum necessary demagnetisation field and no more!

8. Logging Group Report

The Report (Appendix E) was presented by D. Goldberg and dealt with both computing and database matters.

The Panel noted with interest that the Masscomp Unix machines are being replaced by Sun workstations, notwithstanding the absence of built-in data acquisition facilities. These offer the potential of compatibility with the Sun workstations being purchased by TAMU for the JOIDES Resolution. It was also noted that the Logging Group were looking at moving the Schlumberger processing software from the VMS environment to a Unix/Sun system. Again the primary advantage was a rationalisation of the software and hardware shipboard environments. IHP supported these moves.

Multi-platform public-domain graphics software has been extensively investigated in preparation for the distribution of FMS and other data on CD-ROM and details are given in the Report (Appendix E). The replacement of Micro-fiche in the back of the Proceedings volumes was supported by the panel who urged the Logging Group to co-ordinate their moves in this direction with similar moves at TAMU.

The number of data requests reached a record in the first semester of 1992, indicating a rising interest in Logging Data. Increasingly these are requests for digital data in ASCII format on Mac/MSDOS diskettes. Much data is also available on-line and via EMAIL and the panel noted with enthusiasm the internet addresses of the LDGO Borehole Research Group Staff presented in the report.

The first trial BRG CD-ROM (Leg 139) is in preparation with the assistance of staff at NGDC. The Group is grateful for this assistance which will continue until LDGO is self-sufficient in CD-ROM production in early 1993. It is hoped that the first 'production' CD-ROM to be included in the Initial Report Volumes will be for Leg 143. Work is also in progress to archive all standard logs predating Leg 129 in ASCII format. These might later be issued on a CD-ROM.

The Panel thanked D. Goldberg for his report and for coming to Marseille to talk to the Panel. They stressed the continuing need to integrate the work of the BRG with shipboard/TAMU activities to achieve the optimal degree of core-log integration and interpretation. It was particularly important that a critical subset of the logging data for the current leg was rapidly available to the shipboard scientists. In the future the easiest way to ensure this was for the data to be placed in the new shipboard Unix-based database system. D. Goldberg promised to provide J. Coyne at TAMU/ODP with information on the structure of the critical datasets.

ACTION

9. Paleontological Committee

The IHP Paleontologists met on September 8th, for a day, immediately prior to the IHP meeting. The following matters were discussed at this preliminary meeting and subsequently by the Panel.

Computerization of paleontological data acquisition. At the last meeting of the IHP, it appeared that the BugWare software package would be a suitable vehicle for paleontological data acquisition, and it was agreed that TAMU/ODP would further investigate its applicability with a view to adopting it for shipboard use. During the present meeting, it became apparent that miscommunications between TAMU/ODP and BugWare's developer had derailed this process. FAX messages during the meeting re-established this communication, which should lead to the timely evaluation of BugWare for shipboard use, and, if the results are satisfactory, its adoption.

Geological time as a parameter for searching the ODP database. After considerable discussion regarding the degree of time-resolution required, it was concluded that the age information routinely available for this purpose should be at the level of sub-epochs (e.g. early Miocene) in the Cenozoic, and epochs (e.g. early Cretaceous) for the Mesozoic. For users who wish to conduct searches on the basis of absolute-age brackets (e.g. 10-15 m.y.), this should be accomplished through an adopted look-up table of ages of sub-epoch and epoch boundaries. At present, a suitable table for this purpose might be the one provided by Harland et al., 1989 ('A Geologic Time Scale, 1989'). Where more precise age assignments have been made (fossil zones, stages), these will be available in the AgeProfile data file.

Shipboard Reference Collections It was noted that:

- A collection of Neogene Nannofossils has been prepared by Dr. Wise along with the documentation. This is now in place on the Resolution.
- A collection of Cenozoic Radiolaria prepared by Drs Nigrini and Sanfilippo is almost complete. This work was supported by funds supplied by JOI Inc.
- Progress in making a collection of Planktic Foraminifera is unknown at this time.
- No plans have been developed for the supply of a Diatom collection.

The sub-panel suggests that shipboard paleontologists be encouraged to report on the condition of the collections on completion of their leg.

Micropaleontological Reference Centers A status report on the Micropaleontological Reference Centers is attached (Appendix F). IHP reviewed progress and approved the concept that the MRCs take any opportunity that may arise to support pre-cruise familiarisation with faunas and floras where this is desired by shipboard participants.

The panel commends the excellent way that Dr. Sanfilippo has completed the task of putting material from the DSDP/IPOD phase of Legs 1 to 96 in place within the 2 years allocated for the work. The Panel continues to support strongly its view expressed in the minutes of the last meeting that every effort be made to release the funding needed by Dr. Annika Sanfilippo to continue preparation of radiolarian reference material for the eight centers. The Chairman again agreed to approach JOI on this matter.

ACTION

The plan to hold a meeting in Basel in mid-1993 for curators and a cross-section of users of the collections was strongly supported by the panel. Such a meeting has been under consideration for some time and is now considered to be highly desirable. It will provide necessary stimulus to the curators and will allow exchange of ideas regarding display, arrangement, documentation, etc, stressing the need to keep a measure of uniformity. Peripheral aspects of the management of individual MRCs will include encouraging the return of samples from investigators to the Centers, thus avoiding the loss of this material to ODP and the scientific community.

Advice to Future Co-Chiefs IHP suggested that to improve stratigraphic coverage on legs, the following paragraph be included in material given to future Co-Chiefs prior to Leg staffing:

We know you will keep in mind the staffing needs for the more specialised requirements of your Leg. However, we hope you will balance these against the obligations that the shipboard party has to report adequately on the routine biostratigraphy and all fossil groups that have been used to create the stratigraphic synthesis. If the coverage appears incomplete following shipboard studies, please involve shorebased postcruise investigators.

Guidelines for shipboard Stratigraphers The subcommittee approved a modified version of the 'Guidelines for shipboard stratigraphers' and it was agreed by the panel that this document should be appended to the minutes (Appendix G) to reflect IHP policy on this matter. It was hoped that the operator would bring these guidelines to the attention of future Co-chiefs prior to cruises.

ACTION

10. Review of Recent ODP Volumes

Reviews of the Initial Report and Scientific Results volumes for ODP Legs 119 through 125 were made as follows: Leg 119 Sherwood Wise, Leg 120 Brian Funnell, Leg 122 Tsunemesa Saito, Leg 124 Patricia Fryer, Legs 120 through 125 biostratigraphy only (John Saunders). The reviews of these individual Legs were considered by IHP and copies passed to the TAMU/ODP operator.

Overall the reviews were complimentary, and some of the concerns expressed have already been addressed by ODP as a result of in-house assessments. The main points made by the Panel in discussing these individual reports were:

- **Scientific Coverage** — Generally good, perhaps better than expected, but individual volumes do suffer from the failure of individual scientists to perform.
- **Layout** — The main problem encountered relates to the positioning of illustrations relative to the text. This is frequently difficult in a double column format and requires constant watching. The Panel appreciated that optimal placements can generate significant wasted space.
- **Illustrations** — An undesirable variation in the quality and style of both line and half tone illustrations results mainly from variations in the camera-ready copy submitted by authors. The Panel appreciated that this variation is the direct result of established policies designed to speed publication and reduce publication costs.
- **Tables** — IHP appreciated that an increasingly large proportion of the tabular material in the Proceedings is being typeset as a result of improved methods of handling authors' numerical tabular material on computer disks. The resulting improvement in the appearance of the volumes is marked.
- **Stratigraphic Synthesis** — Generally these have not been adequate as they are either embedded in specialist (e.g. paleontological) chapters, or the synthesis is too abbreviated, or simply absent. Further attention must be paid to this aspect by Co-Chiefs, particularly in relation to differences in interpretation distinguishing the Initial Report and Scientific Results volumes.
- **Indexing and Table of Contents** — In general the Table of Contents were satisfactory and usefully complemented the Index. (Also see under Agenda item # 11, below)

Finally, the Panel noted that although some Scientific Results volumes do contain contributed chapters that are either second class or simply data reports, these often contribute by helping maintain a

balanced account of the achievements of specific legs. Many contributions are very good or excellent and changes in the publication policy at this time do not seem warranted.

11. Indexing of the ODP Proceedings Volumes

The panel noted with satisfaction that the indexes to the more recent volumes, while not perfect, are enormously improved over the indexes for the earlier volumes, particularly considering both the complexity of the information and the limitation of the index to the two-level hierarchical format. IHP suggested that TAMU/ODP might stress to the indexing contractor that the key words in the titles of chapters, sections, and subsections must be indexed. It appears that this practice is not being uniformly followed at present.

IHP continues to recommend publication in CD-ROM format of a cumulative index of Legs 101 through 125, using the new indexing guidelines for all legs and the terminology of the AGI thesaurus. Information provided to the panel by R. Merrill and M. Loughridge (NGDC) suggest that the costs for this work might be about \$100K. Under the circumstances the Panel were unable to recommend to PCOM that a start be made at once, although it remains a priority of the panel.

12. Review of the content of ODP Datasets

A draft document detailing the content and structure of the individual ODP datasets maintained by TAMU/ODP is now available from the Database Manager. Although incomplete, this document will allow the user community (including IHP and SMP) to comment the completeness and appropriateness of the individual data sets, the necessity of data items and their compatibility with existing and planned data acquisition software and instruments. The document will also be a helpful starting point for the development of the new database structure. It was suggested that J. Coyne get in touch with assigned members from IHP (As listed in the April 1992 IHP minutes) to discuss their review of selected data sets and to include their comments in an updated version describing the status of the database. Prior to a final design of the database, the complete document should be thoroughly reviewed by the shipboard scientists during upcoming postcruise meetings, by staff scientists and by a selected group of experienced shipboard scientists from recent cruises.

In a later stage the description of the data structure should be extended to include to record changes in the methodology and calibrations.

13. Co-Chiefs Report

W. Sager, Co-chief, Leg 143 noted that the lithologies penetrated on this leg led to low recovery and the data and computer systems on board were not taxed during the leg. As a result the shipboard computing environment served the scientists well and they found sufficient number and types of computers and software to accomplish their tasks. The addition of a second shipboard System Manager was a significant help and the improved scratch server allowed users to readily exchange and share files. Two computer-related problems were a source of irritation:

- The beta version of the VCD barrel-sheet program was inadequate as it didn't allow the detailed description of small volumes of complex core, and it didn't provide the scientists with numerical barrel-sheet data — only a graphical image.

- It was difficult to generate routine seismic profiles and navigation plots, partly as a result of the absence of an automated real-time navigation system, and partly because the shipboard party did not include a geophysicist dedicated to these tasks: the onboard technical staff had limited expertise in these areas and were hampered by sparse documentation.

W. Sager noted that the logging scientists sailed partly to assist in core-log integration. On this low-recovery leg, this work consisted of plotting the log data on a Mac and correlating this information with fragmentary lithologic columns. Geochemical and FMS logs were not available on board in formats that allowed such correlations. Depth discrepancies between core and log data caused significant (and unresolved) problems and clearer guidance to the shipboard parties was required on how to resolve such conflicts and on how to generate an integrated depth scale applicable to both core and log data.

Electronic mail too and from the ship was tested on Legs 143 and 144 and was well-received by the scientists. No abuses of the facility were reported.

Finally W. Sager addressed complaints of oversampling on Leg 143. He explained that the Co-Chiefs made every effort to design a sampling program that would allow shipboard scientists to complete their work despite the low recovery. However, on this low-recovery leg, even the most conservative plan left little material for further sampling because 75% of the core is considered archival.

In discussion, the panel commented that responsibility for sampling rests with the co-chiefs and that making the sampling policy yet more restrictive seemed inadvisable at present. IHP recommended no change in the present policy.

Jorg Erzinger, Co-chief, Leg 140. Drilling at Hole 504B, although very successful scientifically, generated relatively little core and as a result the data and computer systems on board were not taxed during the leg. Nevertheless, the petrologists on board were frustrated by the well-known inadequacies of the software for entering hard-rock core descriptions and thin-section descriptions. As a result the shipboard scientists developed an alternative dataset using 'Excel' to store tabular information on the units, petrography, alteration, vesicles, phenocrysts, veins, fractures etc. It was this second, alternative dataset that was used and corrected by the shipboard scientists during the Leg and NOT the formal shipboard record; the latter being left in an incomplete and probably erroneous state. The Panel recognized that this avoidance of the formal data-acquisition procedures will only be eliminated with the installation of a new user-friendly data-acquisition environment and structure.

The rather unusual nature of this leg allowed the scientific party to adopt a procedure for describing all the recovered core in which a single individual was responsible for one aspect of the description of ALL the recovered material — alteration, vesicles, phenocrysts, veins, etc. This ensured a very uniform treatment through the complete drilled succession. Structural data were treated similarly. The panel noted that this approach, while very desirable, was not practical in many instances. However, IHP considered that the collection of high quality structural data from the core was most important and the panel will examine with SMP in February 1993 how this might be integrated into hard-rock description procedures

14. IHP Membership

The panel noted that Ted Moore had offered his resignation from the panel. Will Sager informed the panel that he had been appointed to PCOM and that he would no longer be able to serve as a US panel member. S. Wise also noted that his term as a recent co-chief was coming to an end. The panel noted these resignations with regret and thanked the members concerned for their service to IHP.

In discussion of possible new members it was suggested that Roy Wilkens (University of Hawaii) and Lyn Watney (Kansas Geological Survey) would bring to the panel expertise in computing and database management. Brian Huber (Smithsonian Institution) is taking an active role in the Micro-paleontological reference centers and would be a valuable panel member following the retirement of John Saunders. The Chairman undertook to approach the individuals concerned and to take a formal recommendation to PCOM relating to additional US Members.

ACTION

15. Date and time of Next meeting

The Panel agreed that the next meeting of IHP would be in College Station in late February, in conjunction with the SMP meeting. The Summer meeting of IHP is planned for eastern Canada, at the time of the St. Johns port call, in late July 1993.

Appendices:

- (A) Database Group Report
- (B) Publications Report
- (C) Computer Services Group Report
- (D) Curators Report
- (E) Reports of Lamont Database and Computing Groups
- (F) Report on the Micro-paleontological Reference Centers
- (G) Report from the IHP Paleontological Sub-Committee on 'Guidelines for Shipboard Stratigraphers'

Appendix A: Database Group Report

Data Base Group Report to the Information Handling Panel

I. Data Requests

The Data Librarian and Data Analyst responded to a total of 1,591 requests for individual DSDP and ODP datasets since May 1985. From February 24, 1992 to August 31, 1992 a total of 183 requests were processed. The variation in the number of requests with time is shown in Figure 1. The 1992 data include requests received up to August 31. The number of requests by type of data is shown in Table 1.

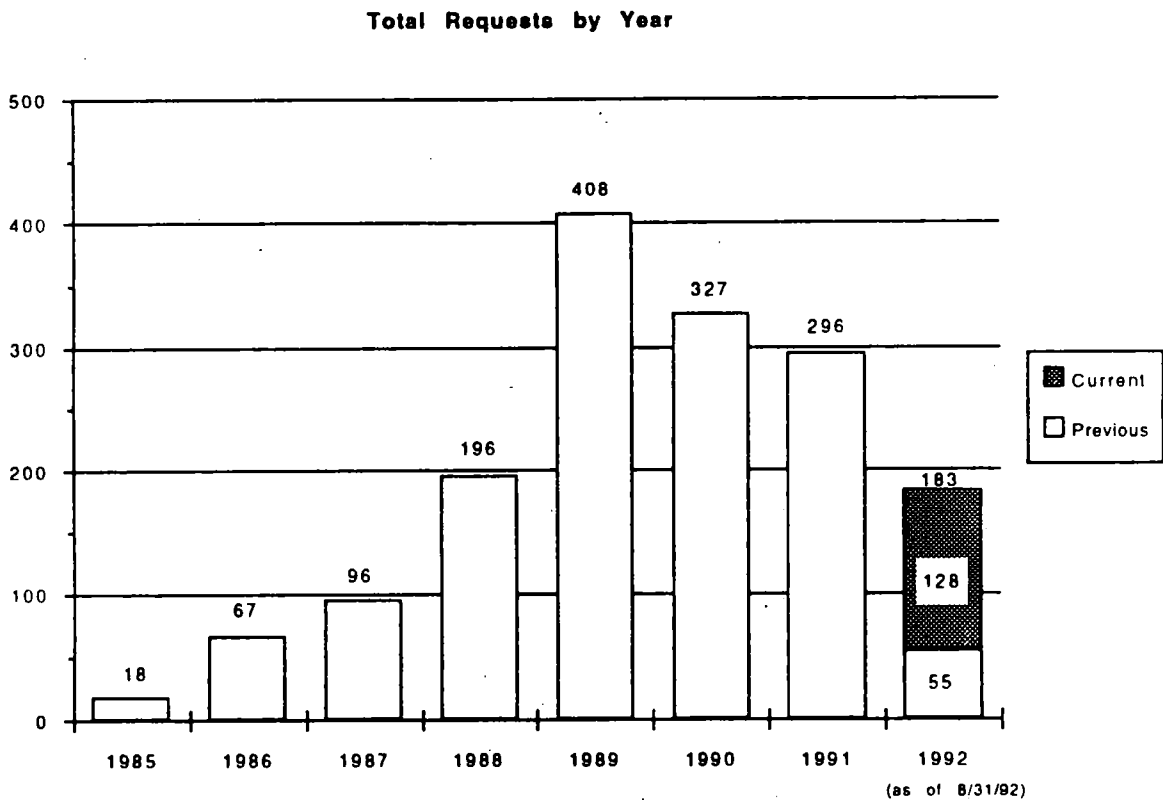


Figure 1: Total Data Requests by Year

II. ACTIVITIES

VCD

John Olsen has continued work on providing a stable version of VCD for use in collecting data on the ship and production in the Art Department. Work has concentrated on the Hypercard stack used to input new symbols for Lithology, Structure, and Disturbance. A draft manual has been completed. A Hypercard stack has been developed for bug reporting. These items will be distributed to a suite of beta test sites so that final testing can be carried out both on ship and shore. The final version of VCD 1.0.1 is anticipated along with release

Data Type	Public		In-house		Subtotal		TOTAL
	Previous	Current	Previous	Current	Previous	Current	
Photo	392	32	15	1	407	33	440
Legs, Site, Hole Summary	90	24	67	4	157	28	185
Physical Properties	93	16	26	4	119	20	139
Chemistry	62	8	33	2	95	10	105
Sediment Description	78	11	7	0	85	11	96
Underway Geophysics	60	9	8	1	68	10	78
Core Log	30	3	44	4	74	7	81
Paleontology	64	1	7	0	71	1	72
Smear Slide	34	6	23	3	57	9	66
Paleomagnetism	49	3	5	1	54	4	58
Sample Record	22	0	9	0	31	0	31
Igneous/Metamorphic Rock Description	26	0	7	0	33	0	33
XRF	29	10	3	1	32	11	43
Igneous/Metamorphic Thin Section	12	2	0	0	12	2	14
Sample Request	8	0	1	0	9	0	9
Bibliography	7	0	1	0	8	0	8
Other†	117	35	34	2	151	37	188
TOTAL	1173	160	290	23	1463	183	1646

TABLE 1: Number of Data Requests by type.

Previous= from May 1985 to Feb.24 1992
 Current = Feb.25 1992to Aug.31 1992

† This category includes maps, technical notes, well logging journals and downhole tools data requests as well as any requests not covered in the above categories.

notes and a written manual for Leg 147.

CORELOG Editing

This project is necessary to provide a "clean" version of the CORELOG dataset with which to verify the sample identifiers in other datasets. The inclusion of this identifier in all datasets requires the sample IDs to match in all instances in order that the database be searchable using even simple queries. The process requires review of the core photos, VCDs, and sample records to identify discrepancies in the CORELOG dataset. These discrepancies are resolved by inspection of the core, or discussions with staff scientists, marine technicians and or lab officers. The objective is to provide a "clean" CORELOG dataset for the scientists at the first post cruise meeting. This method was implemented beginning with Leg 139.

Table 2 is a progress chart showing the activity to date and the remaining work on editing the CORELOG dataset.

AGE PROFILE

Data entry into the Ageprofile dataset has resumed. Legs 127-140 have been entered and uploaded (with age codes) to main dataset and Leg 141 is nearing completion. Leg 142 had no sediment cores recovered

Prior to Leg 135, both the Age and biostratigraphic data were taken from the Barrel Sheets. Beginning with Leg 135, the biostratigraphic data were no longer included on the Barrel Sheets. Age data is still taken from the Barrel Sheets but the paleo data is now taken from either the biostratigraphic summary charts in the Site Summary chapters of the Initial Reports, the hard copies of the shipboard biostratigraphy reports, or a combination of the two. Future plans call for the direct electronic capture of these data from the Paleontology and Barrel Sheet entry programs currently being developed.

AGE COMPARISON

We compared the ages and zonations shown in the Barrel Sheets (BS) of the Initial Reports to those in the biostratigraphy articles of the Scientific Reports (SR), for each of the 4 main microfossil groups (forams, nannos, rads, and diatoms). Legs 115 and 120 were chosen because they contained significant amounts of paleontology data and represented both high (L120) and low (L115) latitude sites.

The quality of the BS data, and therefore of the AGEPROFILE data, compared favorably with that of the SR data. In many cases, the BS data are the only published age and zonation data for particular intervals.

Leg Nos.	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050						
Edit started	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded	shaded			
First edit complete																																														
Second edit complete (if applicable)																																														
Final review complete																																														
Final corrections complete																																														
Core evaluation complete (if applicable)																																														
Error/change documents sent																																														
CORELOG revisions complete																																														
Hardcopy revisions of CORELOG filed																																														

Table 2. Status of CORELOG Editing

Most discrepancies between BS and SR ages are relatively minor:

- a. boundaries move up or down within the same core
- b. boundaries move up or down by one core
- c. ages overlap or show a change in "detail" (ie Eocene vs Upper Eocene), but not always less detail at BS to more detail at SR.

LAT / LONG EDIT

Latitudes and longitudes of site locations in HOLEDATA.DMS were compared to those kept by Engineering.

Numerous discrepancies were noted, most of which were minor (second or third decimal places of the minutes) or were missing minus signs.

Paleontology Program

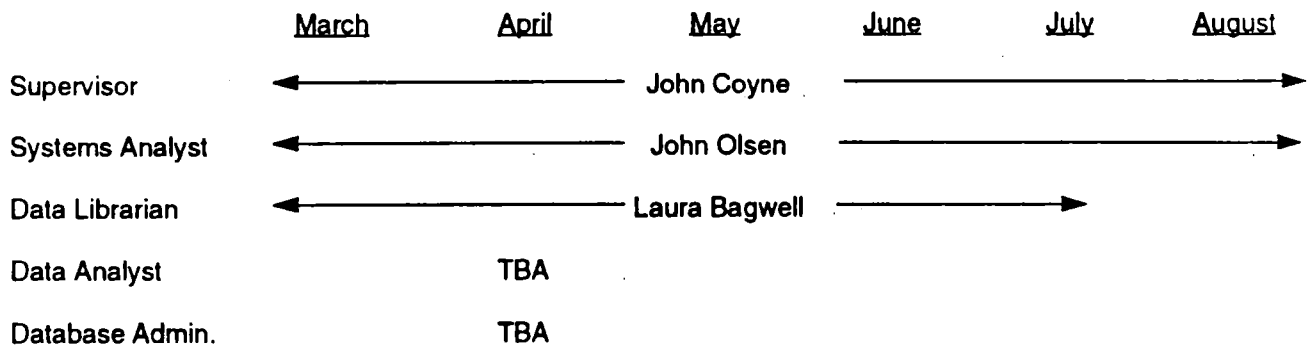
The RFP for a Paleontology program has been prepared for release. A bidders list is currently being compiled before release of the RFP.

Database Review/Migration

A review continues of the data types, datasets and methods of collection has been completed and compiled in anticipation of a redesign of the database. This information will serve as a starting point for the development of individual data models for each of the identified data types.

III. PERSONNEL

The Data Librarian, Laura Bagwell, has left ODP.



Appendix B: Publications Report

Summary of ODP Publications Activities, April–August 1992

(Prepared by W. D. Rose for September 1992 IHP meeting)

1. Proceedings volumes: We continued preparation and publication of ODP *Proceedings* volumes as follows (see ATTACHMENT 1):

a. *Initial Reports:* Vols. 135 and 136/137 were printed and distributed. Vols. 138, 139, and 140 are at the printer.

b. *Scientific Results:* Vols. 120 and 125 were printed and distributed. Vols. 123, 126, and 127/128 are at the printer.

c. ATTACHMENT 2 shows volumes scheduled for distribution during the 1993 fiscal year. ATTACHMENTS 3 and 4 show the number of volumes and the number of published pages, respectively, produced during fiscal years 1987–92. ATTACHMENT 5 shows the time in publication of IR Vols. 120 through 141, in terms of months post-cruise. ATTACHMENT 6 is similar to ATTACHMENT 5 but covers the time in publication in terms of months following the post-cruise meetings; this depiction removes any variations caused by the scheduling of these meetings. ATTACHMENT 7 shows the time in publication of SR Vols. 104 through 129.

These attachments were prepared by our Chief Production Editor, Jennifer Hall.

You will note from ATTACHMENT 1 that 15 volumes will have been published by 1 October of this year. At present, two other volumes have closed and are in production: IR Vol. 141 and SR Vol. 130. We are publishing an average of 12 volumes annually.

2. Informal publications distributed:

a. Technical Note: TN 16, *Hydrogen Sulfide–High Temperature Drilling Contingency Plan*, by Steven P. Howard and Daniel H. Reudelhuber.

b. Preliminary Summary of Drilling Results (Hole Summary): Legs 142, 143, 144.

c. Scientific Prospectus: SP 145, 146.

d. Preliminary Report: PR 141, 142.

3. Other publications: Also prepared and distributed was an updated version of the brochure *Micropaleontological Reference Centers*. This brochure was prepared originally by members of the ODP Data Base Group. Linda De Leon and Norman Stewart designed and edited the new version. John Saunders furnished the text. A copy of the brochure is enclosed.

4. History of manuscript submission and review: Debbie Partain and Janalisa Soltis have continued the series of four graphs that show the period of elapsed time vs. the number of manuscripts during the periods when (1) manuscripts were initially submitted, (2) reviews were received, (3) revised manuscripts were received, and (4) final disposition (acceptance or rejection) was received. The current series of graphs (ATTACHMENT 8) covers SR Vols. 127/128 and 129. This information shows in detail where lag time developed before and during the review process.

5. Manuscript-submission deadlines: Original and revised deadlines for manuscript submission for SR Vols. 130 through 139 are shown in ATTACHMENT 9, prepared by Janalisa Soltis.

6. Volume indexes: With helpful advice from members of the IHP indexing subcommittee, we have worked with our indexing subcontractor, Wm. J. Richardson Associates, Inc., to improve the quality, and hence the usefulness, of the volume indexes. Earlier this year we prepared a Request for Proposals (RFP) for identifying the best subcontractor for indexing the volumes. We received 10 responsive proposals. Of those, we gave four especially high marks in terms of quality and quantity of personnel, equipment, price, and overall ability to do the job: Wm. J. Richardson Associates, Inc., Poway, California; Editorial Experts, Inc., Alexandria, Virginia; Indexing Specialists (Richard Raper), Hove, East Sussex, England; and DBA, Inc., Falls Church, Virginia. We elected to award the subcontract to DBA, Inc., principally because the indexing will be done under the editorial supervision of Dr. Ghassan Rassam, a geologist. For many years he was the chief editor for the American Geological Institute's GeoRef database and in that capacity was a major factor in formulating the indexing guidelines and core terms contained in the *GeoRef Thesaurus and Guide to Indexing*. This document serves as our criterion for assessing the validity of ODP indexing terms. We are completing negotiations with DBA, Inc., for a 3-year subcontract, to extend from 1 October 1992 to 1 October 1995.

7. Cumulative index to ODP volumes: As a follow-up to IHP's recommendation for ODP to publish a cumulative index to Vols. 101 through 125, to be issued in CD-ROM format, we prepared a summary statement of work listing various steps that would be involved in preparing this index, in accord with IHP's directive. We sent this document with a cover letter to four of the respondents to the RFP we had prepared for our regular indexing subcontract (see preceding paragraph). We asked for an estimate of cost for preparation of the entire electronic index (minus the cost of the CD-ROM, for which we will oversee preparation). By the time the IHP meeting is held next month, we expect to have an approximate cost for compiling the index.

8. Other subcontracts:

- a. **Printing:** In August we will send an RFP to the four printers who have printed some of our recent volumes. From them we hope to identify one or two with which we can enter into 3-year subcontracts, beginning this October. At that time we will begin the second year of a 3-year subcontract with our long-time printer, Edwards Brothers, Ann Arbor, Michigan. The other four printers are Friesen, Altona, Manitoba, Canada; Bookcrafters, Chelsea, Michigan; Thomson-Shore, Dexter, Michigan; and Allen Press, Lawrence, Kansas.
- b. **Typesetting:** The subcontract with our long-time typesetter, Design Service, Anaheim, California, will expire 1 October 1992. On that date we will enter the second year of our 3-year subcontracts with Graphic Composition, Menasha, Wisconsin, and Industrial Publications and Graphics, Anaheim, California.
- c. **Microform:** On 1 October we will enter the second year of a 3-year subcontract with Southwest Image Technology, Inc., Houston.

Attachments 1 through 9

Proposed Distribution Dates of ODP Volumes - Fiscal Year 1992

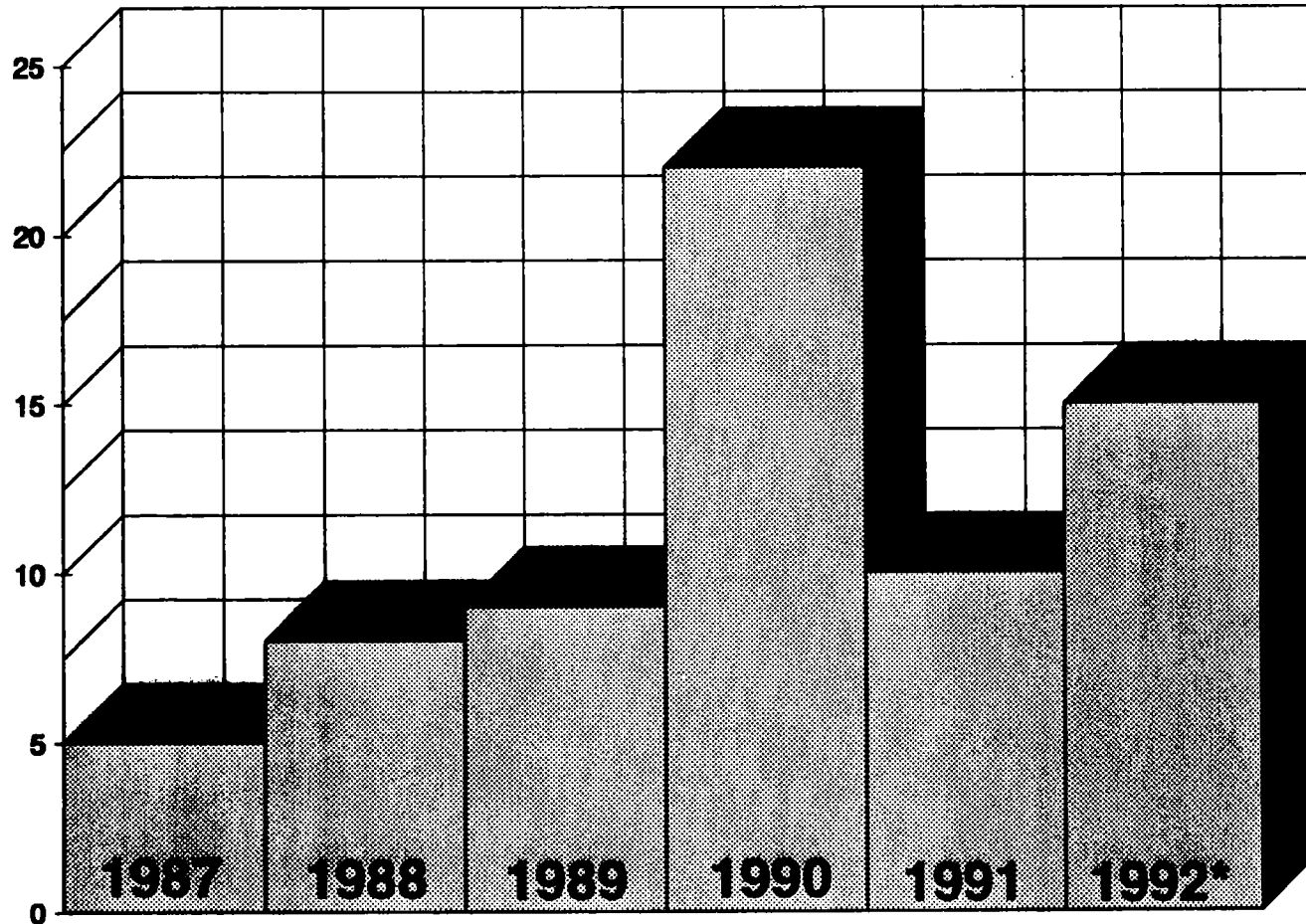
	<i>Initial Reports Volume</i>	<i>Date to Printer</i>	<i>Date Distributed</i>	<i>Months Post-Cruise</i>	<i>Scientific Results Volume</i>	<i>Date to Printer</i>	<i>Date Distributed</i>	<i>Months Post-Cruise</i>
OCTOBER								
NOVEMBER					121	8-20-91	11-30-91	41
DECEMBER								
JANUARY	136/137	12-10-91	1-27-92	10/8				
FEBRUARY					122	12-19-91	2-28-92	42
MARCH	134	12-19-91	3-7-92	15				
APRIL					120	2-3-92	4-29-92	48
MAY	135	3-6-92	5-29-92	15				
JUNE								
JULY					125	4-29-92	7-29-92	39
AUGUST	138 139	6-23-92 6-25-92	8-92 8-92	13 10	123 126	4-1-92 6-5-92	8-92 8-92	45 38
SEPTEMBER	140	7-23-92	9-92	10	127/128	7-14-92	9-92	37/35

Month-day-year listings indicate actual dates. Month-year listings indicate proposed dates.
August 3, 1992

Proposed Distribution Dates of ODP Volumes - Fiscal Year 1993

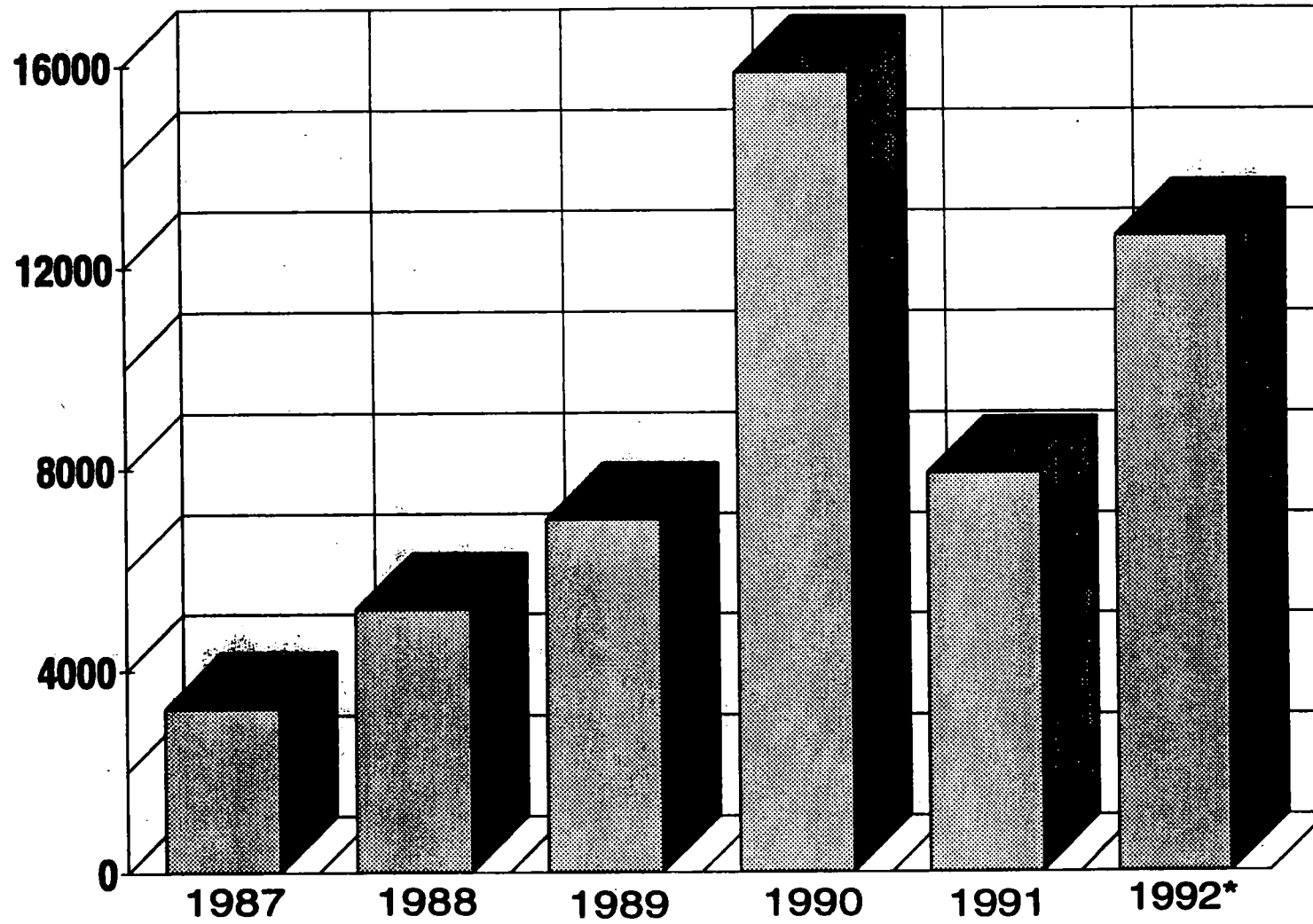
	<i>Initial Reports Volume</i>	<i>Date to Printer</i>	<i>Date Distributed</i>	<i>Months Post-Cruise</i>	<i>Scientific Results Volume</i>	<i>Date to Printer</i>	<i>Date Distributed</i>	<i>Months Post-Cruise</i>
OCTOBER								
NOVEMBER								
DECEMBER					129	10-92	12-92	35
JANUARY	141	11-92	1-93	12				
FEBRUARY								
MARCH	142	1-93	3-93	12				
APRIL					130	2-93	4-93	37
MAY	143	3-93	5-93	12	131 132	3-93 3-93	5-93 5-93	35 33
JUNE								
JULY	144	5-93	7-93	12				
AUGUST					133	6-93	8-93	34
SEPTEMBER	145 146	7-93 7-93	9-93 9-93	12 10	134	7-93	9-93	33

July 17, 1992



Proceedings Volumes Produced Each Fiscal Year

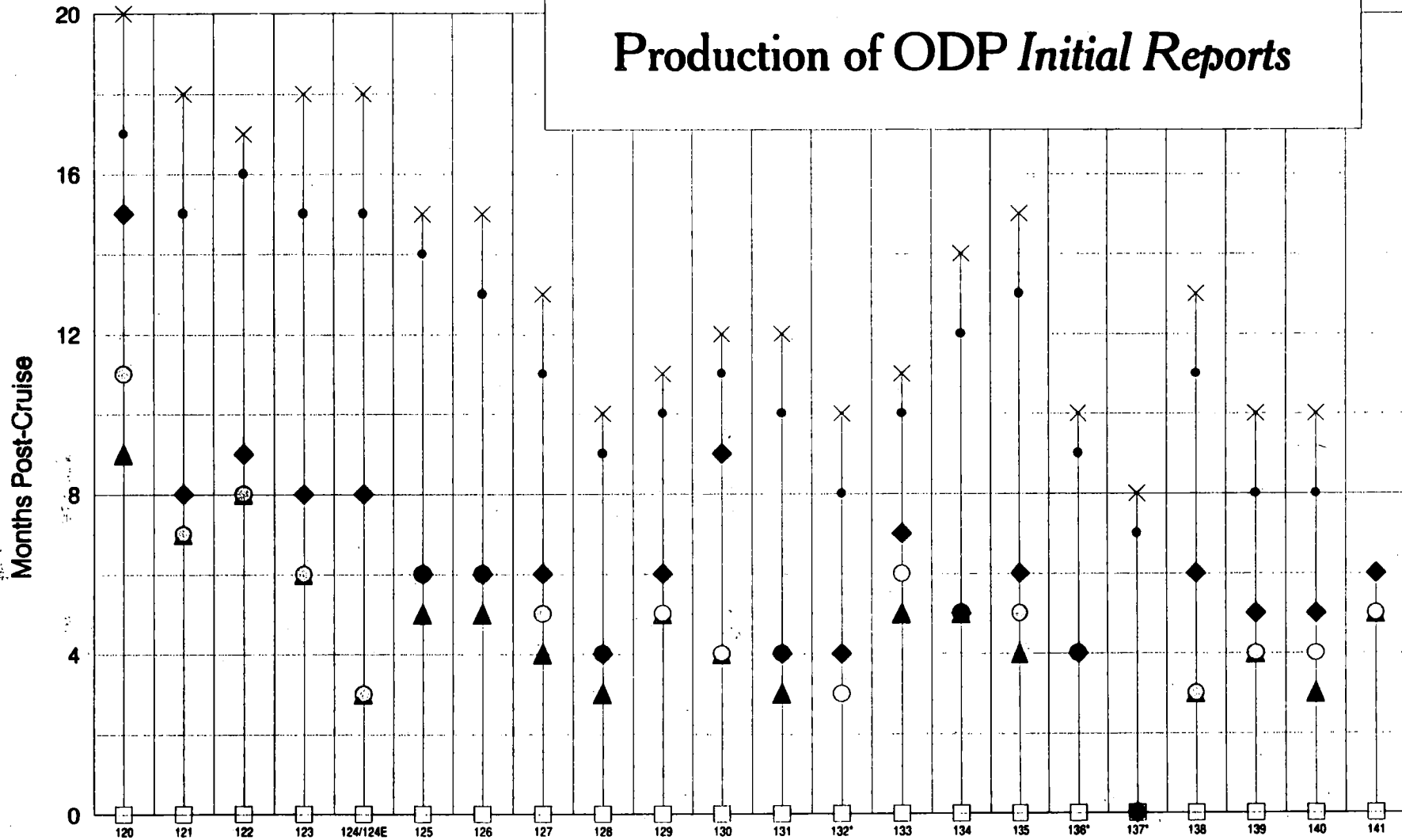
7-17-92
* proposed for 1992



**Published
Pages
Produced
Per
Fiscal
Year**

*1992 proposed
7/17/92

Production of ODP Initial Reports

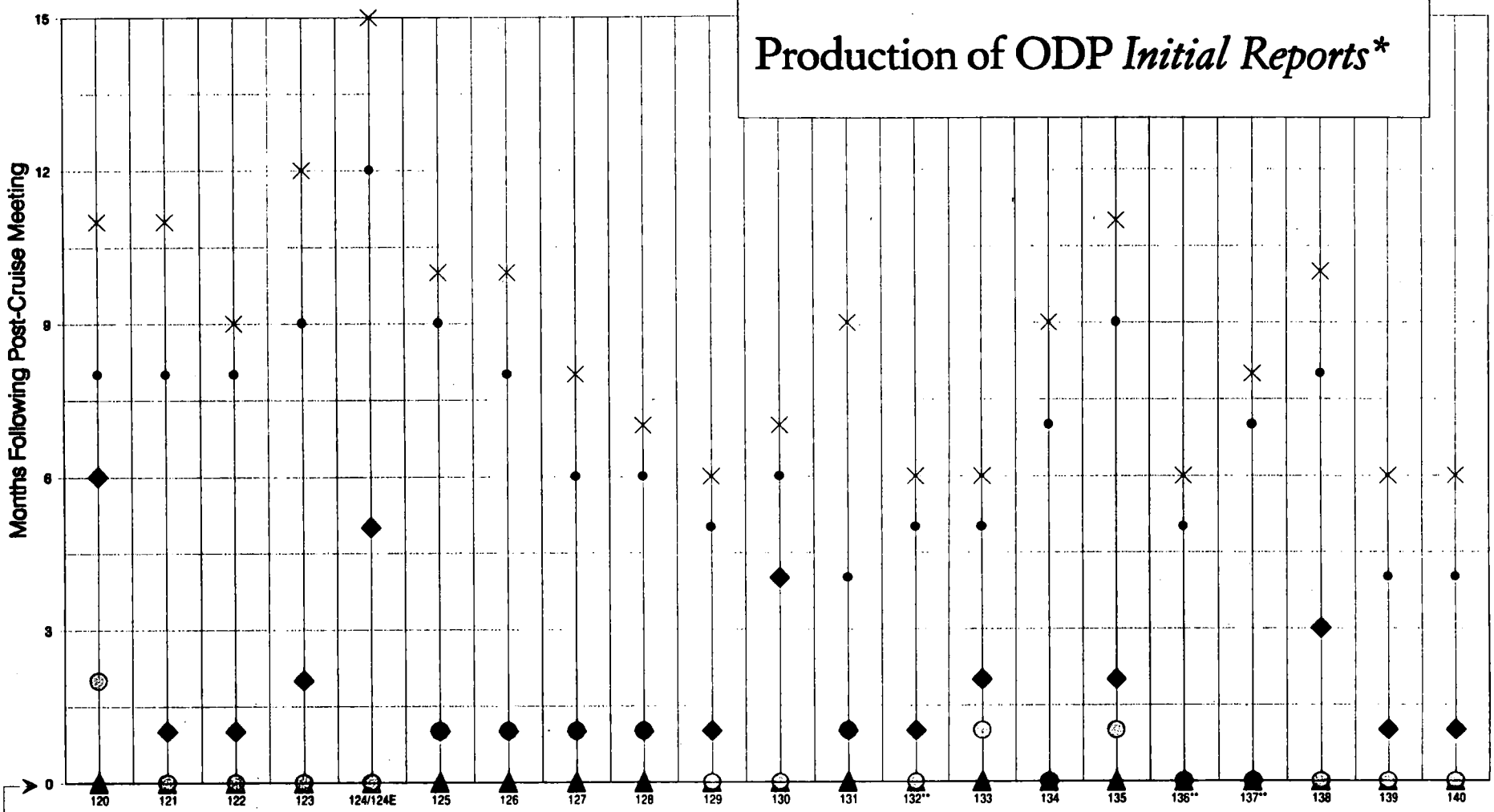


*No post-cruise meeting held.

7-22-92

□	Cruise ending	◆	Acceptance of last material
▲	Post-cruise meeting	•	To printer
○	Acceptance of first material	×	Distribution

Production of ODP Initial Reports*



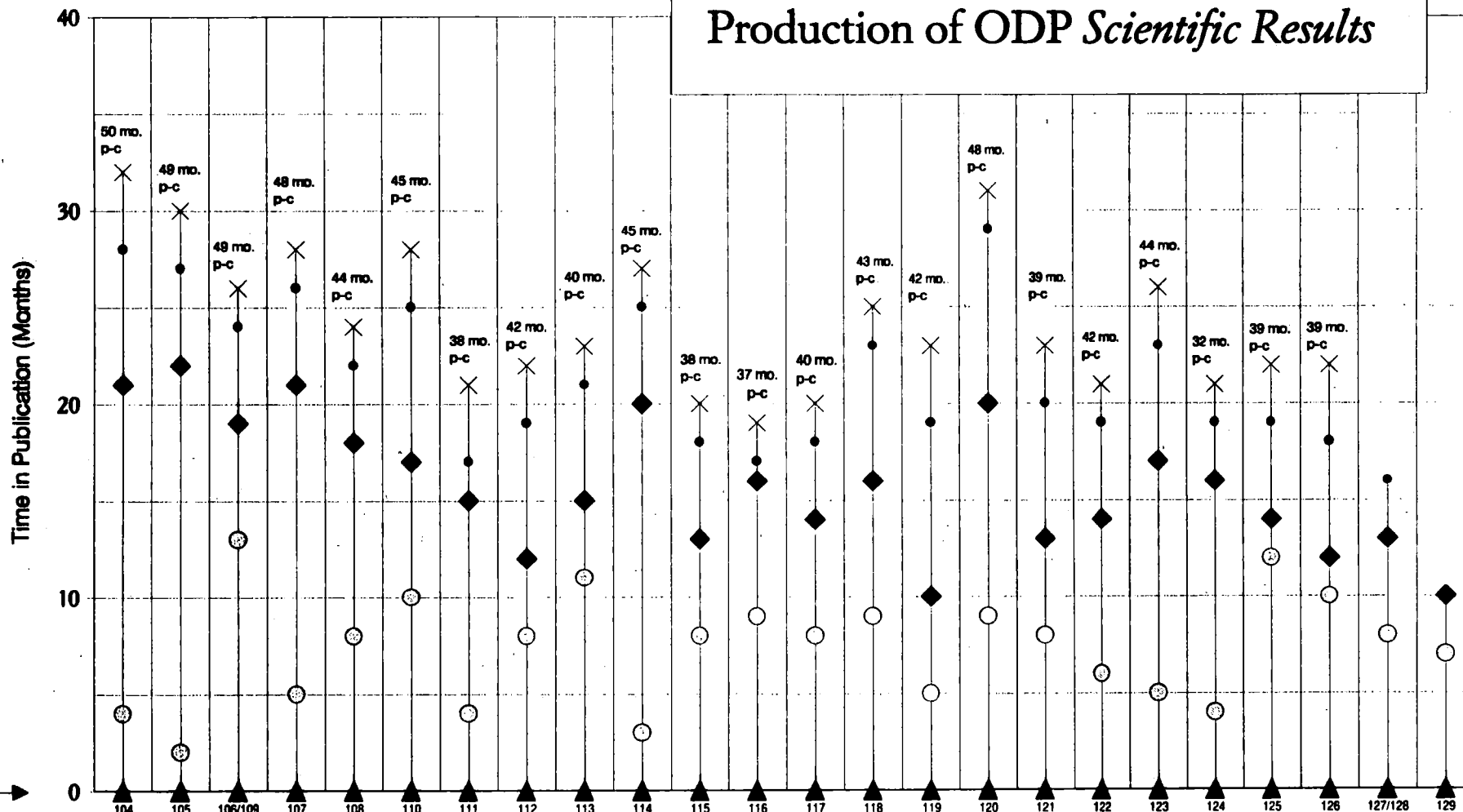
Post-cruise meeting

*Removes variations caused by scheduling of post-cruise meetings.
 **No post-cruise meeting.

- ▲ Post-cruise meeting
- Acceptance of first material
- ◆ Acceptance of last material
- To printer
- × Distribution

7-22-92

Production of ODP Scientific Results



Initial deadline set by shipboard scientists

- ▲ Initial submission for peer review
- Acceptance of first material
- ◆ Acceptance of last material
- To printer/indexer
- × Distribution

7/24/82

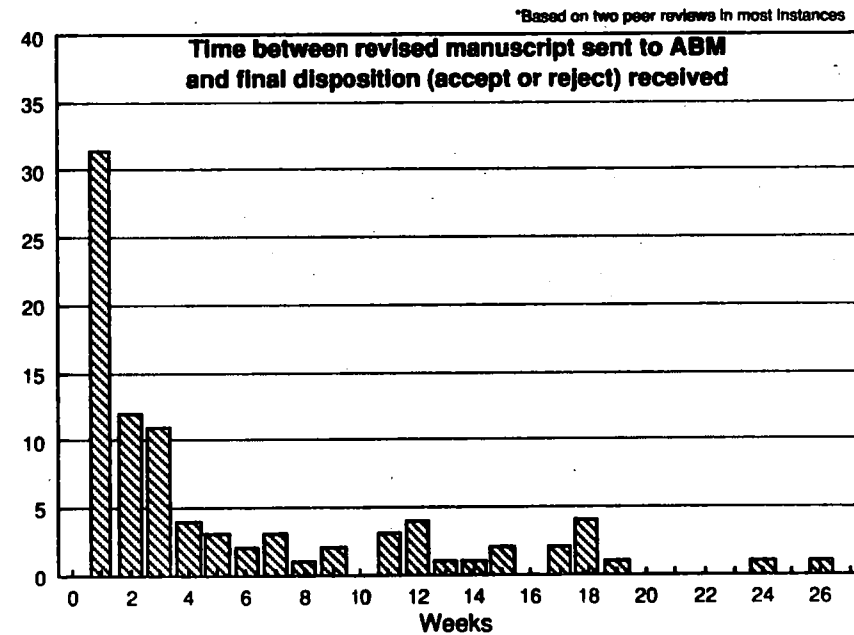
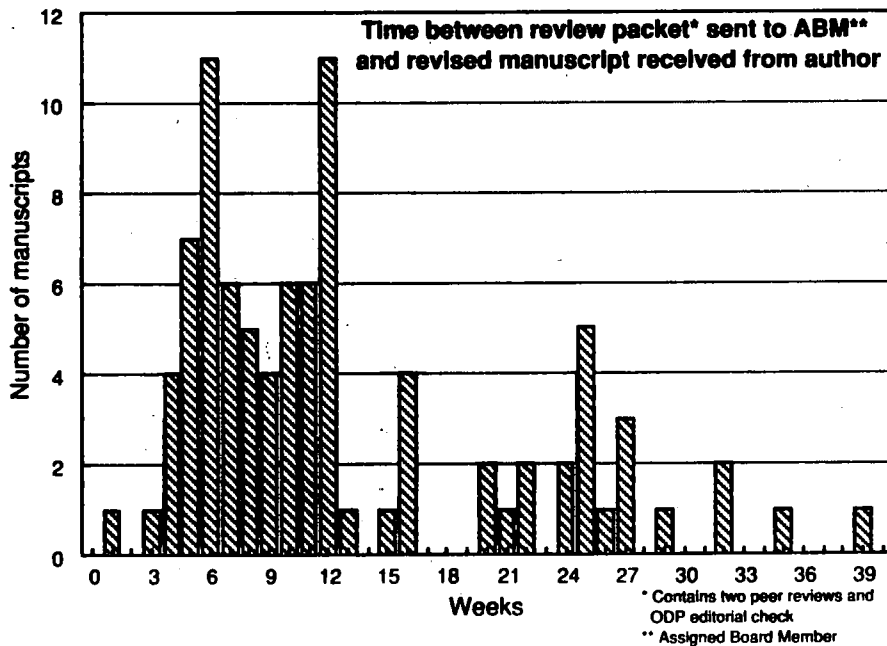
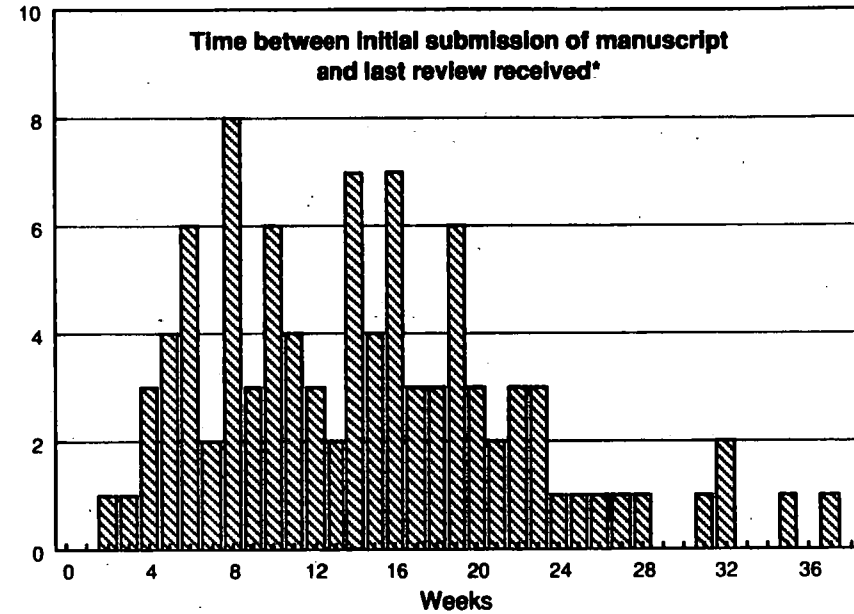
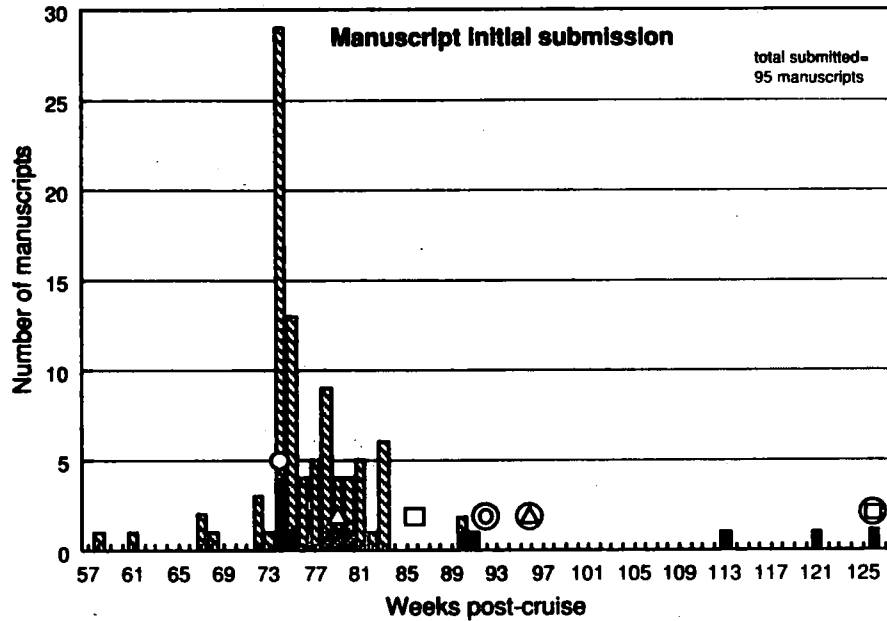
Key for Volumes 127/128 and 129 IHP graphs:

- Original specialty manuscript submission deadline (approx. 16 months, or 69 weeks, post-cruise)
- Original synthesis manuscript submission deadline (approx. 19 months, or 83 weeks, post-cruise)
- Closing deadline for specialty manuscript submission (approx. 22 months, or 96 weeks, post-cruise)
- Closing deadline for synthesis manuscript submission (approx. 24 months, or 104 weeks, post-cruise)
- Final submission of specialty manuscript (if later than closing deadline)*
- Final submission of synthesis manuscript (if later than closing deadline)*

Synthesis

Data Report

*Note: This is the latest submission that was allowed to the volume.



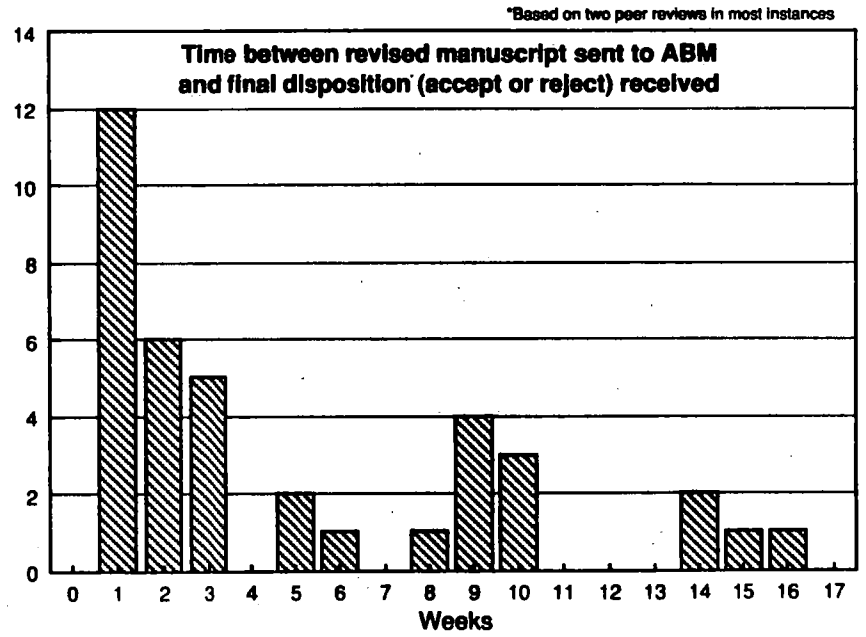
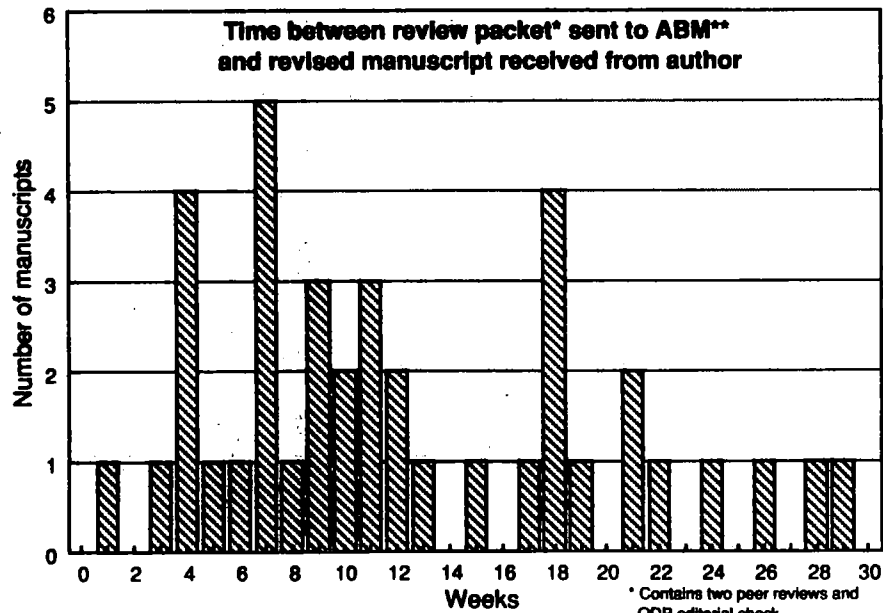
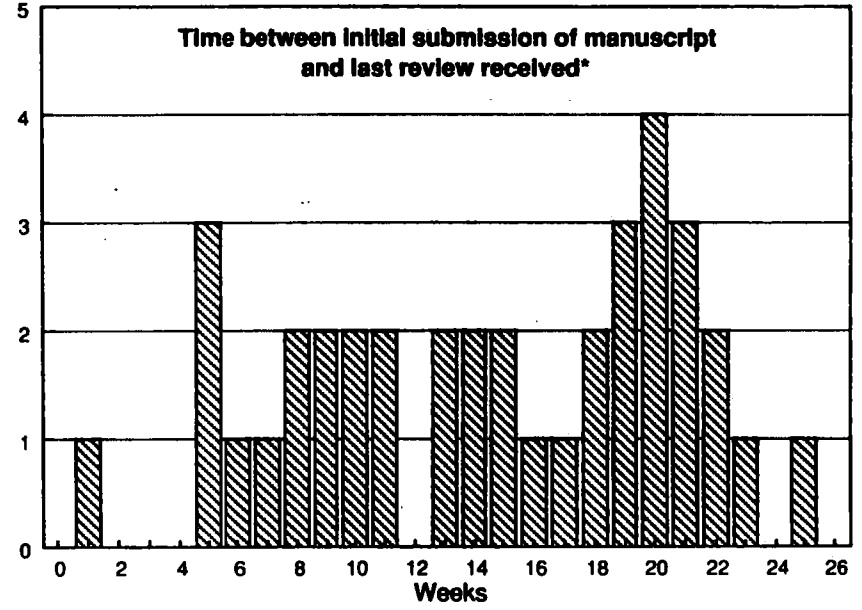
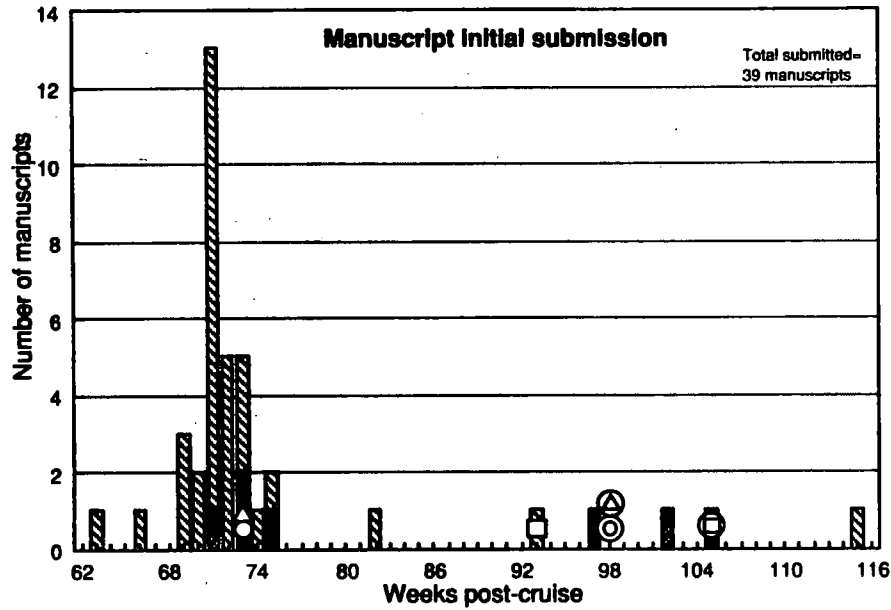
Leg 127/128 co-chiefs:

Kensaku Tamaki, University of Tokyo
 Kenneth A. Pisciotta, El Cerrito, CA
 James C. Ingle Jr., Stanford University
 Kiyoshi Suyehiro, University of Tokyo

Cruise ending date:
 21 August 1989
 16 October 1989

Initial post-cruise meeting:
 11 December 1989
 19 February 1990

Science post-cruise meeting:
 15 October 1990



*Based on two peer reviews in most instances

* Contains two peer reviews and ODP editorial check
** Assigned Board Member

Leg 129 co-chiefs:
Yves P. Lancelot, Université Pierre et Marie Curie
Roger Larson, University of Rhode Island

Cruise ending date:
19 January 1990

Initial post-cruise meeting:
11 June 1990

Science post-cruise meeting:
28 January 1991

Scientific Results Manuscript Submission Deadlines as of July 31, 1992

<u>Leg</u>	<u>SPECIALTY Initial Submission¹</u>	<u>SPECIALTY Revised Submission²</u>	<u>SYNTHESIS Initial Submission³</u>	<u>SYNTHESIS Revised Submission⁴</u>	<u>ALL to Production⁵</u>
130	1 SEP 91 <i>28 APR 92</i>	1 JAN 92 *	1 JAN 92 *	1 MAY 92 *	1 JUN 92/1 JUL/1 SEP 92
131	1 OCT 91 <i>11 FEB 92</i>	10 JAN 92 *	10 JAN 92/11 MAY 92 *	1 MAY 92/1 AUG 92 *	1 JUL 92/1 OCT 92
132	1 AUG 92 *				
133	15 MAR/15 APR/ 15 MAY/30 JUN 92 <i>1 JUL 92</i>	15 JUN 92 *	15 JUL 92/30 AUG 92	15 OCT 92	15 DEC 92
134	15 APR 92 *	15 AUG 92	15 AUG 92	15 NOV 92	1 JAN 93
135	30 JUN 92/30 AUG 92	30 SEP 92	30 DEC 92/10 JAN 93	28 FEB 93	31 MAR 93
136	1 SEP 92	1 DEC 92	1 MAR 93	1 MAY 93	1 JUN 93
137/140	15 MAR 93	15 JUN 93	15 SEP 93	15 NOV 93	15 DEC 93
139	1 DEC 92	1 APR 93	1 JULY 93	1 SEP 93	1 OCT 93

Deadlines established by IHP (updated Feb 91):

- ¹ 16 months post-cruise (specialty initial)
- ² 19 months post-cruise (specialty revised)
- ³ 22 months post-cruise (synthesis initial)
- ⁴ 24 months post-cruise (synthesis revised)
- ⁵ 25 months post-cruise (ALL to Production)

Dates in italics: Actual submission of last manuscript

Dates in bold: New deadlines

* still expecting late submissions

Appendix C: Computer Services Group Report

September 1, 1992

Summary of CSG Activity Since Last IHP Meeting

Since the last CSG report to IHP, WSTP (Water Sample Temperature Pressure) Phase II has been completed and is in use aboard the *Resolution*. The shipboard sampling program, SHIPSAM, is undergoing final testing at the repositories and will be officially released and installed aboard ship at the Leg 146 port call in Victoria, BC. There is a beta version being tested during Leg 145 as time permits. The PHYSPROPS application is currently on hold pending definition of some algorithms which are not finalized at this time. As soon as this occurs, work will continue on this project.

CSG personnel have been active in planning and acquiring equipment for the upgrade of the shorebased network at ODP HQ. This upgrade will provide 10 Mbps service to the majority of the microcomputers on shore as done for the shipboard units last year. This project will be approached in two phases and is scheduled for final completion in January 1993. The components selected for both the ship and shore networks will provide a path for cost effective upgrades to 100 Mbps service when the need arises.

The long-range computer plan has been in the works for several months and all areas of ODP are involved with providing input for the plan. This plan is expected to be completed in late August or early September and will include the proposal for the implementation of the Ocean Drilling Information Network (ODIN). When implemented, ODIN will provide significant improvements for the collecting, retrieval, and analysis of all ODP data. Extensive use of Graphical User Interfaces (GUI) are planned for ODIN.

The on-going daily support of software and hardware continues to be a time consuming area for CSG. The growth in computer literate users along with a proliferation of software applications requiring support and maintenance have far surpassed the 1984 vision of computer usage at ODP.

Approval has been obtained from JOI for the acquisition of two (2) general-use SUN workstations, one (1) for the ship and one (1) for shore. One system has already been ordered and will be installed on shore for training purposes during September. The shipboard system will be acquired shortly thereafter, and is planned for installation aboard the *Resolution* no later than the Leg 148A port call. The pacing factor will be the training required for shipboard support of the system. A suite of geological-related software will also be provided with the system. Users will be consulted to determine the appropriate software to be delivered with the system to the ship.

Computer Services Group
Task Completion Report for Past 12 Months
09/01/92

* - Completed Since Last IHP Meeting

Application Name	Ship/Shore Usage	Status	Comments
Core Sample Inventory	Both		
- Phase 5: Installation of SAMUTL Vax Core Sample Database program at ECR and WCR		Complete	
Upgraded APPLEALK Network on Resolution	Ship	Complete	Upgrade networking capability on ship to provide 10 Mbps service to all PCs and Macintosh units.
Added Ethernet network cards to Shipboard PCs and Macs	Ship	Complete	Upgrade PCs and Macintosh microcomputers with Ethernet cards to provide faster and more efficient network speed.
Added 'Scratch' Server to shipboard network	Ship	Complete	Added an additional server with 1 gigabyte hard disk to provide more space for file sharing and storage, as well as faster file retrieval/storage speed for scientists.
WSTP (Water Sample Temp. Pressure) - Phase I	Ship	Complete	Initial release of Water Sample Temperature Pressure application software
WSTP (Water Sample Temp. Pressure) - Phase II	Ship	Complete*	Enhanced version operating under Windows 3.1 GUI environment.
DSDP Depthdeck database update program	Shore	Complete*	Allow correction of DSDP depthdeck dataset (equivalent to ODP's Corelog) by ECR and WCR personnel.

Computer Services Group Task Status Report

09/01/92

Application Name	Ship/Shore Usage	Status	Compl. Date	Comments
Core Sample Inventory	Both			
- Phase 4: Conversion of Shipboard SAM to PC with enhancements similar to those for REPOSAM		Testing	September 92	Application currently running on PRO350s and will be converted to IBM PC compatible units. Installation to occur at Leg 146 port call in Victoria, BC
- Phase 6: Further automation of residue and inventory tracking		Analysis	To be determined	
- Phase 7: Implementation of bar code printing and reading for sample IDs.		Pending	To be determined	
Physical Props (strength, index properties, discrete sample GRAPE, velocity)	Both	Development	To be determined	Development of a new physical properties data collection application system.
Paleontology Database Update Program	Both	Pending	To be determined	Loading of PC entered Paleontological data into S1032 data sets and post processing. Further work on hold pending acquisition of an acceptable data entry program.
Utility Libraries	Both			
Phase 2: Make CSG Utility libraries available to users with appropriate documentation; supply other utilities as requested.		In Progress	To be determined	Documentation is being upgraded on a time-available basis.
Integration of Logging and Corelog data aboard the Resolution	Ship	Pending	To be determined	This is currently being done on some legs by shipboard scientists with assistance from the Marine Computer Specialists. It is expected that a full needs analysis and design effort will be forthcoming.
Upgrade Shorebased Network Phase I	Shore	In Progress	October 92	Upgrade shorebased network to provide 10 Mbps service to microcomputers as accomplished on <i>Resolution</i> . Support provided for Science Operations, Art Room, Editors, and Administration microcomputers.
Upgrade Shorebased Network Phase II	Shore	Planning	January 93	Completion of upgrade to network by providing 10 Mbps to remainder of microcomputers at ODP HQ.
Develop and improve user interface to computers	Both	On-going		
Development and teaching of computer courses for computer users	Both	On-going		Provide computer short-courses to shipboard participants and other ODP computer users on Vax, IBM, and Apple computers. SUN workstation courses are future additions.
User software support and maintenance of micros	Shore	On-going		User support for software applications, application installation, and maintenance of microcomputer hardware and peripherals. (See list of support software on following page.)
Network Monitoring and support	Both	On-going		Monitoring and correction to problems with shipboard and shorebased LANs. Enhancements and upgrades performed as needed to enhance operation and efficiency.

Software Supported and Maintained by CSG Personnel

09/01/92

Third Party Software Applications Routinely Supported:

For PC Compatibles

Microsoft Windows 3.0 and 3.1
WordPerfect 5.1
WordPerfect for Windows
Microsoft Word
Microsoft Excel for PC
Lotus 1-2-3
MSDOS 3.3 and 5.0
Smarterm 240 terminal emulator

Norton Utilities
Grapher
Lahey Fortran
Microsoft Fortran
Microsoft C
Appleshare PC
ARC data compression software
BLAST communications package

HIJAAK graphics conversion software
Silver Platter Software for GEOREF
MACLAN Appleshare file/print server
Viking Forms
Fastback backup software
Intermission Screen Saver
Afterdark Screen Saver
Farallon PhoneNet Talk

For Apple Macintosh

Macintosh System 6.0.8, and 7.0
MacDraw II
Microsoft Excel for Mac
Kaleidograph
Omnipage
WordPerfect
Mac240 terminal emulator
Adobe Illustrator

ACTA
Aldus Pagemaker
Fortran
Think C
Appleshare file server software
Afterdark Screen Saver
Cricketgraph
Fastback backup software

Data Desk Professional
MORE II
DOS Mounter
MacWrite

For Vax Systems

VMS operating System
FORTRAN
System 1032 DBMS
DECNET
TCP/IP

VMS Mail
AlisaShare file/printer Server
DI3000/PICSURE Graphics
BLAST communications software
PMDF email store & forward software

C
EASYLINK telex software

ODP Developed Application Software:

CORELOG - corelog
DEPTHDECK - DSDP corelog
LEGS - Leg, site, hole DB appl.
REPSAM - Repository Sampling
SAMUTL - Sampling DB appl.
WSTP - Water Sampler Temp/Press.

CHEMDB - geochemistry
HARVI - Hard Rock Vis. Desc.
MATMAN - Material Mgmt System
SHIPSAM - Shipboard Sampling
SLIDES - Smear Slides
MANTRACK - Manuscript Tracking

ADD-DEPTHS - sub-bottom depth calc.
HRTHIN - Hard Rock Thin Section
PHYSPROPS - Physical Properties
SAMREQ - Sample Request/Biblio.
SMOOTH - Navigation

NOTE: This is not the complete list of software supported, but is shown to illustrate the magnitude of the support demands on CSG. Hardware maintenance and support is also provide on over 100 microcomputers on a daily basis.

Appendix D: Curator's Report

Curation and Repositories January 1992 - July 1992

I. Repository Sampling Statistics

A. Average yearly sample distribution from the repositories under DSDP vs. ODP

23,230/year under DSDP (1976-1984) versus 38,901/year taken under ODP (Jan 1985-July 1992); based on ODP total to date of 291,759. Average # samples taken per year under ODP is 41% greater than under DSDP (i.e. an average of 15,671 more samples are taken per year under ODP).

B. Total sample distribution (January 1992-July 1992) is 25,554. Breakdown of sample distribution by repository (East Coast Repository=ECR Gulf Coast Repository=GCR and West Coast Repository=WCR) is as follows:

ECR = 9,877 (all subsequent)
GCR = 11,867 (3,017 shorebased, 8,850 subsequent)
WCR = 3,810 (all subsequent)

C. Total number visiting scientists at each repository (includes sampling, describing and photographing cores)

ECR = 71
GCR = 62
WCR = 44

D. Average request approval turnaround by the Assistant Curator's office is: 1.4 weeks

E. Mail order (excludes visitors) average sampling turnaround times (based on date received at ODP/TAMU through the date the samples are shipped from the repository; in the case of the remote repositories, this includes the mailing time from TAMU to the repository):

ECR = 7 weeks
GCR = 3 weeks
WCR = 3 weeks

II. Shipboard Sampling Statistics

Total sample distribution (January 1992-July 1992) is 17,864. Breakdown of sample distribution by leg is as follows:

Leg 142 = 132
Leg 143 = 8,011
Leg 144 = 9,721

III. The Curation Project and the Recuration Program

A. The Core Curation Project, initiated by DSDP in 1983 and continued by ODP until 1986, involved photography and in some cases, re-photography of all archive halves of cores stored at the ECR and WCR for Legs 1-65. Cores in whole round were split and labeled (including many igneous/metamorphic, zero and miscellaneous sections). At the ECR, all archive halves were cleaned and occasionally reconstructed when time allowed. At the WCR, all archive halves were cleaned and reconstructed. Cores were intermittently re-photographed by ODP when necessary in order to complete this project. The end result of this work can be seen on the ODP video disc. A steady state was achieved in January 1989.

B. The Recuration Program was initiated by ODP in 1985 in an effort to combat the advanced state of deterioration of many cores due to expansion, desiccation, heavy sampling associated with lack of proper curatorial maintenance, and poor initial shipboard curation. If necessary, restoration of the core sections is performed by the permanent staff of each repository when a section is being sampled for a request, however, this process slows the sampling process tremendously. Sponges stored with the cores are always refreshed when a core is sampled. At present the Program exists in the summer months only, when student labor is readily available. The following is the work that has been accomplished to date.

	ECR mmw	ECR done	GCR mmw	GCR done	WCR mmw	WCR done
1. re-wet sponges*	0	0	0	3		4
2. re-curate cores**	109	1	62		4.5	53
3. inventory thin sections/ smear slides***	.5	0	-	-	4	1
4. curate frozen OGs****	-	-	4	1	-	-
5. curate frozen dedicated cores****	-	-	1	.5	-	-

* suggested sponge re-wetting schedule is every two years

** (ECR/GCR=archive & work, WCR work only)

*** Not applicable to GCR which continues to receive thin sections and smear slides while ship is in the Pacific/Indian Oceans.

**** Not applicable to the ECR which does not house frozen OGs or frozen dedicated cores. The WCR, which houses all DSDP OGs, is caught up.

IV. Geriatric Core Study (GER)

In January 1988 IHP and PCOM endorsed a request to collect cores of convenience to monitor the changes (if any) which occur in cores while they are stored in the DSDP/ODP repositories. As of this writing eight cores have been collected for use in the Geriatric Study. No additional cores intended for use in the Geriatric Study have been added to the collection since the last report to the IHP.

A. Collected Cores

- 2 GER cores from Leg 119 (Kerguelen Plateau) are stored at the ECR
- 3 GER cores from Leg 124E (Luzon Straits) are stored at the GCR
- 1 GER core from Leg 132 (Shatsky Rise) is stored at the GCR

B. Status of Geriatric Core Sampling

The cores for the Geriatric Study stored at the ECR were sampled in February 1992. The cores stored at the GCR were sampled in July 1992. The next sampling time-line at the ECR is scheduled for February 1993.

V. Communication with the Scientific Community

All three repositories are now readily accessible by fax machines. Scientists with requests for information or those having questions about sample requests are encouraged to communicate freely with the repositories and the Assistant Curator via fax or electronic mail. The possibility of implementing an electronic mail "forum" as suggested in the minutes from the March 1991 IHP Meeting, for the purpose of requesting samples is being explored by the Assistant Curator. The fax numbers and email addresses are:

Assistant Curator fax=409-845-4857, email address = CHRIS@TAMODP.TAMU.EDU
ECR fax = 914-359-5262, email address = ECR@TAMODP.TAMU.EDU
WCR fax = 619-534-4555, email address = WCR@TAMODP.TAMU.EDU
GCR fax = 409-845-4857, email address = GCR@TAMODP.TAMU.EDU

VI. Computer Status

A. Communications

1. We have some interesting challenges associated with operating our computers in a remote environment. At the ECR, they were having problems fitting into the local area network at Lamont. This meant that certain utilities such as core log cross checks in REPSAM and SHIPSAM were not available. Lamont has been aware of this problem for several months, and are finally approaching a solution.
2. Maintaining duplicate datasets at three remote locations presents a challenge. Curation and Repository staff wrote software that saves changes made to any of the datasets, transfers the changes across the networks using a midnight wake up phone call, and automatically updates each of the datasets with the changes. This keeps the datasets identical within a 24 hour window.

B. Sample Investigations Database (SID)

1. Sample Requests (January-July 1992)

Requests processed = 359
Requests coded and entered = 3,334
Backlog of requests to code as of 31 July 1992 = 2,972

2. Data entry of the bibliographic reprints are at a steady state. All published ODP Scientific results and part A papers have been entered. All reprints from the outside journals that authors have sent ODP are entered.
Reprints entered = 2,619

C. DSDP Bibliographic Database (Curation assumed responsibility in May 1991)

As of 31 December 1991, the Initial Reports of the Deep Sea Drilling Project through volume 96 have been entered.

D. Sample Records Data

All ODP shipboard sample records are recorded in real-time and are available in a computerized database during the cruise. Recent improvements to the shipboard system includes the addition of the request number and request part providing a clear link to the sample request

datasets. Several reports are made available to the scientists. DSDP sample records have been cleaned up and loaded into searchable datasets. They will be used to ease the task of residue inventory. The sample records datasets are used to determine the extent of sampling across specific intervals in a core. These records can be linked to SID which contains detailed information about the proposed studies, the investigator and the resulting papers.

DSDP Sample Records have reached a steady state. They remain incomplete because early sample records were not kept by DSDP, and others were not transferred to ODP in a readable format.

Legs 100-144 shipboard sample records uploaded and on-line.
Legs 1-138 subsequent sample records are uploaded.

E. Thin Section Database (TSD)

The TSINFO (Thin Section Information) dataset and its user interface program were modified per specifications provided by ODP thin section technicians and repository staff. Changes should make it easier to inventory and track ODP thin sections.

Steady state achieved for ODP thin section data entry.
Upload DSDP (Legs 64-96) thin section inventory (mmw = 6).

F. Repository Sampling Database (REPSAM) - the backlog of sample request data entry from all repositories has been entered using REPSAM. However in March 1992, major problems with the data were discovered. We spent about six months re-entering the data and looking for the source of the problem. All information on samples from requests honored by ODP is now in a searchable database.

G. Section Log Dataset

This dataset is designed to keep a record of the history of core sections which require curation or have experienced a noticeable change from the original state as recorded in barrel sheets or core photographs. In addition, it will contain information on critical or rare material in the cores. It is intended to supplement the core-specific information stored in the CORELOG database.

The SECTIONLOG dataset's user interface program has been rewritten. The beta version of the program has been tested and debugged. A user's guide is in preparation by the curatorial staff.

Testing and debugging = 1.5 month of curatorial staff effort
Data entry of backlog = 12 mmw

H. PC SHIPSAM

1. The repositories' staff have been testing the beta version of PC SHIPSAM. Most of the major bugs have been identified and corrected. Testing continues on the ship during Leg 145. This version of the software has a template feature that will facilitate high resolution sampling.

I. SAMUTL

1. The SAMUTL report formats were modified to better reflect the differences between the shorebased and shipboard environments.

2. A major bug has been identified in the SAMUTL reports program.
CSG is working on the solution.

VIII. Curation and Repository Improvements

A. West Coast Repository

1. New core racks were purchased to increase the storage capacity of the refrigerated areas, creating more space for residues and temporary storage of cores. John Tarduno and Lisa Tauxe requested 128 whole round sections be transferred to the WCR for magnetic susceptibility work. The cores were subsequently split, described, and housed on the additional space freed up by using the newer core racks. The new core racks are being installed in the new refrigerator and the core transfer occurring simultaneously. New shelves will be constructed to house residues and other miscellaneous collections. This will clear the aisles of mobile racks presently in use.

B. Gulf Coast Repository

1. Cores from Legs 137, 140, 141, 142 and 143 (approximately 2510 section halves) were unboxed and racked in Room B118.

2. In support of the EGLINTON/ZHAO (#13533A) sample request, all Leg 108/Hole 685C frozen dedicated cores (8 cores/144 sub-section) were measured for magnetic susceptibility and split using the GCR's meat-cutting band saw. The archive halves were kept frozen; the working halves were thawed out, described, photographed, measured using the digital color imaging system, sampled, and finally re-frozen.

3. All OG whole round samples comprised of unconsolidated sediment, and 75 percent of the OG samples comprised of more consolidated sediment, which were taken during Legs 130-134 and subsequently thawed out, were unboxed, sorted, and then split using the core splitter from the Glomar Challenger and the GCR's Felker saw. All the split archive halves of the OG samples were photographed by the GCR staff. The OG samples were further curated and returned to their parent cores stored in the refrigerator.

4. An inventory of OG samples stored in the GCR's Room B116 freezer (ODP Legs 100-129) has been completed. The cumulative ODP sample database was then updated and corrected based on what was discovered during the inventory effort.

5. Leg 139 cores that are comprised of massive sulfides or contain pyrite were spot-checked to determine the amount of oxidation which has occurred. Cores stored in the repository in sealed bags containing N₂ were compared to cores which were sorted unbagged under ambient environmental conditions. Based upon guidance provided by the Leg 139 scientific party, the GCR staff placed the selected Leg 139 section halves in bags, sucked the air out of the bags, filled them with nitrogen gas and heat sealed them.

6. The final refrigerated expansion into existing ambient storage was completed in April 1992. Two rows of core racks (joined back-to-back) were constructed and two core protection barriers were installed at both ends of the new core racks.

C. East Coast Repository

1. Monies to hire a summer team (as we have done in the past) were not available this year. Consequently, all of the planned summer projects that were stated in the Report to IHP (January-December 1991) were not completed. New residues remain uninventoried, sponges were not re-wet, Leg 75 phys prop sections/samples remain uninventoried, minimal recuration was done (166 sections A and W completed, both spot and systematic), TS-INFO database was not cross checked with the ECR collection.

2. Plans to expand the refrigerators to receive the Atlantic cores in April 1993 continue to progress.

3. Plans to receive the NJ Transect Shore cores are underway (both storage and data entry). Ken Miller and Greg Mountain, (co-Chief scientists for Leg 150) have received permission/funding from JOI and NSF to drill the continental section of the NJ transect and to store the cores at the ECR. USGS will drill three holes with an estimated 1,500 m of recovery. The cores will be ultimately be stored at the ECR, so they must use the ODP nomenclature to fit into ODP databases and to follow ODP conventions. They have funding for a post-doc to handle the conversion: Dan Quoidbach (ECR staff) will liase with the post-doc to facilitate an easy transition into the ODP databases.

Appendix E: Reports of Lamont Database and Computing Groups

Borehole Research Group Database and Log Analysis Group Report

Information Handling Panel
September 9-11, 1992

The present report includes four sections:

1. Database report
2. Data processing and publication update
3. CD-ROM production
4. The new survey: results

1. Database Report

Database Update

The ODP database consists of logging data tapes through Leg 144 and consists of about 2000 magnetic tapes, including Schlumberger original proprietary and field edit tapes, backup tapes of processed data, temperature data tapes, and multichannel sonic tapes. Videotapes or cartridges of borehole televiewer data recorded at selected sites are available as well. Starting with Leg 126 the ODP database also includes Formation MicroScanner (FMS) data, in the form of original proprietary tapes and processed backup tapes. Blackline copies of the processed FMS images are now available to interested scientists for Legs 126 through 140. Microfiche of FMS images are available for Legs 126 through 139.

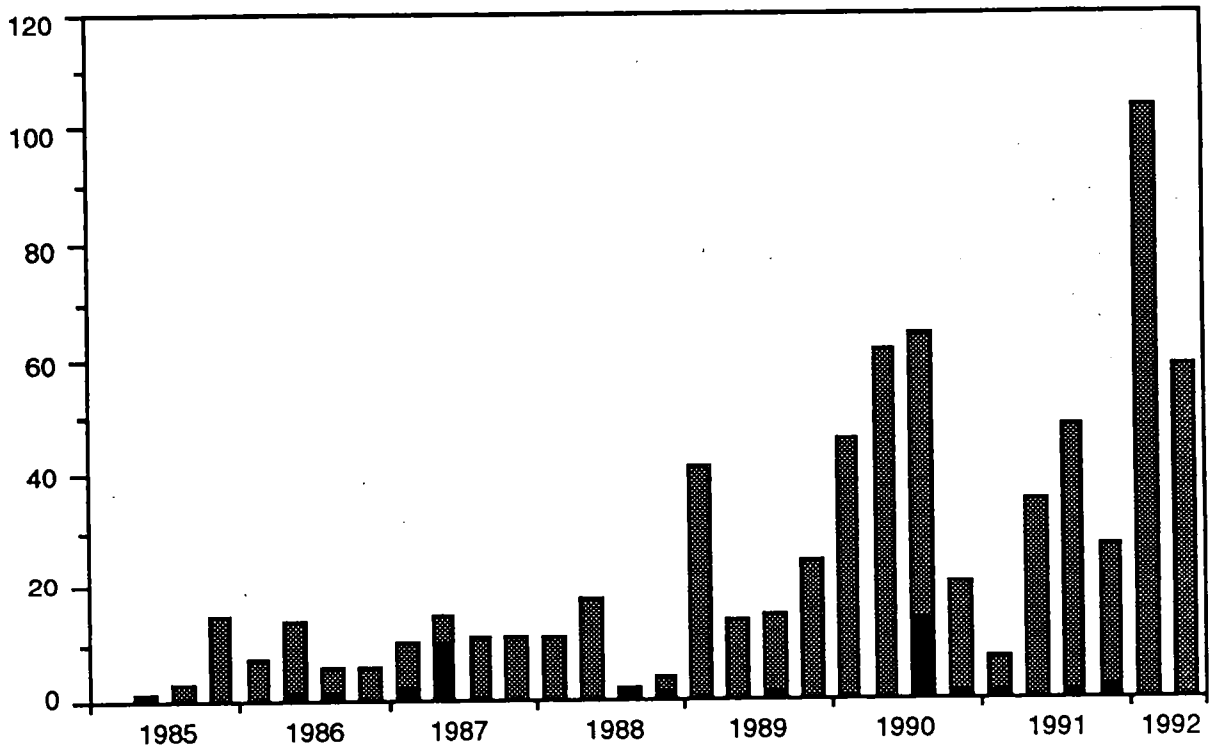
Because of the increasing number of requests of data on floppy disc in ASCII format, we have created a temporary "on-line" database accessible from all of our Macintoshes, complete of general information about the hole and of more detailed information about the processing performed. The conversion and the transfer of the data takes place as soon as the processing (which also includes differential depth shifting and reference to the sea floor) on the MicroVax is completed. Data is presently available for Leg 129 through leg 141.

Data Requests

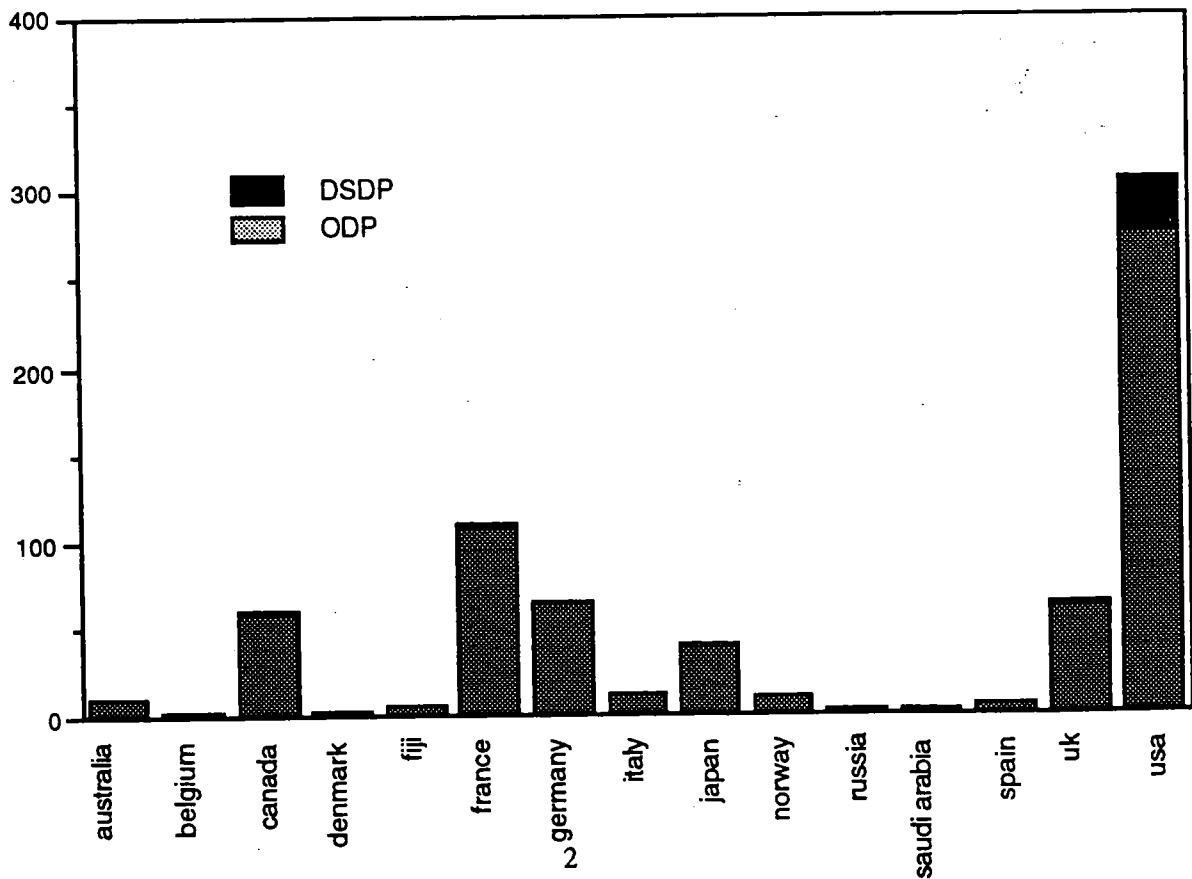
The first semester of 1992 has kept us busy fulfilling a record number of data requests, 162 (see page 2 and Appendix 1).

As noted in the April report, besides the definite shift of preference for data on Mac/MSDOS diskettes, we have also noticed an increasing interest in electronic transfer. While a portion of the database is already "on-line" (see above), we still fulfill requests of older data the traditional way, using magnetic tapes or floppies as a medium. Also, we have noticed an increasing interest in receiving Formation Microscanner data in digital form, while until a few months ago the data was requested as analog images. This is the result of our efforts to produce LIS (Log Information Standard) formatted tapes, in addition to the standard backup tapes. We are also in the process of developing a program (FMAX) to make raster files from LIS files. These raster files are 8-bit binary files which can be imported to graphics applications on several platforms (e.g. Macintosh, SUN, VAX, IBM PC). Our work on the development is nearly complete, and we look forward to providing sets of raster images for each hole logged with the FMS tool.

NUMBER OF DATA REQUESTS BY YEAR (June 30, 1992)



NUMBER OF DATA REQUESTS BY COUNTRY (June 30, 1992)



Data Requests and Communications via Electronic Mail

The BRG Log Analysis-Database Group can receive data requests and queries electronically by two paths. The first path is over the Internet. Lamont-Doherty has a T3 class connection to the Internet so data file transfer over the net is a practical option in addition to handling electronic mail. Data transfer via ftp or anonymous ftp can be arranged (this has already been done in several instances). The primary contact points for outsiders are the following:

chris@lamont.lldgo.columbia.edu (account for Cristina Broglia, database-log analysis manager, for data requests and database/log analysis-related questions)

barnes@lamont.lldgo.columbia.edu (account for Debbie Barnes, database assistant and CD-ROM Production Coordinator).

filice@lamont.lldgo.columbia.edu (account for Frank Filice, CD-ROM Production Coordinator).

beth@lamont.lldgo.columbia.edu (account for Beth Pratson, senior log analyst, for geochemical analysis-related questions)

reynolds@lamont.lldgo.columbia.edu (account for Robin Reynolds, senior log analyst, for fms-related questions)

hobart@lamont.lldgo.columbia.edu (account for the LDGO-BRG computer systems manager, for computer related questions)

The second path is over OMNET, using the general account Borehole, which is checked every day:

borehole@lamont.lldgo.columbia.edu (general purpose account)

Data Media

Data can presently be distributed on the following media:

- 1600 bpi/800 bpi, 9 track tape
- 3.5" or 5.25" diskettes, MAC or MSDOS format
- videotapes (BHTV)
- TK50 cartridges (BHTV and FMS only)
- DAT tape (FMS only)

NGDC-UK Database

Well log data of Legs 135 and 138 were shipped in June to NGDC and to the UK database located at Leicester University. The next shipment, including Legs 139 and 140 data, will take place by the end of December.

Distribution of Logging Data

Plots of the standard logging data (partially processed and now depth-shifted with reference to the sea floor to facilitate correlation with cores) are routinely distributed to each member of the shipboard party 3-4 months after the end of the leg, along with

forms to request additional data. Distribution of standard log data of Legs 140 and 141 has already taken place, whereas Leg 143 data will be disseminated by the end of September.

2. Data Processing and Publication Update

Geochemical Data Processing

Geochemical data generally are processed in time to be presented to the shipboard party at the second post-cruise meeting. Since the last IHP meeting Leg 138 (9 holes), Leg 140 (1 hole), and leg 141 (2 holes) geochemical data have been processed and are available to interested scientists.

The log analysis group is considering the possibility of including the processed geochemical data in the ODP Proceedings, Preliminary Results, instead of the Scientific Results. The main advantage of this would be to provide interested scientists with a product that they would be able to use for correlation with other datasets before the submission of their manuscript to ODP. The data report would be then replaced by a boiler-plate introduction (in the Explanatory Notes?) as well as by a minimum of comments to the results. However, because such a commitment would considerably alter our present processing schedule, and would probably imply a preliminary review by members of the shipboard party, we are unable to anticipate when we will be able to start.

Formation MicroScanner Data Processing

Routine FMS and dipmeter processing steps have been defined for shipboard processors in an FMS manual. Shore-based processing consists of depthshifting FMS images and dipmeter data to match a standard reference log chosen by the log analysis staff at BRG. After shifting, new plots are made on a Benson plotter, which produces higher quality plots than the Versatec plotter on the ship.

Processing of legs 139 and 140 has been completed on shore and the data is available to interested scientists.

In May, Robin Reynolds has trained Tim Bronk of TAMU-ODP as shipboard FMS processor.

Publications in the ODP Proceedings

Leg 134, 135, and 136 geochemical processing results have been submitted in a data report for publication in the ODP Scientific Results volumes.

A summary of depth-shifted and edited well log data is routinely submitted for publication before the barrel sheets in the Initial Reports of the ODP Proceedings. In general, this summary is ready 2-3 weeks after the first post-cruise meeting or, if problems arise, by the second post-cruise meeting.

FMS images on microfiche have been inserted into a pocket inside the back cover of the Initial Report volumes. Each microfiche page contains 200 frames, with each frame displaying approximately one meter of processed images. As anticipated in the April report, microfiche will soon be replaced by digital data on CD-ROM, for inclusion in the ODP Proceedings Part A.

Personnel

Starting October 1, 1992, the database-log analysis group will consist of the following people:

Cristina Broglia: database and log analysis manager

Elizabeth Pratson: senior log analyst

Neil Payne: log analyst

Debbie Barnes: database assistant and CD-ROM production coordinator

Frank Filice: CD-ROM production coordinator

Mr. Neil Payne will replace Robin Reynolds, FMS log analyst, who will be leaving BRG in October. Mr. Payne is a petroleum engineer with a 12-year experience; he is familiar with all aspects of exploration, developments and operations geology. Ms. Reynolds will train him during the month of September but later she will remain available on campus to answer any questions related to FMS processing.

3. CD-ROM Production

As CD-ROM production coordinators, Debbie Barnes and Frank Filice are working together in publishing ODP-BRG's first CD-ROM. The CD-ROM will be a "data only" CD and will include:

1. processed FMS data in LIS (log Information Standard) format
2. FMS image raster files (PBM-format - programmable bit map, 8 bit binary)
3. dipmeter data (ASCII format)
4. conventional logging curves (ASCII format)
5. third party tool data (ASCII format)
6. sonic waveform data (to be included only in future CD-ROMS, format to be determined).
7. text/information files (ASCII format)

The CD-ROM will be mastered using the ISO 9660 format standard readable by any computer platform. BRG will provide a comprehensive list of application software, sources for software, and any relevant information that is needed to view the data. BRG will submit a proposal for purchasing the hardware and software necessary to produce a "pre-master" WO-CD (write once-compact disc) that can be tested locally before a production run. Once tested, the "pre-master" will be sent to a production facility for duplication (2000-2500 copies) and distribution.

The first four CD-ROMs will be pre-mastered by NGDC. Production of data from legs 139, 140, 141, and 143 will start late September with the first pre-master from NGDC by mid to late October. Initial testing will be carried out by several "users" at Lamont. If changes are necessary, a new pre-master will be made by NGDC. When we are satisfied with the pre-master, it will be sent out for final mastering and production.

The initial CD-ROM will be a relatively small volume of data (~250-300Mb) in ASCII format. As the volume of data grows (third party tools, full waveform, and LIS format data being included) and the establishment of an on-line database matures, faster access and more compact data formats (binary) will be investigated.

4 The New Survey: Results

Streamline Operations

In the first months of 1992, we at the Borehole Research Group conducted a survey of all participants of ODP legs since Leg 130. Our main concern was to streamline our data distribution operations through discovering what scientists require for their research. We also followed up our first survey, conducted in the spring of 1991, which investigated our performance as a service and the needs of the ODP community.

Analog Distribution

We decided to survey the ODP scientific community in 1991, when the increase in the amount of log data gathered each leg and the mounting interest in the Formation MicroScanner (FMS) caused data requests and microfiche expenses to soar. Our methods of distributing data had been largely analog: we xeroxed copies of all standard logs for each shipboard scientist at the end of each leg; we printed out paper copies of the processed FMS images, the shortest of which were tens of meters long; we produced over two thousand microfiche sets of the FMS images for each leg. We also copied hundreds of eight-track tapes and shipped them.

Argument for Digital Distribution

We suspected that these labor- and cash-intensive methods were not serving the majority of researchers. Some scientists were not taking advantage of this vast scientific data pool because they could not manipulate the data. Those who could read the eight track tapes had to wait for their data -- they could not retrieve it over the existing computer networks.

Further waste was not as obvious: some scientists did not use the log results at all, since they were not familiar with them. Xerox copies of the logs showed shipboard scientists what standard logs looked like, but they did not allow scientists to correlate the logs easily with other data they used, so they often didn't try to use them.

And the new technology requires hands-on work; the FMS tool, the digital Borehole Televiewer (BHTV), and the Geochemical Spectrometry Tool (GST), whose precise measurements have enormous powers of geological description, can be used best if scientists can manipulate the data themselves.

As the analog methods were only the first solution to the IHP mandates, we decided to pursue other, more effective and efficient means for distributing the data. The first order was to ask the scientists what they require for their research.

High Response Rate

We sent surveys to 220 ODP shipboard scientists who had sailed on or since Leg 130; so far 128 have answered, yielding a very high response rate (58%). The numbers of foreign and domestic respondents are about even.

The Population's Computer Background

The first set of questions explores the users' background in and access to computers. Over 90% of the users most frequently work on Macintosh or IBM (type) personal computers and over 80% have access to Vax or SUN mainframe units (Fig. 1). When asked what digital media they work with, 53% of the users respond that they use floppy disks and networks (Fig. 2A). Only 9.5% currently have CD-ROM; however, over 36% expect to get CD-ROM capability within the next two years (Fig. 2). Nineteen percent will increase their network access (Fig. 2B). Over 80% of the population have e-mail and use it regularly. Only a small percentage, however, are now familiar with FTP (Figs. 5, 6).

FMS Microfiche

The next section of questions addresses the viability of continuing to provide the FMS data on microfiche in the Part A ODP volumes (Fig 7). Over 60% NEVER use the microfiche (Fig. 7). Most of those respondents feel that using the microfiche is too cumbersome or inaccurate. Of the people who actually have looked at the microfiche, just over half have found it to be even somewhat useful (Fig. 8B). Over 70% believe they would find FMS data useful if it were available on CD-ROM (Fig.9).

Standard Logs

The third set of questions concerns post-cruise standard log distribution. Over 54% would prefer receiving data on diskette in a numeric format (64%) than as a xerox copy in a fixed scale (Figs. 10, 11).

On-line, Digital Database

The final section explores the usefulness of putting the ODP/BRG well log database on-line. Almost 90% of the population say it would be very or somewhat useful (Fig. 13A). Most say that the frequency of their use would depend on the data they needed; therefore, predicting how often they would use the on-line service is difficult, but most respondents estimate monthly to yearly (Fig. 13B).

Over 90% of the researchers would be able to perform their research more effectively with the database on-line (Fig. 15).

Survey Implications

Information gathered from well logs can be exploited much farther than it has been so far. With the advances in technology and quality control of the last few years, well logs can and should provide more than just a general overview of the borehole (see Fig. 8).

When the data is distributed digitally, it can be manipulated by scientists according to their research needs. They can then correlate logs with other data (see Fig.14). To this end, we at BRG are effecting several changes in the way we handle the ODP well-log data. In the next few months we will:

- Produce a pilot CD-ROM of Leg 139 well log data. FMS data will be presented in a graphic format that will allow users on personal computers to browse the raster images with shareware available through Internet. The entire processed FMS data set will then be provided. The disk will also contain standard logs in ASCII format, which can be read by all platforms, and processed dipmeter data.
- Work toward including the first well-log CD-Rom in the Leg 143 *Initial Reports* volume.
- Cease production of FMS microfiche after Leg 140.
- Archive all standard logs from future legs and from legs prior to leg 129 in ASCII format.

These measures will streamline our data distribution operations, improve our service to the scientific community, and aid scientists in performing their research more easily, efficiently, and fruitfully.

Appendix F. Report on the Micropaleontological Reference Centers

Selection of Samples for the Centres

In 1991 Annika Sanfilippo and J. Saunders spent two periods at ODP Headquarters to continue the selection of samples for the centres. As on previous occasions, selection was made for the four fossil groups: Nannofossils, Foraminifera, Radiolaria and Diatoms. The work has now progressed to the end of Leg 128.

The speed with which samples can be selected is governed by the availability of specialist chapters in the Scientific Results Volume for any particular leg. Experience has shown that it is not possible to make a useful selection using only the Initial Report Volume. By doing the work at ODP Headquarters, and with cooperation from the Publications Group, we have been able to use manuscript copies of some chapters to avoid waiting for actual publication of the Scientific Results Volume.

Sample despatch from the core repositories is keeping up very well with selection requests.

Preparation of Radiolarian reference material

As reported earlier, Dr. Annika Sanfilippo of the Scripps Institution of Oceanography was awarded a National Science Foundation grant, for the period October 1990 to September 1992, to prepare and distribute radiolarian material already selected for the DSDP/IPOD phase of drilling (i.e. Legs 1 through 96). The work has been completed in an exemplary fashion within the allotted time. Still outstanding were the first six legs which were initially sampled by J. Saunders and which were not chosen for siliceous fossils. This gap has now been filled by Dr. Sanfilippo, who expects to complete the work with a minimal over-run of her grant period.

At the Spring '92 meeting of IHP, a strong plea was made for the continuation of the radiolarian preparations, and IL.Gibson (Chairman IHP agreed to take up this matter with JOI). It is particularly important that the ODP legs be included as the coverage is very different from earlier legs with the ship now coring in higher latitudes.

Preparation of Diatom reference material

Dr Tanimura reported that the Japanese MRC had received a total of 3905 samples. Of these, 659 had been processed for Diatoms and despatched to the other seven MRCs. A further 701 samples were processed and ready for immediate shipment.

Preparation of Palynological reference material

At the Spring '92 meeting of IHP, it was reported that some scientists at AMOCO might be interested in making palynological preparations. However since then, many stratigraphers have moved and others have left the company and AMOCO participation now seems unlikely. However, recently faculty at Aberystwyth University have expressed an interest in being involved with the palynological collection and these discussions continue.

Micropaleontological Reference Center Brochure

The new promotional brochure for the centers has been issued by ODP TAMU. Copies have been distributed to IHP members. The Centers are grateful to the ODP staff for the obvious care with which the brochure has been produced.

Meeting of the MRC Curators and other users in Basel

This meeting was originally scheduled for June, 1992, but was postponed because only five of the eight curators could attend at that time; a minimum of seven members was considered necessary for a viable meeting. The meeting is now scheduled for the Spring or early Summer of 1993. The additional time will allow the computerization of the Basel collection to demonstrate the different ways the material can be used.

J. Saunders, Co-ordinator,
Micropaleontological Reference Centers

Appendix G. Report from the IHP Paleontological Sub-Committee on 'Guidelines for Shipboard Stratigraphers'

Minimum standards for recording fossil occurrences

Practically all of the investigations on ODP cores depend heavily on fossil-based age assignments for their placement in a time-stratigraphic framework. For this reason, the fundamental task of the shipboard paleontologists is to provide age-determinations for all fossiliferous sequences, at the highest feasible resolution. Only after this obligation is fulfilled should effort be devoted to other projects of special interest. The following guidelines are intended to help paleontologists to achieve the results needed by others for shipboard work, and for the compilation of the Initial Report volume.

An important requirement for ODP publications, as for any other, is that it must be possible for records of species occurrences, zonal assignments, and magnetostratigraphic and isotopic scales therein to be compared with results reported in earlier and later publications. Since the concepts associated with the name of each species, zonal limit and event can vary from author to author and year to year, it is necessary to associate a bibliographic reference with the concepts applied in each ODP paper, if it is to be effectively integrated into the total geologic literature.

The following sampling and recording guidelines should be followed where possible:

- At least one sample per core should be examined for each of the major microfossil groups (calcareous nannofossils, foraminifera, diatoms and radiolarians), and their abundance and preservation, or absence, recorded.
- In fossiliferous sequences, it will generally be one of the groups for which smear slide preparations are adequate for age determinations (calcareous nannofossils or diatoms) that provides the bulk of the age assignments. Except where impractical because of overwhelming recovery, this primary fossil group should be evaluated with a minimum frequency of two or three samples per core. Other fossil groups present in usable amounts should be investigated in one sample per core.

Minimum standards for paleomagnetic observations and records

1. Measurement of natural remanent magnetization (NRM) with the pass-through cryogenic magnetometer of all archive halves containing mainly undisturbed sediment sections (only APC cores).
2. Determination of general characteristics of magnetization by systematic stepwise demagnetization of selected discrete samples.
3. Measurements of discrete sediment samples, where long core results need to be confirmed or improved or where a larger portion of the cross-section represents disturbed sediments, which degrade the primary signal. Systematic stepwise demagnetization is recommended according to the results of step 2.

4. If time allows, additional pass-through measurements in critical intervals after demagnetization with appropriate alternating fields, which were derived from magnetization characteristics (step 2), are desirable.
5. Graphical presentation of the critical magnetization angle (inclination or declination) to determine magnetic polarity together with magnetic polarity column for each Hole. Unrecovered and uninterpretable intervals should be noted with specific signatures.
6. Development of a magnetostratigraphy in an interactive feedback process with biostratigraphers. The standard procedure normally includes the following steps
 - Determination of the magnetic polarity pattern
 - Comparison with a standard geomagnetic polarity time scale (GPTS)
 - Definition of the preliminary primary biostratigraphic tiepoints in cooperation with biostratigraphers
 - Assignment of the polarity pattern to the standard GPTS
 - Final integration of biostratigraphic data into magnetic age assignments
7. Construction of an age-depth model for each Hole/Site in cooperation with the biostratigraphers. Indication of discrepancies between bio- and magnetostratigraphies.
8. Identification of those intervals which are critical for a magnetobiostratigraphic integration, for further refinement in detailed shorebased studies. This should happen in consultation with co-chief scientists and the paleontologists to provide high quality stratigraphic age control.
9. Routine rock magnetic measurements of magnetic susceptibility with the MST should be used as an additional correlation tool, together with other core logging methods.

Age-Depth plots

Age-depth plots (sedimentation rate diagrams) are usually prepared by stratigraphers for Site chapters in the Initial Reports and for the stratigraphic syntheses in the Scientific Results volume. These not only provide a convenient graphic method to display sedimentation rates and hiatuses, but can facilitate comparisons of biostratigraphic age data among fossil groups or with paleomagnetic or chemostratigraphic data sets in order to determine chronostratigraphies for drill sites. These charts should be accompanied by appropriate data tables defining the stratigraphic events used to construct the age-depth plots.

ADP is a computer program written for the Macintosh by Dave Lazarus to aid in the construction of age-depth curves and in the comparison of chronostratigraphic data with published time scales (Lazarus, D. 1992. Age Depth Plot and Age Maker: age modeling of stratigraphic sections on the Macintosh series of computers. *Geobyte*, vol.7, no.1, pp.7-13.) Examples of output from this program are illustrated in Harwood, D.M., Lazarus, D.B., Abelmann, A., Aubry, M.-P., Berggren, W.A., et al., Neogene integrated magnetobiostratigraphy of the central Kerguelen Plateau, Leg 120. In: Wise, S.W., Schlich, R., et al., 1992. *Proc. ODP, Sci. Results, 120*. College Station, TX (Ocean Drilling Program).

Biostratigraphy in the Scientific Results volume.

1. For each of the standard microfossil groups for which the making of microscopic preparations is not excessively onerous, one sample per core section should be examined. Where desirable and feasible, additional groups such as palynomorphs should be worked in shore labs.
2. Each fossil group present in a sequence should be recorded in a tabulation of species abundances in all samples investigated. If abundances are not reported as absolute counts or estimated percentages, the ranges of percentages implied by the use of such categories as 'abundant', 'common', 'rare', etc. should be given. Unless the information available on a fossil group is too sketchy to justify a tabulation, records of species occurrences should not be presented in paragraphs of text.
3. Ages of assemblages will usually be given in terms of a scheme of biostratigraphic zones, or a series of datum levels (first or last occurrences of species). A bibliographic reference to the scheme used should be given, or if a published scheme is being applied in a modified sense, those modifications should be clearly stated.

Stratigraphic synthesis for each Scientific Results volume.

1. Each Scientific Results volume should contain a tabular stratigraphic synthesis showing, for each Site, the zones and events used for correlations of the cores obtained on the Leg. The concept of each zonal scheme represented should be identified in this table, even though this will normally have been done somewhere in the text as well.
2. For each Site in this synthesis table, a scale indicating the numbered cores should be included.
3. It will be helpful to later readers if uncertainties in the placement of zonal boundaries or events, or in their correlation with whichever data category is used as the unifying standard for the table, are shown as hachured intervals, rather than stretching the interpretation by representing them as thin lines. Ideally, uncertainties in the placement of zonal boundaries at a Site will be made clear in the special chapter dealing with each data type (fossil group, paleomagnetism, isotope, etc.), so that these can be evaluated separately from the cumulative uncertainties presented in the stratigraphic synthesis.