87-276
RECEIVED APR - 2 1987

Minutes of the Information Handling Panel Meeting

February 23 - 26, 1987

College Station, Texas

Members present: Daniel Appleman, Ted Moore, Jan Hertogen, Meirion Jones, Michael Latremouille, Judit Nowak, Alfred Loeblich, Michael Loughridge, Eric Moussat, Stefan Gartner (Feb. 23), Russell Merrill

Members absent: Ian Gibson, Raymond Ingersoll, Cristina Broglia

Guests (ODP): Patricia Brown (Data Base Group), Noble Fortson (Computer Services Group), Christine Mato (Curation and Repositories), and William D. Rose (Publications Group)

A. Report on last PCOM meeting

The Panel chairman presented a summary of the outcome from the last PCOM Meeting.

1. Regarding panel communications, three issues came up: a) liaisons, with the exception of S. Gartner, do not seem to be passing information effectively; b) panel chairmen should send minutes of meetings to all members; and c) all unsolicited communications to different panels should come through the JOIDES Office.

2. There is a concern that the desire to complete a certain number of circumnavigations is driving the Program. This desire

may result in too much work is being attempted, and scientific accomplishments are being affected. As a result the Indian Ocean and the Eastern and Western Pacific areas were selected as future drilling sites, where objectives would most likely be met. No work will be done on the Red Sea for the moment. R. Merrill pointed out that this is a concern that will most likely be discussed at COSOD this summer. Engineering efforts will be focused on bare-rock drilling and techniques for drilling alternating soft and hard rocks.

3. PCOM approved a motion to commend the DSDP staff for the manner in which completion of the Project is being handled. IHP notes that the commendation apparently hasn't been communicated to DSDP, and recommends that PCOM do so.

4. The funding situation would improve should the U.S.S.R. join the Program. However, questions have been raised by the U.S. Department of Defense. R. Merrill explained that the concerns involve the state-of-the-art computer equipment aboard the Resolution, that this objection should not be a problem that cannot be overcome, and that ODP hopes that the U.S.S.R. will be able to join us in our efforts.

B. Status of DSDP completion

D. Appleman talked with the staff at DSDP and is under the impression that everything should be completed by April.

1. Publications - R. Merrill reported that he visited DSDP in December to finish up his work with the indexing program. This program will not be completed by the end of April, and ODP

has agreed to take over the subcontract and supervise it to completion. The amount of work that ODP will have to do on the indexing program should be minimal. The subcontractor will deliver the index by mid-July. ODP has learned from the DSDP experience, and as a result the Proceedings volumes are now indexed individually as they are published.

2. Data Bases - R. Merrill reported that a lot of the computer effort was devoted to the indexing project because it was viewed as the one that required most time to complete. In any case, work on the data bases will be finished by the end of June. P. Supko, who is working for DSDP as a consultant, is writing a guide explaining how the task was accomplished.

The National Geophysical Data Center (NGDC), Texas A&M University, and the eighth Paleo Reference Center have been receiving the shipments of DSDP data, according to M. Loughridge, S. Gartner and R. Merrill. NGDC distributed announcements indicating how to get data, and the members of the panel indicated that they have received these.

E. Moussat and J. Nowak have not received the shipments of data. They asked what needs to be done and who needs to be contacted to correct this situation. M. Loughridge believes that their not receiving the data must have resulted from an oversight, or it was likely that the interest was not expressed. He pointed out that responsibility for distribution of the data should lie with DSDP. The NGDC will take over the responsibility after DSDP closes its doors. NGDC is exercising the tapes that it receives to verify that they are readable and that the data

seems reliable. E. Moussat and J. Nowak will contact L. Musich of DSDP to check on data shipment.

C. Report of the Downhole Logging Group

The report by C. Broglia was sent to all the Panel members together with the copy of the last meeting minutes. M. Loughridge confirms that NGDC has received all the DSDP data and data for ODP legs 101 through 105.

J. Nowak and E. Moussat asked whether they need to request a complete set or whether they can just ask for data as needed. It was the general consensus that Lamont should archive all logging data and that requests can be pursued individually. E. Moussat said that French scientists would like to explore the possibility of a low-cost, remote connection to provide on-line access.

In the letter that accompanied her report, C. Broglia suggested that some of the IHP members may be interested in attending a logging school concurrent with their next meeting at Lamont. T. Moore inquired which members of the panel would be able to attend such a school, and seven people responded positively. Some items that are of interest are on-board data generation techniques, data processing on-board vs. on shore, and problems with shipboard logging techniques. R. Merrill stressed the need for anyone who plans to attend the school to read the ODP Wireline Logging Manual. T. Moore will inquire about the possibility of holding the school on Sept. 9, and the meeting can be held Sept. 10-12.

The subject of the Data Bank is to be discussed further at

Lamont.

D. Status of micropaleo reference centers

L. Musich of DSDP has sent guides to each center, and she will send documentation to ODP regarding how guides were prepared. The diatoms section should be received from Japan during the early half of 1987. W. Riedel will need some monetary support to complete the work on radiolarians. The funds could come from USSAC or JOI. T. Moore will call Riedel and find out how much money is needed in terms of man-years and proceed to make the request. J. Saunders is preparing an information booklet.

S. Gartner commented that he is very pleased with the work that has been done in establishing the centers. IHP agreed to express commendation to J. Saunders for his work both as a Panel member and as one of the organizers of the centers. T. Moore and D. Appleman will communicate this resolution to J. Saunders.

R. Merrill suggested that a list should be published, probably in the JOIDES Journal, about the reference centers, where they are and what they do. ODP reference samples should not be included, as ODP is only holding the materials for the eighth center until a decision is reached regarding where it should be established.

E. Data-base development

Patsy Brown presented a report on the status of data-base development at ODP (see Attachment 1). All the data were

received (except for Leg 102, where none were collected), and the Data Base Group is in the process of incorporating them into a data-base-management system, S1032. In her report she included a list of the sets of data and their status. Chemistry data are now up to date in the computer, and routines to collect physical-properties and chemistry data directly on the ship are being completed and should be finished within the next 6 months. After data are incorporated into S1032, the group will proceed with the second part of the process, which is building connections between data sets and creating an index.

Data entry should be prioritized, with reliable data to be entered first, suggested D. Appleman. P. Brown talked with E. Moussat and defined a list in order of priority as follows: a) site summary and core depth, 2) screen - lithological classifications, 3) paleontology, 4) calcium carbonate, 5) sediment paleomagnetic data and hard-rock major and minor elements, 6) visual core descriptions for igneous and metamorphic rocks, and 7) x-ray mineralogy. T. Moore pointed out, however, that it would not be a problem if the Data Base Group needs to deviate from the order that Moussat indicated, and that the Group should continue as they see necessary.

F. Status of applications programming / Computer Services Group (CSG) staffing

N. Fortson presented the report of the Computer Services Group (see Attachment 2). He noted that at the previous meeting J. Foster submitted a FY87 hardware acquisition plan, which has

now been completed. N. Fortson stressed that the new hardware gave ODP more disk space and the ability to access files from either VAX. J. Foster's plan also called for a third VAX to accommodate increased work loads, though. This system has not been purchased and would really become necessary if on-line data bases are to be made available, and particularly after all the new programs are in place.

Software-development programs for the sample-inventory system, GRAPE, materials-management data, and physical-properties data are now almost finished, only about 2-5 months behind their initial estimated completion dates. Completion of these programs will allow double checking for quality of data and building indexes.

E. Moussat asked when data bases will be accessible on-line and what is being done to make the system user friendly. R. Merrill explained that it would not be difficult to establish a telephone connection. Also forthcoming is the possibility of linking our systems to Ethernet, but we are not sure of the time constraints yet. When that is done those data bases that are in the system should be accessible. However, this poses two questions: how many people will really use the on-line system to justify the amount of effort that is needed to implement it, and, if there is interest in its use, what will be the impact on the response time of the two VAXes? Furthermore, the CSG will be devoting its time to other areas considered to be of higher priority. M. Loughridge agreed with the latter, commenting on the fact that the NGDC has experienced offering access to their

data bases and having had only one request. He strongly suggests that the need for placing data bases on-line should revolve around the internal requirements.

Because at least one replication of the data (for France) will be eliminated, T. Moore felt that the effort to implement on-line data bases would be worthwhile. It was the Panel's consensus that this project should be pursued in two stages: a) train several of the members of the IHP, who would then act as contact points for their countries/areas and see what needs develop, and b) train others as the need arises. The Panel will help by strongly recommending increasing the programming staff so that on-line search capabilities, as well as other tasks whose completion is highly desirable, can be accomplished (see attachment 2A).

N. Fortson prepared a list of the CSG projects that cannot be completed in reasonable time with the present level of staffing, and the Panel reviewed it. R. Merrill suggested that the member countries could help by providing visiting scientists/programmers at no cost to the Program. T. Moore prepared a draft statement (see Attachment 3) and all panel members will review it and submit their comments to him.

A small demonstration of how S1032 works will be presented to the Panel members at the end of the meeting. P. Brown will prepare an information guide on the contents of and how to use the data bases that are currently on line. She will send this guide, together with information on where to buy documentation for S1032, to T. Moore, who will then distribute the material

among interested Panel members.

G. Shipboard/repositories - sampling

C. Mato submitted the report on the status of the repositories (see Attachment 4). Staffing is now complete. The core-maintenance program has continued, with 4 man-years left of work at the West Coast Repository and 1 year at the East Coast Repository (including photographing the cores).

Per D. Appleman, PCOM seemed pleased by the statement, in the Sample Distribution Policy, to the effect that the staff scientist will make final decisions regarding shipboard sampling. R. Merrill and C. Mato said that the policy seemed to be working well, except when co-chief scientists accepted requests for more samples than can be taken on the ship. As it is, the policy provides enough flexibility to accommodate the needs of a particular cruise, if pre-cruise planning is effective.

A question was raised by C. Mato regarding discontinuing sample distribution to persons who have a record of non-compliance with the obligations that derive from sampling as cruise participants. The Panel agreed that the best way to handle this problem is on a case by case basis. C. Mato was asked to prepare a list of persons in this category and the status of each of their sample requests. The list will be submitted to PCOM, who should decide what action will be taken in each case.

H. Publications Group report presented by Bill Rose

This report (see Attachment 5)was accepted with commendations from the Panel for the quality of the Leg 101/102 Initial Reports volume of the Proceedings that was published. The effort being put forth to overcome the delays caused by the initial delay of funding for this group was also mentioned. The facts that ODP was able to choose the typesetting and printing subcontractors and that R. Silk, ODP's Chief Production Editor, is in close contact with the printers were cited as being directly responsible for the high quality of the photographs published. All of the above, the Panel concluded, strengthens the case that ODP made for in-house control of production.

Several questions arose for which the following clarifications were provided by R. Merrill and B. Rose.

The 36-month target date for production of the Part B volume for each leg was arrived at by adding the length of time that it would take to go through the following steps: research after the cruise (18 months), review cycle (4-6 month), preparation of synthesis chapters (2-4 months), and review, editing, production and distribution (8 months).

Indexing is being subcontracted because we get a good product at a reasonable cost from a group that already has expertise in performing this task. It is also difficult to keep a full-time employee performing this task book after book. Indexing will continue to be done book by book, with the data being fed into a computerized system for on-line access. This will provide easy access to a cumulative index. We are hoping that the on-line system will be adequate until the need arises to

print hard copies of the cumulative index. Originating copy for typesetting and printing could then be done directly from the on-line system.

ODP has microfiche and microfilm copies of DSDP Volumes 1 through 44, and copies can be supplied upon request. Arrangements will be made to make the rest of the DSDP and ODP volumes available in the same formats. The cost of producing each copy is approximately $5. Availability is currently being advertised through the JOIDES Journal and other scientific journals.

The lessons learned from DSDP are being used in production of the ODP Proceedings, and are of much help. However, some differences between the DSDP and ODP volumes were pointed out by R. Merrill. These are mostly in the way the data are gathered and presented for hard-rock and thin-section descriptions. The changes made in these areas should result in more consistency and were received with enthusiasm by the Legs 106 and 109 scientific parties.

I. Re-entry

The number of holes left behind by the Ocean Drilling Program is increasing rapidly. At the same time the technology that allows wireline re-entry from surface vessels is advancing at a fast pace. The concern, as explained by R. Merrill, is to be able to have the complete history of the holes so as to be able to use it in the future. We have no property rights over these holes, and we can only request cooperation. However, it

can only be beneficial to anyone interested in re-entering these holes to be able to know what kind of problems that might be encountered when doing so.

A possible solution would be to establish a center of coordination at ODP. Those interested in entering the hole would get full disclosure of all the information regarding the hole in exchange for new data acquired during the wireline re-entry.

E. Moussat reported that France has a great interest in this subject because their technology is highly advanced with respect to wireline re-entry. He will consult with his colleagues and come up with a list of recommendations regarding exchange and centralization of information, which he will send to T. Moore.

R. Merrill also explained that there is a possible solution, should violations of agreements on this subject happen, and mostly to protect the interest of the Program in those cases where we are certain of the need for re-entering the hole. That would be plugging the holes. However, up to now ODP has only taken this step in cases where the environmental hazards justify it, and it would be best to keep doing it this way. Plugging the holes should only be an extreme measure. Also, wireline re-entry most likely would be attempted by member countries, so difficulties shouldn't arise.

After E. Moussat submits his recommendations, T. Moore will put together a list of guidelines for centralization of information regarding re-entry, and this list will be submitted to PCOM. M. Loughridge suggested that the guidelines be presented in terms of international interest, which would make

those affected most likely to comply.

J. Sediment classification

A. Meyer was present to discuss this subject. She explained that the new classification was needed to be able to address the description of sediments that had not been encountered before. The classification also clearly separates major and minor modifiers and clearly identifies them. This will make working with the data bases much easier.

When the new classification was compiled, Audrey explained, it was submitted to PCOM and SOHP. SOHP responded with a few minor corrections, which have been incorporated, and the new version is ready for the next meeting of the SOHP in March. We expect that it will be accepted, and from there it will go to PCOM.

The main concern voiced by the Panel members was the difficulty that a new classification would create when trying to correlate data from DSDP and ODP legs, particularly for synthesis studies. A. Meyer explained that such a task is not easy to attain in any case, because the DSDP data were not consistent. We are trying to have ODP data collection follow a standard format that would provide continuity from leg to leg and facilitate correlation of data. The new format should also be more appropriate for use with computers. One way to facilitate synthesis studies would be to answer each request with both data and an explanation on the standards and procedures for gathering them.

The Panel members agreed that the sooner a standard system is decided upon, the fewer the ODP legs that will be inconsistent. Redoing the mapping between DSDP systems and ODP to make the DSDP descriptions match the standards of ODP's, though time consuming, is not unreasonable, according to A. Meyer.

K. Reference citations

The panel requested information from S. Gartner as to what PCOM's position is regarding ODP's policy to recommend citing the staff scientist as the third author for the Proceedings volumes. S. Gartner explained that it is his impression that PCOM wants a clarification of the role of the staff scientist.

A. Meyer and R. Merrill said that this recommendation is only ODP's way of recognizing the tremendous amount of effort that is required of the staff scientist in the preparation and production of the Proceedings volumes. The suggested placement of the staff scientist as third author in the recommended citation would not elevate the staff scientists to the category of co-chiefs, but it does recognize that their level of work is more than that of the other cruise scientists. This system was instituted by DSDP for later legs; and up to now, co-chief scientists have not had any difficulty with it.

All panel members agreed that, though an emotional issue, this recommendation is not aimed at damaging anyone's reputation, and instead serves an honorable purpose. IHP unanimously approves the recommended citation as it was proposed by ODP. It

should be kept in mind that this citation recommendation is not binding in any way on authors who cite the Proceedings in other publications.

L. Site-survey data / drilling data in site-survey chapters

The issue is one of assigning credit properly, indicates A. Meyer. The participating scientists want to have site-survey data in the Part A volumes of the Proceedings because they are a critical part of scientific data. However, site-survey authors have the right to publish their papers in either Part A or B of the Proceedings.

It has been requested by ODP that papers which contain significant amounts of interpretation be submitted before the post-cruise meeting. This would allow for review of the papers and incorporation of drilling data where necessary. This procedure has been tested, and, within some constraints, it is possible to complete such manuscripts in time for publication in Part A volumes.

Should a paper not be ready for publication in a Part A volume, the data should be made available for use in interpreting drilling results. In this case, appropriate recognition should be made, said M. Loughridge.

A question raised by T. Moore was whether the data may be interpreted and published by someone other than the surveyors. R. Merrill replied that it is an up-front requirement that data be available to the shipboard party.

A memorandum was submitted by R. Merrill explaining the

issue. M. Loughridge suggested that R. Merrill elaborate on establishing two-way recognition between surveyors and scientists, and the Panel accepted the memorandum after this change (see Attachment 6).

M. Use of archive halves

D. Appleman read an excerpt from a letter from N. Pisias, in which Pisias expressed PCOM's concern regarding the "sacredness" of archive halves. Based on the kinds of measurements referred to in the letter, it was the consensus of the Panel was that the concern must be related to whole-round samples taken during a cruise.

A policy regarding whole-round sampling was discussed and approved at the last IHP meeting. The bottom line in that policy is that sampling will be done according to the nature of each cruise and is ultimately up to the discretion of the co-chiefs. This emphasizes the need for stratigraphers, sedimentologists and geochemists to work together on a sampling plan in the preparatory stages of the cruise.

The Panel reiterated their conviction that the policy has adequate built-in flexibility, and T. Moore will notify PCOM of this decision.

N. Other

1. P. Cepek was answering requests for Mesozoic paleontological data from DSDP legs. Is his system being

updated? R. Merrill should get tapes with data and future updates from him. J. Nowak agreed to communicate this to Cepek.

2. R. Merrill presented the possibility that a request may be forthcoming from IUGS for ODP to provide data for preparation of circum-Atlantic time-slice maps. He said that ODP is ready to provide data if it doesn't involve a major effort and that if IUGS reimburses ODP for the cost of the tapes necessary to fulfill requests. D. Appleman cited the previous meeting, during which it was agreed that L. Musich would send tapes. Per Lillian, the tapes were sent as requested. R. Merrill explained that he thinks that the request may still be made from ODP and wants IHP to be aware of this possibility.

3. In response to the need for some intellectual entertainment aboard the Resolution, ODP is experimenting with a system by which news updates are sent to the ship via Satcom on a regular basis, said R. Merrill. This is a 3- to 5-page report, and contributions from any member country would be appreciated. This would complement the news being received from the Associated Press, in whose reports Europe, for example, is not well covered.

4. M. Latremouille expressed concern regarding acquisition of appropriate information on upcoming legs in

time for proposals to be put together.

Cruise prospectus cannot be used as the source, said M. Loughridge, because it is normally published too late. R. Merrill said that we only get a list of suggested co-chiefs about 3 months before each cruise, which leaves very little time to obtain acceptances and prepare prospectuses on time. Another avenue, though, would be to access Telenet's news updates/ bulletin boards, which contain the ship's schedule as far ahead as our plans cover. R. Merrill will ask L. Garrison to investigate expanding electronic bulletin boards.

T. Moore indicated that what is really needed is a listing that includes leg numbers, sites and co-chiefs. Such a listing would allow other scientists to present proposals. R. Merrill said that notices are supposed to be placed with scientific journals by JOI, but this has happened only once. T. Moore will contact JOI and request that ODP be nominated to take care of this in the future. If he can't get JOI to agree, then JOI should place the notices at least 4 months before each cruise.

5. There appears to be a problem with the distribution of the JOIDES Journal, said E. Moussat, because ESF representatives are not getting it. T. Moore pointed out that the issue that ESF did not receive was the one that was published at the time of the transfer of the JOIDES office to Oregon State University. He will call the problem to the

attention of N. Pisias, though.

6. J. Nowak requested that the reports to the Panel be sent by mail so that the members can have them for review at least a week before the meeting. E. Moussat said that besides this, it would also be good to have an agenda. An agenda for the September meeting was proposed by T. Moore, a few modifications were added by the other members, and changes will be made as the meeting approaches (see Attachment 7).

O. Report on status of data base at NGDC

The following report was presented by M. Loughridge.

1. The promised Sedimentary/Physical Properties Techniques manual was published. A total of 2,000 copies were printed, and only about 400 copies have been distributed. Printing costs were recovered.

2. Pacific stratigraphic sections will be published shortly. Only 500 copies will be printed because these are descriptions at the level of the Initial CoreDescriptions that were published by DSDP which will become outdated as soon as the ship goes back to the pertinent area.

3. The Center has purchased a CD (compact diskette) ROM reader. It has a capacity for storing 500+ megabytes, and production of the software is under contract. M. Loughridge feels that this is a very good medium for dissemination of stable data bases, but it has disadvantages when data have

to be continually updated, and he does not recommend it for permanent archiving. A reader costs about $800, and some reader programs provide access to DBASE, Lotus 1, 2, 3 and other data base systems.

4. Concern was expressed as to the manner in which the IHP could have an impact in making sure that ODP's site-survey data are being used to serve the interests of the scientific community. The system of data distribution is perceived as working smoothly, getting data into the data bank and making them readily available to the co-chiefs, according to T. Moore. D. Appleman indicated that the Site Survey Data Bank was supposed to fulfill a need for archival requirement but is instead becoming another data-distribution center. R. Merrill feels that a problem with distribution of data from Site Survey Data Bank may be lack of staff, and the demands that the co-chiefs and general public place on it. Besides, data from the Data Bank is available in paper form, and co-chiefs need to have access to computerized data. Lamont is the only center cited in the JOIDES Journal as the ODP data bank, which is incorrect. Data should be going to M. Loughridge after they have been received at Lamont. All data used in proposals for site selection should be in the public domain.

ACTION ITEMS

ALL MEMBERS: Review priorities for development of science programs / data bases (refer to attachment 2A).

C. Broglia, R. Merrill, T. Moore:
Send reports 3 weeks prior to meeting.

M. Latremouille: Send pamphlet guide to writing English reports for scientists whose first language is not English to R. Merrill.

M. Loughridge: Send copy of DSDP prime data to ODP.
Check with J. Saunders will need funds for completion of his work.
Use of DSDP data from UGS.
Send index on DSDP data to M. Jones.

P. Brown and R. Merrill:
Prepare guide on how to use on-line data bases, send to T. Moore together with information on how to purchase documentation for S1032.

C. Mato: Prepare and submit to PCOM a list of people with record of non-compliance with obligations

deriving from sampling as cruise participants. PCOM will decide on action to be taken in each case.

R. Merrill: (Via L. Garrison) Investigate expanding electronic bulletin board.

Get P. Woodbury to send notes/tapes on preparation of index.

E. Moussat: Gather comments from French scientific community regarding exchange of information acquired during wireline re-entry. Send comments to T. Moore.

E. Moussat and J. Novak:

Contact L. Musich DSDP to request the data they haven't received.

J. Novak: Contact J. Saunders and request brochure on Micropaleo Data Bases, and send copies to JOIDES office.

Contact P. Cepek requesting that he send Cretaceous micropaleo data bases to ODP; determine if he will continue to provide this service.

A. Loeblich: Review spelling list of species. Send brochure

on his book to W. Rose.

T. Moore: Request logging workshop at Lamont in connection with next meeting (tentative date is 11 Sept.).

(With D. Appleman) Send letter of appreciation to J. Saunders.

Make sure that wireline logging manual reaches of IHP members.

Call W. Riedel regarding funds needed for completion of work on rads, then request funds from USSAC or JOI.

Put together list of recommendations on wireline re-entry using input from other panel members (particularly E. Moussat). Submit recommendations to PCOM.

Ask JOI whether ODP can take care of placing notices regarding upcoming cruises in scientific journals. If JOI wants to continue to do this, notices should be placed at least four months before each cruise in order to allow preparation of proposals for sampling.

Contact N. Pisias and make sure that ESF representatives are in the distribution list for the JOIDES Journal.

Write to C. Broglia and D. Hayes on subject of IHP's interest in the data bank being a

long-term archival center as well as distributing data to the scientific community. R. Merrill asked to add ODP's concern about the need for a link between ODP and the Data Bank.

ATTACHMENT 1

February 17, 1987

TO: Members of the Information Handling Panel

FROM: Patricia Brown
Data Base Supervisor

SUBJECT: Data Base Group Status Report and Upcoming Activities

The following report reviews the status of the Data Base Group (DBG) since the last IHP meeting and outlines the projected activities for the next 6 months and 12 months.

As in the past, the Data Base Group (DBG) is still concerned with quality control in archiving the data, whether on paper or computerized, in transferring the paper collected data into our computerized data base management system S1032, or the incorporation of the DSDP data into the ODP collection. With the help of the Computer Services Group (CSG), the DBG has continued to create the computerized data base to house the data collected by ODP and DSDP and create the data entry screens for shipboard computerized data collection.

The 12 month moratorium for public access to the data from Legs 101-107 has passed. Data requests continue to be quickly and completely answered.

DATABASE PROGRESS TO DATE

I. Personnel

With several new hires since the last IHP meeting, the DBG is presently staffed and moving ahead with data editing and computerization. An Assistant Data Base Supervisor, with a background in igneous and metamorphic geology, was hired at the end of August, so work is again in progress on the igneous/metamorphic data base.

Our Data Entry person, responsible for entering the back log of data recorded on paper forms, accepted a position in Publications in early October. A new Data Entry person was hired in late December, with little interruption in data entry.

A geology graduate student began working half time with the DBG this January. He is currently writing programs to enhance the Sediment/Sedimentary Rock Smearslide/Thin Section Description Data Base. The hiring of another half time gradute student is being considered for later this spring. This student would work on cleaning up and processing the Thermal Conductivity and G.R.A.P.E. computer files.

II. Present Status of ODP Data Bases

Table 1 is a listing of the data bases archived by the DBG and their current status. The DBG has continued to process and microfilm all data received from the ship on paper forms, and make both paper and microfilmed data available to the public. As of this writing, data has been received, processed and microfilmed up to and including Leg 111. (No data were collected by ODP on Leg 102, except Underway Geophysical data and Downhole Heatflow data.) The Leg 112 data were received last week and are currently being processed.

Since the last IHP meeting, work has progressed steadily on the computerized data bases archived by the DBG. With the help of CSG, we have focused on completing the activites outlined in our last report to IHP (Memo to IHP, June 25, 1986). Preliminary designs for the data bases and computerized shore data entry screens for Sedimentary Visual Core Descriptions and Igneous/Metamorphic Visual Core Descriptions and Thin Sections were completed and submitted for review to the CSG. Improvements were made to the shipboard data collection program for Paleomagnetic Discrete Sample data. These improvements will facilitate the transfer of the Paleomagnetic data files to the S1032 Paleomagnetic data base. Cleanup of the back log of Paleomagnetic data files and the transfer of the data files into S1032 data bases were completed for several legs. Please refer to Table 1 to see which Legs have been transferred. Work was begun on the cleanup of the G.R.A.P.E. computer files. The Leg 108 files are processed and awaiting conversion into the S1032

format.

A review of the Corelog data base identified the need for several user friendly programs to facilitate searches and retrievals.

The DBG has also been actively assisting the CSG in trying to complete the computerized data entry screens and data bases for the Physical Properties data bases (including Index Properties, Compressional/Shear Wave Velocity, G.R.A.P.E. Special 2 Minute Count, and Shear Strength); the Leg, Site, and Hole Summary data bases (including the design of the Site Summary Report); and the Chemistry data bases (including CaCO3, Carbon, Rock Evaluation, Gas Chromatography, and Interstitial Water).

The editing and keyboarding onshore of data recorded on paper forms has reached "steady state" for most of the Chemistry data bases and is progressing well for the other data bases. Please refer to Table 1 for the current status of data in S1032 data bases.

III. DSDP Data

The DBG has received one more finalized digital data base, the G.R.A.P.E. data base, from DSDP since the last report. The final versions we have received to date are:

- XRD
- Carbonate
- Vane Shear
- Sonic Velocity
- Grain Size
- Density/Porosity
- Paleontologic Data (Legs 1-82)
- G.R.A.P.E.

Only the XRD data base has been converted into a S1032 data base.

Although the final versions have not been received for the following DSDP data bases, they have been temporarily converted into S1032 data bases for inhouse use:

- Site Summary Report
- Core Depth
- Sediment Visual Core Description.

IV. Data Requests

One of the major activities of the DBG is to answer data requests from the scientific community. To date the Data Librarian has responded to 96 requests outside of those from ODP staff members.

Request Type	Number of Requests
Photos	73
Sediment Description	8
Leg, Site, Hole Summary	4
Paleomagnetics	3
Corelog	2
Physical Properties	2
Underway Geopysical	2
Chemistry	1
Sediment Smearslide	1

V. Miscellaneous

To improve our knowledge of the data base management system S1032, the DBG, with the help of CSG, held 2 inhouse S1032 classes. One was a beginner S1032 class taught by a member of CSG in which the basics of S1032 were reviewed. An advanced S1032 class, which included advanced report writing, was taught by a S1032 instructor from Software House, Inc.

BASE	LEGS ON PAPE' MICROFILM	LEGS IN COMPUTER	IN S1032 FORMAT	SHIPBOARD COLLECTION METH
Corelog	101-111	101-111	yes	M
Leg, Site, Hole Summary	101-111	101-111	yes	P
Sediment/Sedimentary Rock				
Visual Core Descriptions	101-111	--		P
Smearslide/Thin Section	101-111	101-104	yes	P
Igneous/Metamorphic Rock				
Visual Core Descriptions	103-106, 109, 111	--		P
Thin Section Descriptions	103-106, 109, 111	--		P
XRF	109, 111	--		P
Physical Properties				
G.R.A.P.E.	--	101-111	no	D
Thermal Conductivity	101-105, 107-111	101-111	no	P & D
Compressional/Shear Wave Velocity	101-111	--		P
Index Properties (Bulk density, Porosity, Water Content, Grain Density)	101-111	--		P
G.R.A.P.E. Spec. 2 Min. Count	101-111	--		P
Shear Strength	101-111	--		P
Atterberg Limits	-no data-			
Consolidation/Triaxial Log	-no data-			
Down Hole Tool Data				
Heatflow from HPC Coring Shoe	--	102, 104-105, 107-109, 111-112	no	P & D
Pressure and Temperature from the Barnes Tool	--	110-112	no	D
Chemistry				
Rock Evaluation	101-111	101-111	yes	P
Carbon	101-111	101-111	yes	P
CaCO3	101-111	101-111	yes	P
IW	101-111	101-111	yes	P
Gas Chromatography	101-111	--		P
Paleomagnetics				
Discrete Samples	101-107	101-110	yes	D
Whole Core Samples	--	(even Legs)	yes	D
		(odd Legs)	no	D
Susceptibility	101-107 (Discrete Only)	101-110 (no data for 109)	yes	D
Paleontology	101-111	--		P

Underway Geophysical--Legs 101-108, 110 processed by Stu Smith, Legs 101-111 computerized and on paper forms and roll records.

* P = Paper
  M = Manually entered onto a computerized screen form
  D = Direct capture of computer generated data by the VAX

PROJECTED ACTIVITIES FOR THE NEXT 6 MONTHS AND 12 MONTHS

I. 6 Months

The following activities are scheduled to be completed by the end of August, 1987.

1. Data Base Design

a. Completion and implementation of the data bases and computerized shore data entry screens for Sediment Visual Core Descriptions, and Igneous/Metamorphic Visual Core Descriptions and Thin Sections.

b. The initial design of the data bases for G.R.A.P.E. and Thermal Conductivity data.

2. Shipboard Computerization of Data Collection

a. The completion and implementation on the ship by the CSG of the computerized data entry screens and data bases for;
- -Physical Properties data bases, including Index Properties, Compressional/Shear Wave Velocity, G.R.A.P.E. Special 2 Minute Count, and Shear Strength
- -Leg, Site, and Hole Summary data bases, including the design of the Site Summary report and documentation

b. Continued work by CSG on the Chemistry data bases, including CaCO3, Carbon, Rock Evalulation, Gas Chromatography and Interstitial Water.

3. Data Base Cleanup

a. Complete the transfer of the Paleomagnetic data files into the S1032 data base for all the odd numbered Legs.

b. Continue renaming to a standardized format and processing the G.R.A.P.E. and Thermal Conductivity data files collected on the computer for Legs 101-106.

c. The completion of several user friendly programs to facilitate searching and retrieving data in the Corelog data base and the Sediment/Sedimentary Rock Smearslide/Thin Section data base.

d. Begin the transfer of the XRF data into the S1032 data base.

e. Complete the design of a scheme for the cleanup of the Downhole Data Tools data files.

4. Editing and keyboarding onshore the data for the following

data bases and Legs:

Data Base	Legs
Sediment Smearslide	105-108
Chemistry	112-115
Leg, Site, Hole Summary	112-114
Sediment Visual Core Description	101, 103
Igneous/Metamorphic Visual Core Description	103-106
Igneous/Metamorphic Thin Section Description	103-106
Physical Properties Compressional/Shear Wave Velocity, Index Properties, G.R.A.P.E. Spec. 2 Min. Count, Shear Strength	101

5. Processing of Underway Geophysical data by Stu Smith for Leg 109, 111-114.

II. 12 Months

The following activities should be completed by the end of next February, 1988.

1. Data Base Design

a. Completion of a design for the programs and data bases needed to generate ODP's input to the Core Curators' file for the National Geophysical Data Center (NGDC).

b. Completion and implementation of the data bases for G.R.A.P.E. and Thermal Conductivity data.

c. A preliminary design of the data base for Paleontology data.

2. Shipboard Computerization of Data Collection

a. Completion and implementation by the CSG of the computerized data entry screens and data bases for the Chemistry data base including $CaCO_3$, Carbon, Rock Evaluation, Gas Chromatography, and Interstitial Water.

b. Completion of a preliminary design for the computer entry screens for the Sediment/Sedimentary Rock Smearslide/Thin Section Description.

3. Data Base Cleanup

a. Complete the renaming to a standardized format and processing of the G.R.A.P.E. and Thermal Conductivity data files collected on the computer for Legs after 106.

b. Complete the transfer of the XRF data into the S1032 data base.

c. Implementation of the scheme for the cleanup of the Down Hole Tools data files.

4. Editing and keyboarding onshore the data for the following data bases and Legs:

Data Base	Legs
Sediment Smearslide	110-118
Chemistry	116-118
Sediment Visual Core Description	104-108
Igneous/Metamorphic Visual Core Description	109, 111-118
Igneous/Metamorphic Thin Section Description	109, 111-118
Physical Properties	103-114

5. Processing of Underway Geophysical data by Stu Smith for Leg 115-117.

6. Incorporation of the following DSDP data bases into the ODP collection:
   Site Summary Report
   Coredepth
   Sediment Visual Core Description
   Smearslide Description.

III. General Activities

Over the next year, as time permits, we will continue to proceed with the following activities:

a. Completion of documentation explaining the contents and format of each data base as it is readied for public access. This will aid requestors in the use of the ODP data bases.

b. Turning over to NGDC our completed data bases. Our first priorities for NGDC will be the Site Summary Report and the Core Curators' file.

c. Although at present several data bases can be searched and reports generated, the final edit checks have not been made. We are awaiting the completion of the batch edit checks designed by CSG.

d. Finally, the DBG along with CSG will be setting up the tape storage library to archive data stored on computer tapes.

ATTACHMENT 2

OCEAN DRILLING PROGRAM

COMPUTER SERVICES GROUP

STATUS REPORT TO THE INFORMATION HANDLING PANEL

February 23, 1987

Prepared by
Noble Fortson, Senior Programmer
on Behalf of
Jack Foster, Supervisor

Summary

The same format has been used as for the previous status report. Attachment A presents significant accomplishments and plans of the Computer Services Group (CSG). Attachment B provides a detailed report on software and system management activities and the allocation of CSG personnel. Attachment C shows present hardware configurations, with indications of equipment added in FY87, and configurations proposed for FY88 and FY89 in the long range hardware plan accepted by JOI.

Despite the addition of a consultant, a senior programmer, and a half-time graduate student research assistant, CSG is still seriously understaffed. The programmer and the research assistant are committed to administrative systems and underway geophysics systems, respectively. As these are responsibilities newly undertaken by CSG, these two people do not contribute to reducing the backlog. Another senior programmer position has recently been made available, but the position has not yet been filled.

Five major software systems which were in the early stages of requirements definition and design at the time of the July IHP meeting are now in the late stages of programming and testing. These are the motor control software and other enhancements for the new GRAPE apparatus; the Shipment, Order, and Vendor processing modules of the Materials Management system; the Sample Investigations data base maintenance system; the Physical Properties data collection system; and the Leg-Site-Hole data base maintenance system. In our July report we projected that these systems would be completed by the end of 1986; actual completion dates will range from February to May, 1987. Project completions have been delayed principally by expansion of requirements and secondarily by the demands of many other miscellaneous tasks.

Most of the work on these projects, and most efforts of CSG to date, have been directed toward acquiring and editing data of one or a few types. The Leg-Site-Hole and Sample Investigations data base maintenance systems represent a beginning of the process of cross-checking, reformatting, organizing, and indexing data types into an integrated ODP data base. With the completion of the five systems mentioned, this process will gain momentum during the spring of 1987. Data will be integrated in a top-down process, from Leg, Site, and Hole data sets, through the Core Log and Core Sample Inventory data sets, to test result data sets such as Physical Properties.

The equipment approved by JOI for FY87 has been acquired and installed. The additional disk and tape drives acquired for the shore based VAXes have provided much needed mass storage capacity. The cluster configuration has simplified distributing files over the disks and accessing them from either CPU. It is expected to improve I/O performance somewhat but to require approximately 5% - 10% of the CPU cycles for cluster overhead.

The third VAX CPU for the shore based system, proposed for either FY87 or FY88 in the plan accepted by JOI, has not yet been acquired. The two CPUs now on line are sometimes overloaded, with a noticeable degradation in response time. The new software under development and use of the integrated data base will, when operational, probably require the third machine.

ATTACHMENT A

FY88 PROGRAM PLAN FOR CSG

The following was submitted as input for the CSG section of the FY88 Program Plan. In addition to the accomplishments noted here for the period October 1, 1986, through September 30, 1987, three persons were added to the CSG staff between July 1, 1986 and September 30, 1986:

(1) ODP contracted with independent consultant Ed Garrett for software development for a minimum of one year.

(2) Floyd Lightsey was hired as a Senior Programmer funded half by CSG and half by Administration. For at least the first year he will be committed exclusively to the administrative accounting, budget, and capital inventory systems.

(3) Graduate student Mark Benson was hired to work half-time as operator/systems manager/maintenance programmer for the MASSCOMP underway geophysics hardware and software.

Accomplishments for FY 1987

Program Plan objectives which have been or will be achieved during FY 1987 are listed as in the FY 1987 Program Plan:

i. Work has continued toward building integrated data bases for ODP and DSDP data. It is anticipated that by the end of FY 1987 all DSDP data will have been received; some will have been loaded into ODP data sets in final form. ODP Leg, Site, Hole, Core Log, Core Sample Inventory, Physical Properties, Chemistry, Smear Slide, and Thin Section data accumulated during calendar years 1985 and 1986 will be completely edited and loaded into data sets. Some search and retrieval programs will be in place.

ii. Requirements definition and preliminary design work is underway for a system to monitor processing of ODP publications.

iii. Data collection systems for Chemistry and Physical Properties data (see iv) will have been installed by the end of FY 1987. Requirements definition will be completed, and design underway, for a real time navigation system for shipboard use.

iv. The new GRAPE apparatus with associated new hardware and software has been installed aboard ship. A Physical Properties data collection system for strength, velocity, and index properties data will have been installed by the end of FY 1987. Requirements for interfacing the new heatflow instrument with a Physical Properties Laboratory microcomputer will have been defined.

v. The art stations have been interfaced with the DI3000 graphics package and are being used for barrel sheet drafting. Production of technical illustrations on the art stations will be operational by the end of FY 1987.

The Vendor File Update and Order and Shipment Processing modules of the Materials Management (MATMAN) system will have been installed on shore and aboard ship.

Maintenance of data bases to record and track sample requests and related publications will have been implemented. DSDP sample request and publications data will have been loaded.

vi. A course on S1032, a data base management system used by ODP, was taught for users by CSG and was followed by an advanced S1032 course taught on site by a S1032 representative. Courses on major ODP systems software packages will have been organized.

vii. Shipboard courses to provide introductions to word processing, graphics, and Core Sample Inventory data collection software have been organized and are being offered routinely at the beginning of each leg.

viii. Addition of two sea-going computer operators to extend support to scientific staff aboard ship was not approved but is still needed.

ix. An additional shore-based programmer will have been added to the CSG staff.

x. Hardware upgrades approved by JOI for CSG for FY 1987 have been installed. CSG will have provided assistance and oversight in installing new hardware and software procured by Texas A&M Research Foundation for administrative users.

xi. The statistical software packages SAS and MINITAB have been acquired and will have been installed aboard ship and on shore. A number of software packages for the IBM PCs have been evaluated and procured.

xii. Procedures have been installed to monitor and route satellite communications messages.

Objectives for FY 1988

i. Complete editing of all ODP machine readable prime data accumulated during calendar years 1985 - 1987 and loading of it and DSDP data into data sets as required. Define required reformatting, cross-linking, and indexing of data and begin implementing these for public on-line access. Begin requirements definition, design, and implementation for data analysis software as required.

ii. Complete implementation of the publications tracking system.

iii. Shipboard software goals:

Remove section data from the Core Log into a separate Section Log data set. Design and implement requested revisions of Core and Section Log data base maintenance.

Continue implementation of computerized forms based data collection systems where required aboard ship.

Continue providing software to interface dedicated microcomputer systems aboard ship to the VAX for data transfer where required.

Implement and install P-wave Logger software revised and enhanced to run on an IBM PC.

Complete implementation of a real-time navigation system aboard ship.

Begin requirements definition and design for the Core Description Station.

iv. Shore-based software goals:

Complete requirements definition, design, and implementation for all modules of the Core Sample Inventory system (shore and ship).

Implement bar code hardware and software systems and procedures where required (shore and ship).

Complete installation of administrative hardware and software.

v. Offer additional courses on shore and aboard ship. Present additional informational material on CSG activities, facilities, and user aids through the ODP newsletter. Provide timely assistance to users of ODP computer facilities.

vi. Add two sea-going computer operators as requested in the FY 1987 Program Plan.

Vii. Proceed with hardware upgrades approved by JOI for FY 1988.

viii. Continue to evaluate and procure useful and cost effective off-the-shelf software.

ATTACHMENT B

PROGRAM AND PERSONNEL DESCRIPTIONS, STATUS, AND PLANS

The following material was prepared for a status report to the JOI Executive Committee in September, 1986. It in turn was based on ATTACHMENT B of the June, 1986, status report to IHP. Appropriate updates have been made.

Summary and Status of CSG Products and Personnel

CSG products consist of (1) deliverable systems and (2) systems management and operations services. The Supervisor of the Computer Services Group is responsible for hiring, managing, and evaluating CSG personnel; planning and procuring computer and telecommunication hardware and software; and working with other ODP Managers and Supervisors and with JOI and IHP review panels to achieve the data processing goals of ODP.

I. Deliverable systems

Systems are developed in response to ODP contractual obligations and requirements of other ODP departments. Because these are production systems supporting essential operations, they must be thoroughly planned, designed, tested, and documented. CSG follows well defined standards for requirements definition, design, coding, and instruction manuals. Consultants commissioned by CSG are required to follow the same standards.

A. Systems and projects

1. Core Log

   The Core Log system was one of the first installed aboard ship because of its central importance for reference by all core data systems and by several operational groups. Some enhancements are desirable but are not yet scheduled.

2. Core Sample Inventory

   This system catalogues physical samples taken and materials on hand and associates them with source cores and with sample recipients. It is referenced by the test result systems. A partial version is operational aboard ship, running on a microcomputer. Features remaining to be implemented include linkage with the central Core Log and Core Sample Inventory data sets on the VAX and tracking of sample material on shore. Requirements Definition and Design documents are being prepared.

3. Core Sample Test Result Systems (physical properties, chemistry, XRF-XRD, magnetics)

   Data acquisition for most of these systems is handled by turn-key software coupled with instrumentation; the data is accumulated in microcomputer files and then transferred to the VAX.

   The GRAPE apparatus is coupled with a microcomputer via an

IEEE-488 interface for real-time data acquisition. Software providing more sophisticated motor control, two minute discrete GRAPE support, and hooks for links to the VAX has been developed by a consultant and has just been installed aboard ship. Implementation of algorithms for rescanning selected portions of sections at different speeds is required but not yet scheduled.

At first it was planned to attach the P-wave logger apparatus to the GRAPE track and drive and add routines to the GRAPE software to control and acquire data from it as well. However, space limitations prohibit mounting the P-wave logger on the GRAPE, and further requirements for a multi-purpose scanning apparatus have been identified. This track and motor would support sensors for the P-wave logger and magnetic susceptibility apparatus and would be designed to accommodate additional unspecified scanning devices. The same consultant who developed the GRAPE software will be used for this work.

Requirements have been determined for data entry and maintenance for velocity, index properties, and strength tests. Requirements Definition and Design Documents have been prepared. Data collection will be implemented on a microcomputer functioning as a terminal to the VAX; later the software may be modified for stand-alone operation of the microcomputer with a communication link to the Core Log and Core Sample Inventory data sets on the VAX. Programming and testing are under way. Installation on the ship is planned for Leg 115.

Data sets, forms, and editing procedures have been developed for entry of chemistry and paleomagnetics data recorded on paper forms, and data entry is in progress.

Requirements definition and design are underway for a chemistry data collection and maintenance system to be used aboard ship. This will provide for forms data entry of carbonate and CHN data directly on the VAX and file transfer of rock eval and gas chromatography data from microcomputers to the VAX.

4. Core Material Descriptive Systems (visual core descriptions, smear slide and thin section descriptions, paleontology and biostratigraphy reports, barrel sheets, technical illustrations)

   Descriptions of core material are currently being captured on standardized paper forms. Data sets, computerized forms, and editing procedures have been defined, and data entry is underway, to transcribe and edit the smear slide/thin section data and visual core descriptions from the paper forms into data sets.

   Ultimately, much of this data will be entered on art stations aboard ship, which will be microcomputers equipped with graphics devices and software. Drafting of barrel sheets has already been implemented on the art stations, and the art stations have been interfaced with the general purpose graphics package DI3000. Art stations are beginning to be used for general technical illustrations. Configuration and software development for the core description station is so far unscheduled.

5. Leg, Site, and Hole Data Base Maintenance

The Leg, Site, and Hole data bases provide information for various summary reports and form the top three levels of the integrated core data base. Presently they are maintained as standardized hard copy reports using word processing software. The Requirements and Design Documents for maintenance of this data using forms-driven data entry and data base software have been completed. Implementation and testing are complete except for the interface to the Core Log, which is a prerequisite for installing the system aboard ship. Data entry is in progress on shore for the Site data set.

6. Core Data Analysis Software

Core data analysis software now existing has been developed by users, in some cases with assistance from CSG personnel, to meet their individual needs. Most of these programs transfer files, plot data, or perform data base retrievals. The sea-going systems managers are providing support on a time-available basis for requirements of this kind for physical properties, paleomagnetics, and chemistry data.

At the request of ODP staff scientists, a system of utility programs has been developed to add top-of-core, sample, and bottom-of-core depths to any data file in which records begin with full sample IDs. Besides being usable end products, they provide good examples of managing the data base interface and cross-references among data sets under program control which may be cannibalized and modified by users.

7. Integrated Scientific Data Base

Programs and command files are required to automate data set loading, reformatting, quality control checks, and retrieval. Indexes and cross-references to the data base, and software for searching them, are also needed. An ultimate goal is to make a copy of the core-related data available to the public for on-line read-only access.

8. Satellite Navigation Data Collection (NAVLOG)

Satellite positioning data is accumulated by a turn-key system on the ship's bridge. The data is currently being transmitted electronically to a floppy disk on a micro-computer in the Underway Lab; it is also available on printed output, and selected parts are encoded on forms. A Global Positioning System (GPS) involving new hardware and software was installed during Leg 106, and software has now been implemented to incorporate GPS data into the seismic tape header records.

9. Underway Data Analysis Software

As for core data analysis, most underway data analysis software either is included in turn-key packages or has been developed by users with assistance from CSG.

A system has been developed by CSG to plot the smoothed ship's course; it is installed in a partial implementation.

Enhancements, including GPS data, real-time plotting, and more flexible scaling, have been assigned a high priority by Science Operations. Requirements definition, design, and implementation for these enhancements will begin in spring 1987 and will take at least the rest of 1987 to complete.

10. Materials Management System

One of the first systems installed aboard ship was a partial implementation of an inventory management system for capital and expendable equipment. Called the Materials Management system because it ultimately will include bill of materials, technical drawing catalogue, and capital equipment accounting functions, the system currently provides for maintenance of item and vendor master files and stock usage and replenishment tracking both aboard and ashore. Processing of end-of-leg crossover between ship and shore data sets has now been installed. Shipment and order processing and Vendor File maintenance are in the final stages of testing and will be installed by the end of March, 1987.

11. Publications Tracking System

Requirements definition and preliminary design work is underway for a system to monitor processing of ODP publications. This work and implementation will proceed during 1987 but will not be completed until some time in calendar 1987.

12. ODP Participant Data Base

Data files from the DASI system developed in the Deep Sea Drilling Program (DSDP) have been acquired, reformatted, and loaded into System 1032 data bases with a minimum of re-design by CSG. This data describes participants in DSDP and ODP and documents the nature and history of their affiliation with either program. Procedures heve been developed for updating the data base via computerized forms with full editing and for standard types of retrieval.

13. Sample Investigations Data Base

Data bases were maintained at DSDP to track distribution of samples from ship and shore and to provide key word indexes to samples and publications. At ODP this has been designated the Sample Investigations data base, consisting of the two sub-data bases Sample Requests and Sample Bibliography. Where the Sample Inventory data base tracks allocation of samples on the ship and from the repositories, physical sources and characteristics of sample, and quantities of samples and residues in the repository inventories, the Sample Investigations data base has the investigation (involving many samples) as fundamental unit. It tracks the purpose and characteristics of investigations and the publications resulting from them. Requirements definition and design is complete for the Sample Requests phase and is in progress for the Sample Bibliography phase.

14. Administrative systems

CSG has recently been assigned responsibility for maintaining

and enhancing administrative budget and fixed assets systems originally developed and maintained by outside consultants. An additional staff position was authorized for this purpose and was filled in August.

15. Telecommunications

A reliable and efficient satellite telecommunications link between the ship and shore is important for transferring several kinds of data and messages. Considerable time has been spent trying various hardware and software products with their myriad switch settings and options. Reliable communication has been achieved at an effective rate of approximately 70 characters per second, but this is too slow for many needs. This work has been and is being done mainly by the Systems Managers and the Supervisor of CSG. Some software development will be necessary to automate the set-up of hardware and software, process and log messages, and allocate charges.

B. CSG personnel primarily responsible for systems development

Noble Fortson is a Senior Programmer assigned responsibility for technical leadership and oversight of software development activities. He is acting as project leader and lead designer for the Sample Inventory, Sample Investigations, Materials Management, and Physical Properties (test results) systems. He is also responsible for the overall design of the ODP integrated scientific data base and the design of editing and updating procedures to maintain it.

May Ling is a Senior Programmer within CSG. She is working on requirements definition, design, and implementation for the Sample Investigations system.

Floyd Lightsey is a Senior Programmer. His primary responsibility is maintaining and upgrading the administrative budget and fixed asset systems.

Steve Bearman is a consultant developing software for the GRAPE, P-wave logger, and magnetic susceptibility devices.

Ed Garrett is a consultant working full-time for CSG. He is doing documentation and programming for the Materials Management system, the new heat flow apparatus, and the Core Sample Inventory system.

Jim Wade is a half-time graduate student Research Assistant. He is working on Physical Properties system requirements definition, design, and implementation and is also evaluating microcomputer software packages.

Mark Benson is a half-time graduate student Research Assistant. He is working as operator/systems manager/maintenance programmer for the underway geophysics system running on the MASSCOMP computer.

Bobby Davis is a half-time undergraduate student worker. He is working on hardware and software for the art stations.

II. Systems management and operations

The computer facilities on shore and aboard the ship are large and complex enough to require full-time systems managers. Each consists of two VAX-11/750s with several kinds each of disk drives, tape drives, printers, and plotters. Each central VAX facility interfaces with approximately 50 terminals and microcomputers via communications interfaces of various kinds. A wide range of software products from an assortment of vendors are used.

A. Systems management and operations activities

These services must be provided for all ODP users, even those who do their own programming.

1. Systems Managers must install, upgrade, and trouble-shoot hardware and software, coordinate vendor maintenance, customize systems software for ODP, and tune systems for optimal performance.

2. Systems Managers must set up and configure user accounts with appropriate privileges, quotas, and security provisions. Programs and procedures are required to facilitate and manage these activities. Appropriate plans and procedures to implement them must be developed to provide for back-up and recovery of data files.

3. The Systems Managers routinely provide training and consultation for users of standard ODP computer systems. This is especially important aboard ship, where there is a new group of users each leg. Formal classes are given, and both permanent ODP staff and guest users have access to the systems managers for questions and help with hardware and software.

4. The systems managers are responsible for the physical operation of the central shore and shipboard computer centers.

5. When new or expanded requirements arise for either hardware or system software, CSG provides some degree of support, ranging from totally configuring the system to advising users and reviewing alternatives for them. This involves identifying requirements and cost effective solutions, contacting vendors, preparing RFQs, and evaluating bids and trial systems. CSG tries where possible to use "off-the-shelf" packages to satisfy requirements, but this approach requires a considerable investment of time up front to make accurate evaluations. Systems managers as well as other CSG staff members participate in this work.

6. Systems managers are used for software development work as time permits. However, the demands of systems management are such that this is minimal.

B. CSG personnel primarily responsible for systems management/ operations

Moses Sun is the shore based Systems Manager. He is also working on the Publications Tracking system, although systems management duties leave him very little time for software development.

Bill Meyer is chief sea-going Systems Manager. A considerable part of his time is spent in coordinating shipboard computing activities. He goes to sea on approximately one leg per year and occasionally on transits. He is acting as project leader and lead designer for the Leg-Site-Hole data base maintenance system and the ship's track plotting project. At present he is working on implementation of Leg-Site-Hole data base maintenance, in addition to his systems management duties.

John Eastlund and Daniel Bontempo are sea-going Systems Managers who alternate at sea, except for the double stand-down provided by Bill Meyer's annual sea duty. Because of shipboard systems management activities and compensatory time, they are available for software development only about one month of each three; completion of previous ship work and preparation for the next leg spill over into that time. For these reasons they are used for required work on outside software, developing shipboard operational procedures, testing software, and assisting the shore-based Systems Manager. Presently John is doing requirements definition and for the chemistry data collection system, and Daniel is doing the same for the Core Sample Inventory system.

Carlton Whitmore and Chuck Benedict are half-time undergraduate student workers who assist with hardware repair, fabrication, and troubleshooting on shore.

David Uechi and Chuck Haddock are half-time student workers who work as computer operators and assist with shore-based systems management.

III. Columns 1 - 3 of the following table, showing tasks and expected completion dates, were part of the status report submitted to IHP in June, 1986. A fourth column has been added to show completion dates which would be desirable and feasible if additional CSG personnel were available.

Application	Tasks	Date	Desired date
Core Log	Various enhancements	Unscheduled	Sep 1987
Core Sample Inventory	Requirements determination	Completed	
	Linkage with VAX central data base	Aug 1987	Apr 1987
	Tracking of sample material on shore	Dec 1987	Aug 1987
Core Test Results			
- GRAPE	Motor control, two minute GRAPE	Complete	
	Link with VAX central data base	Aug 1987	Apr 1987

	Algorithms for rescanning,	To be determined	
- Multi-purpose scanner	P-wave logger, mag. susceptibility, hooks for unspecified devices	To be determined	
- Velocity, index properties, strength	Requirements determination	Completed	
	Data entry and maintenance, linkage with VAX central data base	May 1987	
- Others	Automated data entry and editing from paper forms for chemistry and paleomagnetics	Completed	
	Chemistry data collection	Dec 1987	Aug 1987
Core Material Descriptions	Automated data entry and editing of smear slide/ thin section data and visual core descriptions from paper forms	Completed	
	Implementation of art station functions		
	- barrel sheet drafting	Completed	
	- interface with DI3000	Completed	
	- technical illustrations	Completed	
	- core description station	Unscheduled	Jul 1987
Leg, Site, Hole Data Base Maintenance	Automated data entry and editing of Site data from paper forms	Completed	
	Leg and Hole data set maintenance, integration with Site data set	Completed	

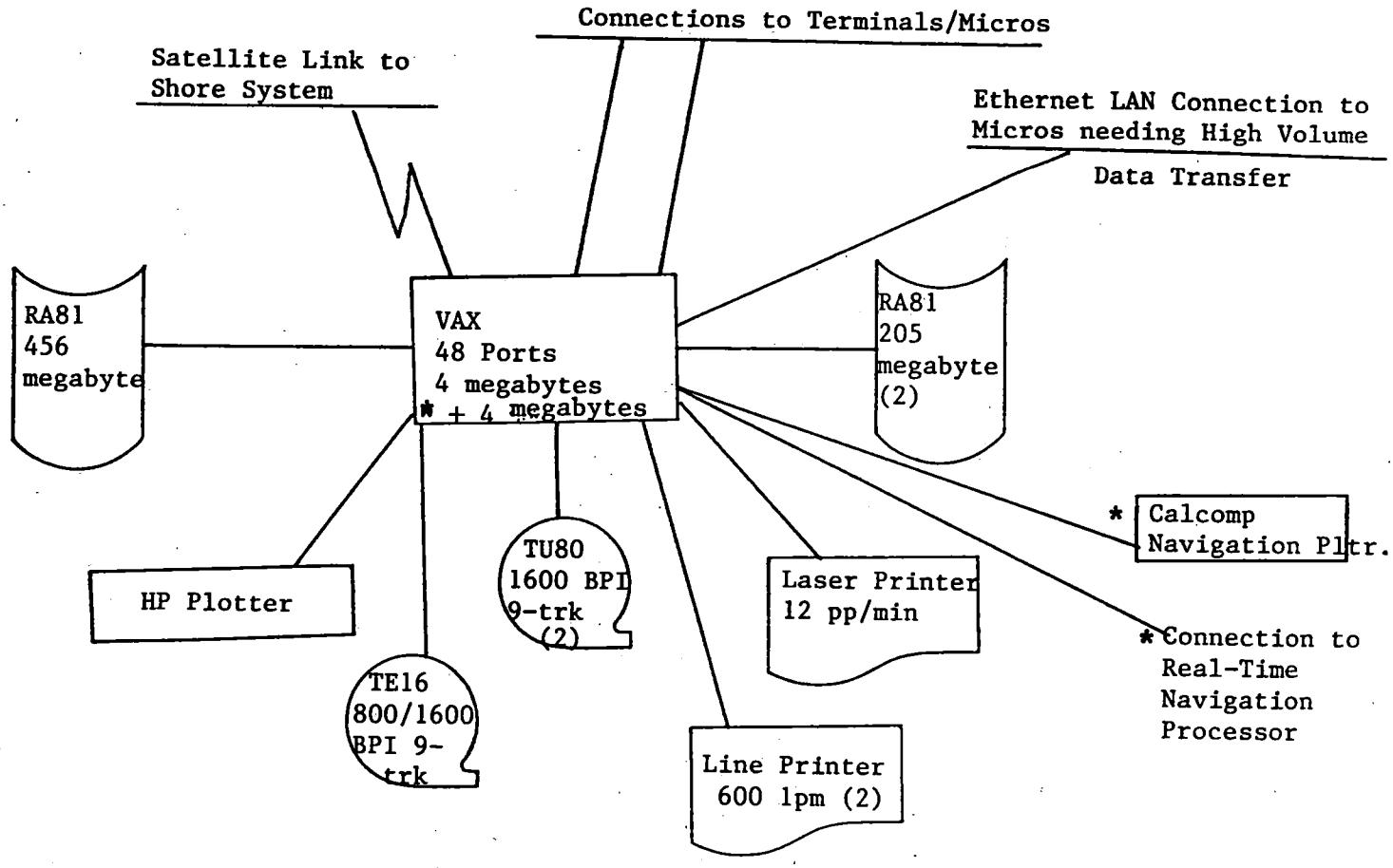
	Integration with Core Log	Apr 1987	
Core Data Analysis			
- Addition of depth data to user data records	Design and implementation	Completed	
- Others	Requirements to be defined by users	Unscheduled - time-available support only	On-going support
Integrated Scientific Data Base	Data loading, reformatting, quality control, indexing, retrieval procedures for ODP data	Sep 1987	Jun 1987
	Loading and/or reformatting of DSDP data	Oct 1987 if received by Apr 1987	Jul 1987
	Public on-line read-only access	Mid 1988	Sep 1987
NAVLOG	Incorporation of GPS data into seismic headers	Completed	
Underway Data Analysis	Phase I implementation of non-real-time smooth track plotting	Completed	
	GPS data processing, real-time plotting, various options and enhancements	Dec 1987	Sep 1987
Materials Management	End-of-leg cross-over processing	Completed	
	Shipment processing		
	- requirements determination	Completed	
	- design and implementation	Mar 1986	
	Order processing	Mar 1986	
	Bar code support	To be determined	Jun 1987
Publications Tracking	Complete system analysis, design,	Mar 1988	Sep 1987

	implementation	
ODP Participant Data Base	Design and implementation	Completed
Sample Request and Bibliography Data Bases	Data entry and maintenance procedures	Jun 1987
	Loading of DSDP data	Jun 1987

Attachment C - Current & Proposed Equipment Configuration

Revised 2/20/87

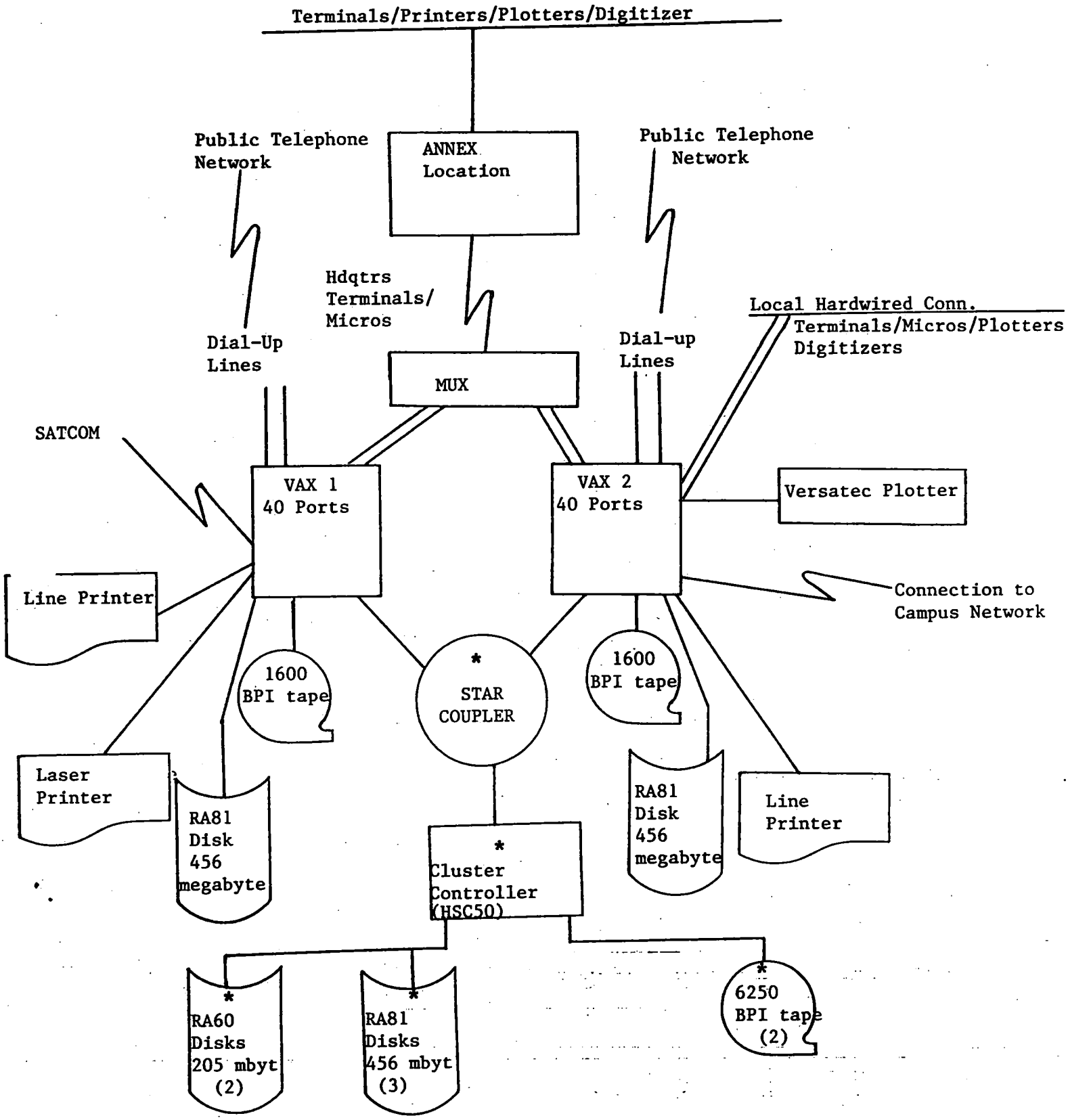
FY87 Current Shipboard Computer Configuration



* Equipment added in FY87

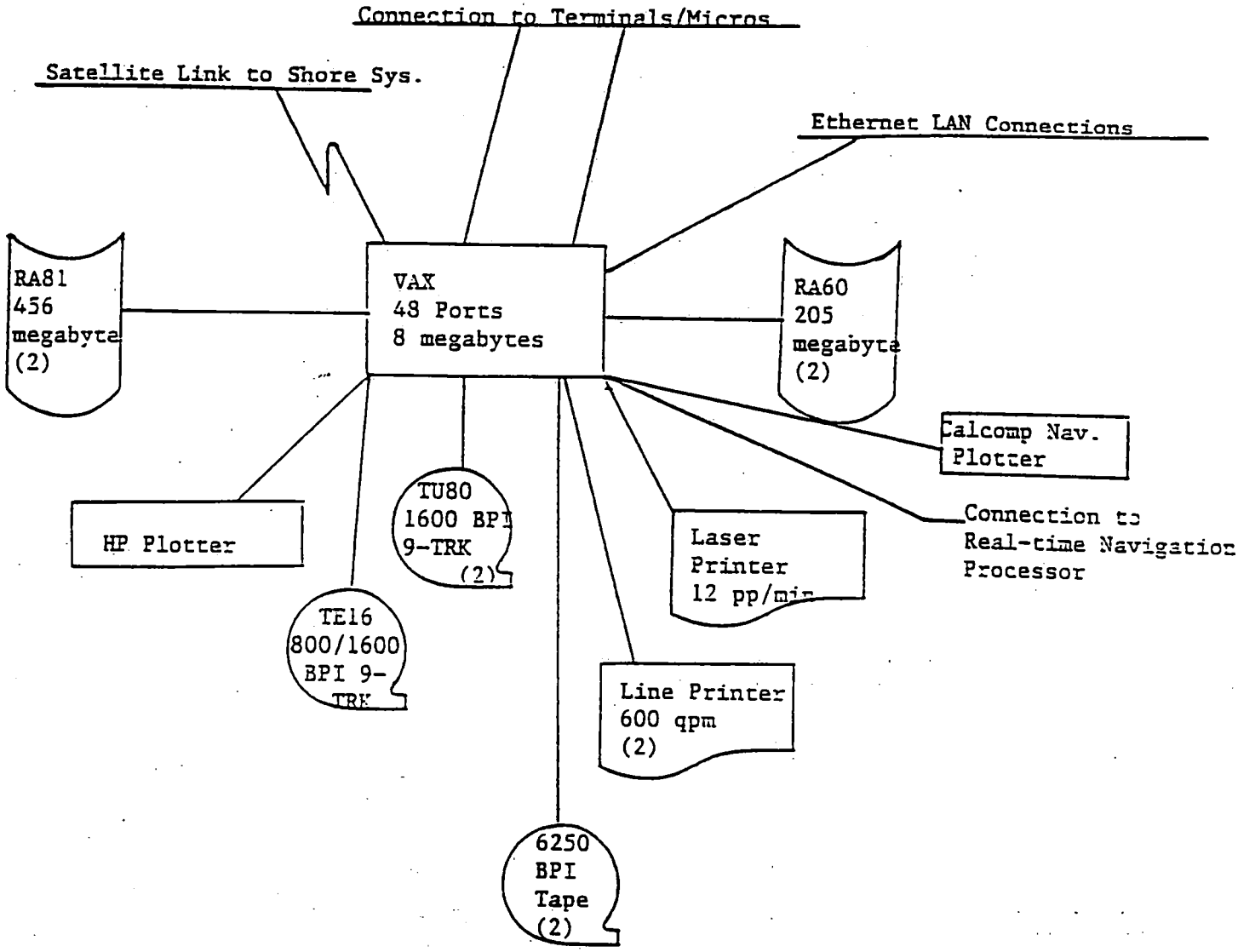
Revised 2/20/87

FY87 Current Shorebased Computer Configuration

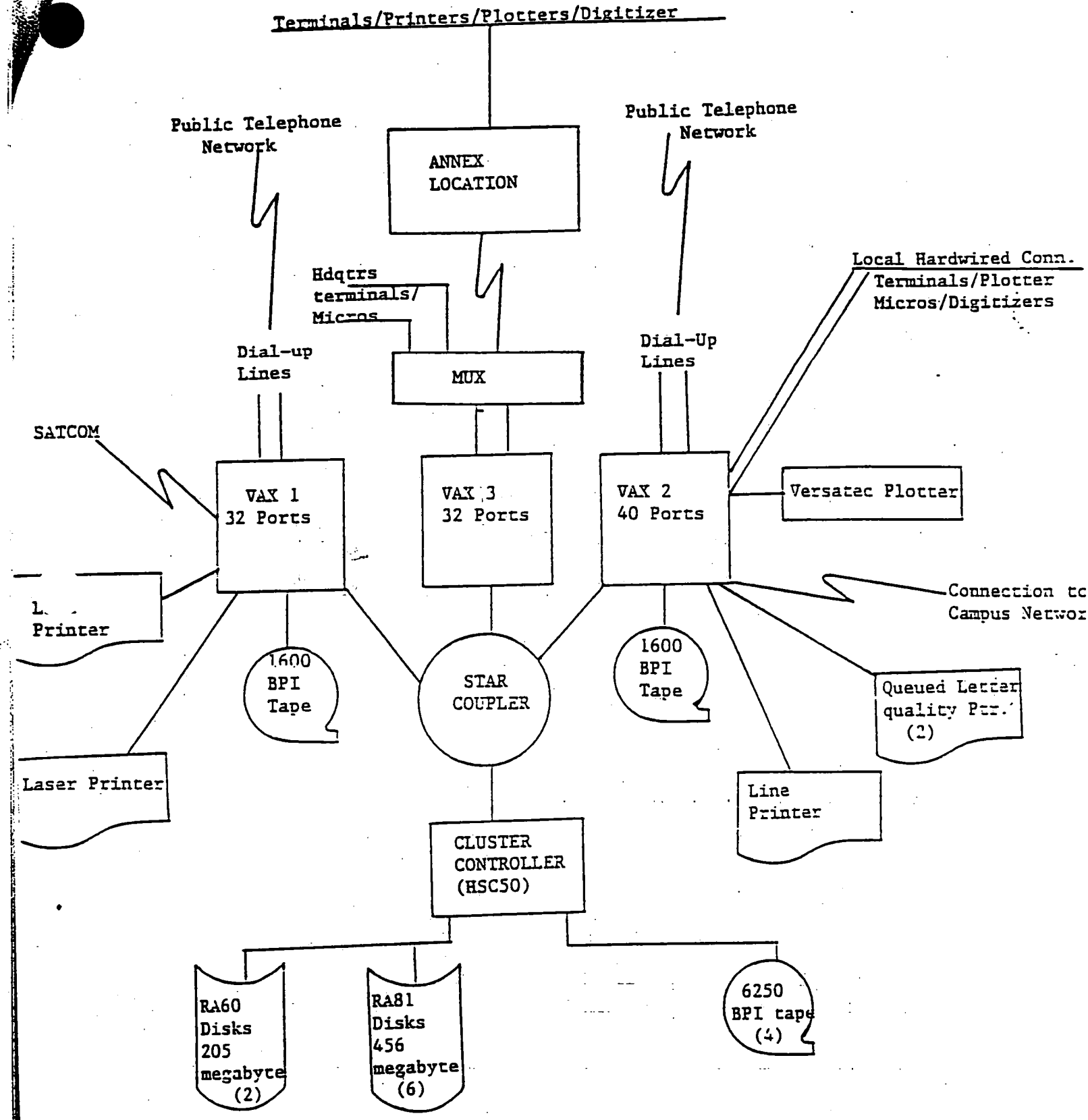


* Equipment added in FY87

FY88 PLANNED SHIPBOARD CONFIGURATION

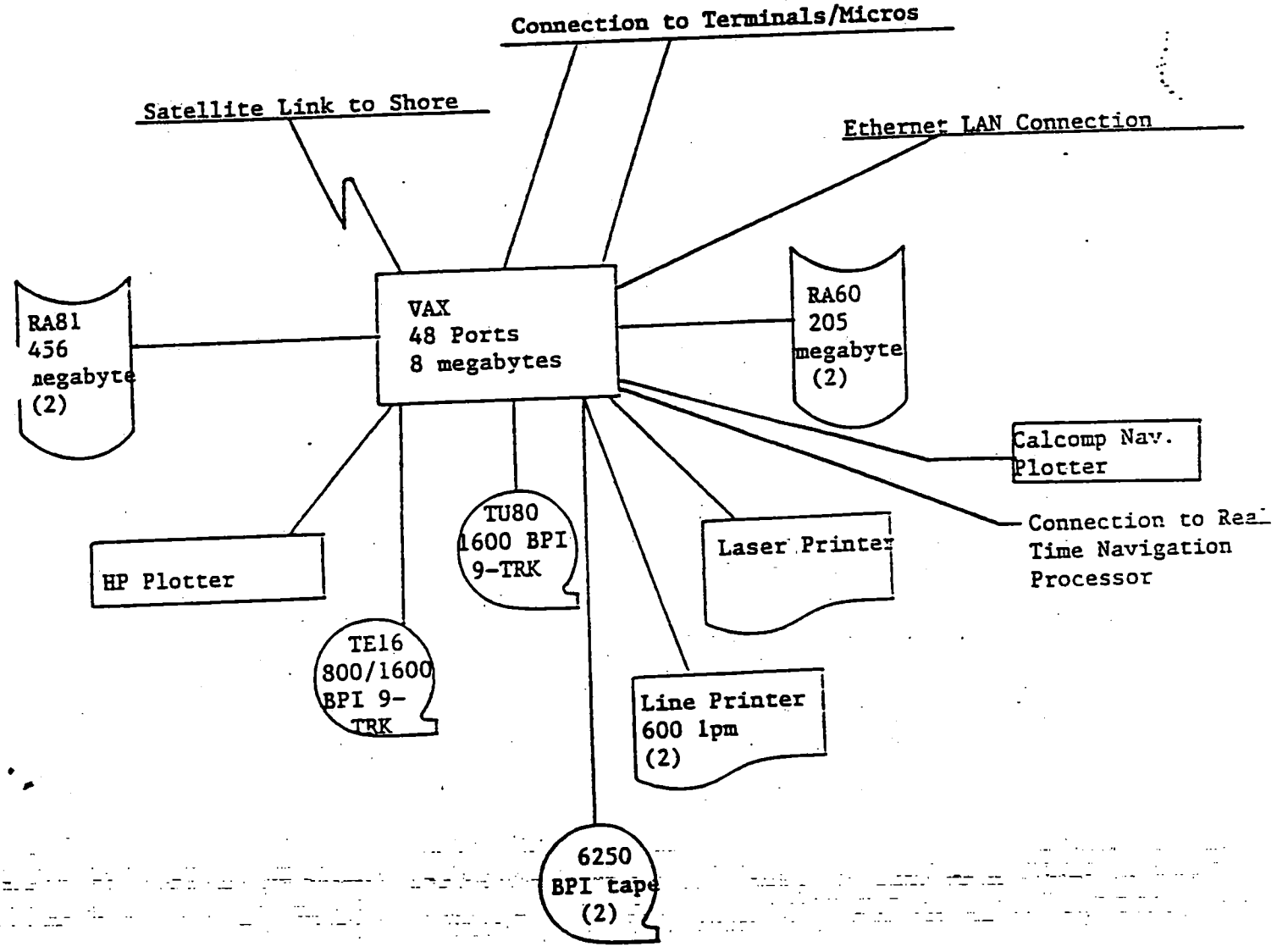


FY88 PLANNED SHOREBASED CONFIGURATION



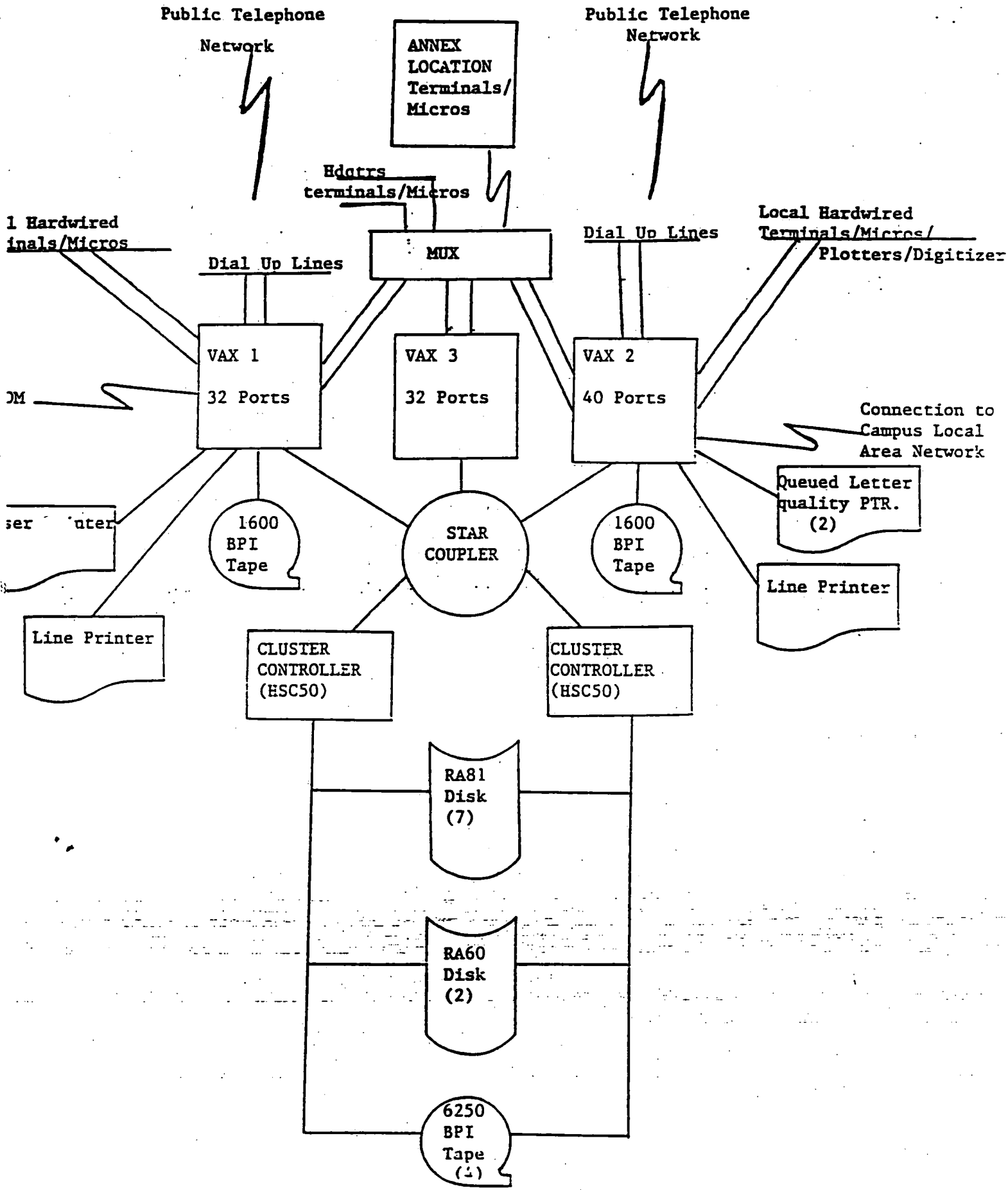
Revised 7/1/86

FY89 PLANNED SHIPBOARD CONFIGURATION



Revised 7/1/86

FY89 PLANNED SHOREBASED CONFIGURATION



ATTACHMENT 2A

COMPUTER PROJECTS SHOPPING LIST
(Estimates of effort are very imprecise.)

1. Core Log, Section Log (8 person months)

   A number of miscellaneous enhancements have been requested for Core Log, such as including more engineering data, creating a Section Log to accommodate variable numbers of sections and provide more detailed descriptions, and enhancing the capabilities of the shipboard video monitor displays.

2. Core Description Station (12 person months)

   Software is needed for a Core Description Station which would combine techniques used with the art stations with menu driven programs to automate the description of core material.

3. Core Curator File building and maintenance (4 person months)

   This was not explicitly identified as a component of the work required to build the integrated data base.

4. Core Sample Inventory enhancements (8 person months)

   Some hardware components (optical position encoder, programmable keyboard) have been acquired for automating the sampling table; considerable software development will be required for this. Use of bar codes for sample IDs has been considered. Thin section and critical material data bases are adjuncts of the Core Sample Inventory which must be maintained.

5. Multi-purpose scanning system (16 person months)

   Software would support scanning track, motor, electronic sensor-computer interfaces for arbitrary (at least within defined operational limits) core section scanning sensors.

6. GRAPE (6 person months)

   Additional software to support feature recognition and algorithms for re-scanning core sections at slower speeds is desired. The GRAPE data base must be defined.

7. Magnetometry (8 person months)

   According to sea-going systems managers, a rewrite of the software which controls the two magnetometers would be desirable in the interests of maintainability and user friendliness. (This software was acquired externally.) Programs to analyze the data should be acquired or developed.

8. Heat flow, thermal conductivity (4 person months)

   Keir Becker of Science Ops (25%) is re-organizing heat flow/thermal conductivity procedures and software. CSG may be required to assist, recast into CSG formats and standards, and/or rewrite what Becker does not get to. Data bases must be defined for these data types.

9. XRD (1 person month)

   Science Ops. has expressed an interest in transferring XRD software now running on a PDP-11 to the VAX, to run in compatibility (RSX) mode.

10. Logging (3 person months)

Some interest has been expressed in interfacing the Lamont MASSCOMP to the VAX so that processed logging data could be used there in graphics and in conjunction with other data on the VAX.

11. Engineering (8 person months)

Engineers are interested in developing a Measurements While Drilling system. They also need software to maintain an engineering drawings data base, which would link to the Materials Management system via hooks already in place there. Enhancements and support for their existing Drill String Modeling system and support for computer assisted drafting (CAD) might also be desirable.

12. Materials Management system (6 person months)

Enhancements are needed to use bar codes for labeling, issuing, and shipping items; for additional report and retrieval procedures; to support data compression and transfer procedures for SATCOMM; and to bring all reports and procedures into the menu structure. Requirements for a shore based inventory variant and for interfacing this to the ship system must be defined and supported.

13. Communications (3 person months)

Allocation of costs, routing of messages, and use of the shipboard radio operator and his IBM PC are desirable enhancements for SATCOMM.

14. Computer utilities, tools, methods (12 person months)

Make CSG utility libraries available to users with appropriate documentation and supply other utilities where required. Develop or acquire a tape library system. Use DEC software and/or develop software to improve CSG software configuration management (version control). Refine/develop backup and security protection and procedures for all systems, using VAX VMS and S1032 security capabilities. Reorganize directory structure where appropriate. Evaluate computer aided software engineering (CASE) software products for speeding up software development.

15. User interfaces (16 person months)

Develop a common and consistent menu-driven method of accessing all CSG software with extensive online documentation and help facilities. Develop user-friendly interfaces for graphics, data base, word processing, statistics, and file transfer software and easy-to-use interfaces between these packages. Develop standard command files, data file formats, and templates for input to and output from software. Provide user-friendly interfaces between the VAX and the popular microcomputers.

16. Data analysis (?? person months)

Requirements are not very well perceived by CSG personnel. There is probably a use for some software for underway geophysics data analysis beyond what is available in the package developed for the MASCOMP by UT Institute of Geophysics. There is a need for "intelligent retrievals" - for example: (1) For two test data types associated with two sequences of samples, retrieve the data and employ an algorithm to associate samples of one sequence with those in the other according to closeness of sample intervals (allowing for unpaired samples in either sequence where there

is no near neighbor in the other). (2) Provide procedures which will retrieve data together with one or more versions of an adjusted subbottom depth for each datum. (3) Plot features at common or related depths across several holes or sites. There is presumably a need for various statistical analyses such as correlation, time seriers analysis, multivariate analysis, similarity index analysis, cluster analysis, goodness of fit tests, etc.. The SAS, Minitab, and IMSL packages are available on the VAXes; other software may have to be developed by CSG. Software to implement modelling may be required.

17. Teaching, consulting, software repository and distribution activities (?? person months)

    It would be desirable for CSG to develop and offer more short courses, on-line tutorials, and machine readable documentation. We would like to be able to provide more assistance and consulting support to users developing programs, models, and procedures, and to convert useful programs developed by the user community to CSG formats and standards. As ODP is the curator of a major international data bank, so it might also be a repository for useful programs for retrieving, reorganizing, presenting, and analyzing that data. CSG might assist a scientist in developing programs and implementing models in return for the scientist's agreeing to let ODP be the repository for making the products available to the scientific community and to provide ODP with changes and updates. ODP might also undertake to convert such products from one computer system to another where desired and to make appropriate products available through its online systems.

18. Ocean Drilling Affiliated Scientists and Institutions (ODASI) system

    ODASI is used to prepare the material appearing in the front of each volume of the Proceedings and to coordinate the mailing of ODP publications. This system was created by a fairly crude and direct cut-over of the comparable data base at DSDP. The data has been updated since then at both DSDP and ODP; a final tape of the DSDP data base has just been received. Some "quick and dirty" programs need to be written in order to examine and compare the DSDP and ODP data bases in order to incorporate all updates correctly. It would be very desirable to re-structure the data sets in order to eliminate redundancy - entering the same data more than once and storing the same data in more than one place. Additional programs are needed to originate mailing lists and other lists automatically. These enhancements would considerably reduce the time spent on ODASI tasks.

ATTACHMENT 3

Draft Statement on ODP Programming/Data-Base Support

The Information Handling Panel approves of the work plan developed by the ODP Data Base and Computer Services groups. However, the relatively low level of manpower available to the Computer Services Group prevents it from addressing several tasks that the IHP feels are very important (see attachment 2A). At the present level of support, we estimate that the following high-priority tasks will not be completed by the end of 1988, or halfway through the lifetime of the Program:

1. Placement of high-use data bases on line for remote (read-only) access and search.
2. Development of user-friendly search routines.

In order to facilitate the speedy accomplishment of these and the other tasks as outlined in attachment 2, we will take the following actions:

1. Identify the priority order in the development of data bases and analysis programs. This will be accomplished by a survey conducted by Panel members.
2. In cooperation with ODP Data Base personnel, we will set up a test of procedures needed to accomplish remote access of on-line data bases using the capabilities existing on the S1032 data-base system.

The IHP further recommends:

1. That the PCOM increase scientific programming support at ODP, and
2. That the PCOM convey invitations to individuals from participating institutions to join the ODP staff (on a temporary, no-cost-to-the-program basis) to work with them on development of specific data-base-management systems and science programs.

ATTACHMENT 4

18 February 1987

Report to IHP
Curation and Repositories
June 1986-January 1987

The procedures for reviewing and processing subsequent sample requests have not changed during the past year. Shipboard/shorebased requests for future ODP cruises are reviewed by the Assistant Curator (C. Mato) soon after they are received. Copies of requests requiring special sampling needs (tools or equipment) are forwarded to the ODP Technical Support Group. The TSG are responsible for providing general supplies and handling shipment of specialized equipment and tools to the Resolution.

The number of requests and samples distributed by ODP have continued to increase during the past eight months. The Repositories and Assistant Curator respond to requests within six to eight weeks after receipt of request. Student workers were hired to assist with non-sampling activities, helping to keep the turn-around time for sample requests consistent with past performance.

The West Coast Repository (WCR) averaged 1,085 samples/month and the East Coast Repository (ECR) averaged 1,860 samples/month during June 1986 through January 1987. The Gulf Coast Repository distributed 636 water samples. Records show that from October 1984 through May 1986 the ECR and WCR distributed about 1,100 samples/month. Much of the overall increase is at the ECR from ODP shorebased requests.

The ECR distributed 1,639 samples for the Paleo Reference Center for nannofossil, foraminifer, diatom, and radiolaria preparation. Because the radiolaria preparation center has not been selected, the 146 samples are being held in storage at the ECR. The WCR is storing 1,251 samples for radiolarian preparation. All outstanding Paleo Reference Center requests are now completed.

The Repositories continue to provide residues in lieu of removing materials from the cores whenever possible. Investigators are always consulted before a substitution is made.

The catch-up core maintenance program continues on a time available basis using student workers. The WCR has about four-man years remaining, the ECR has one.

Curation and Repositories
Report to IHP June 1986-Jan 1987

Software Development

The DSDP investigations file has been uploaded to the ODP VAX. The database will provide a bibliographic history of all DSDP and ODP sample requests. The final editing of selected parts of the DSDP records which will make the records compatible with the ODP system will be completed this month (Feb 87). All sample requests to ODP (about 900 requests) must be coded and added to the new ODP database.

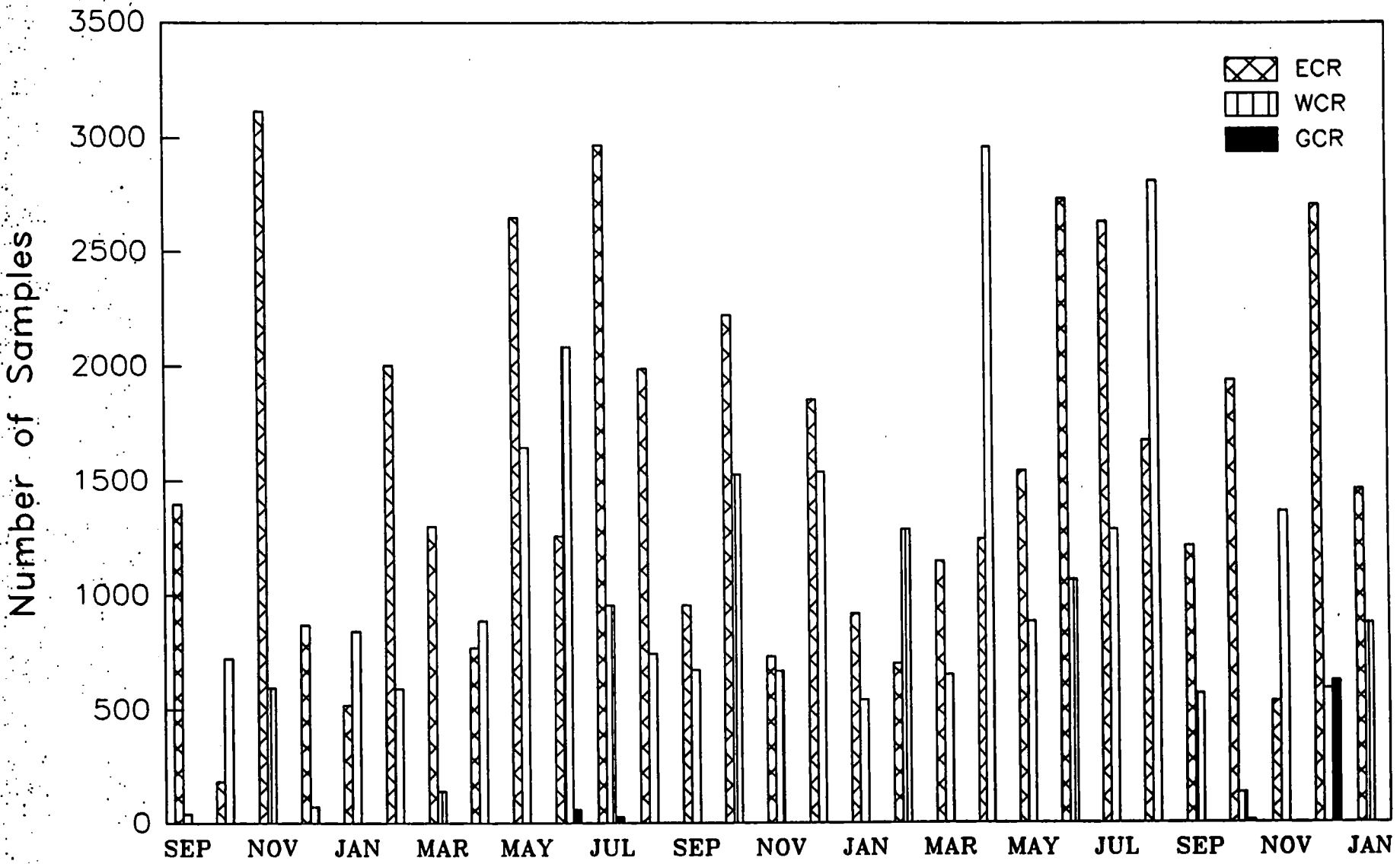
Preliminary SAM data from ODP Legs 101 through 112 are been uploaded to the VAX and are now in searchable database structures. There are some problems with the Leg 107 data which are being resolved, this data should be available soon.

Repository Staffing

In August 1986, the Superintendent and a senior level Curatorial Scientist at the East Coast Repository resigned. The Superintendent position was filled by the remaining Curatorial Scientist (P. Weiss). An offer was made to a junior member of the WCR staff who would otherwise be terminated in a planned RIF in September 1986. The offer was declined and a former temporary museum scientist was hired to fill the Curatorial Scientist slot (J. Butler).

In September 1986 according to plan, the staff at the ODP Repositories were reduced and reorganized. Each Repository is now staffed with a Superintendent and at least one Curatorial Scientist. The GCR Curatorial Scientist (B. Wilcox) is a rotating sea-going position. In late 1988, the second Curatorial Scientist (D. Quoidbach) presently located at the ECR will move to the GCR. He will be the other half of the Curatorial Rep sea-going rotation.

Samples Distributed from ODP Repositories

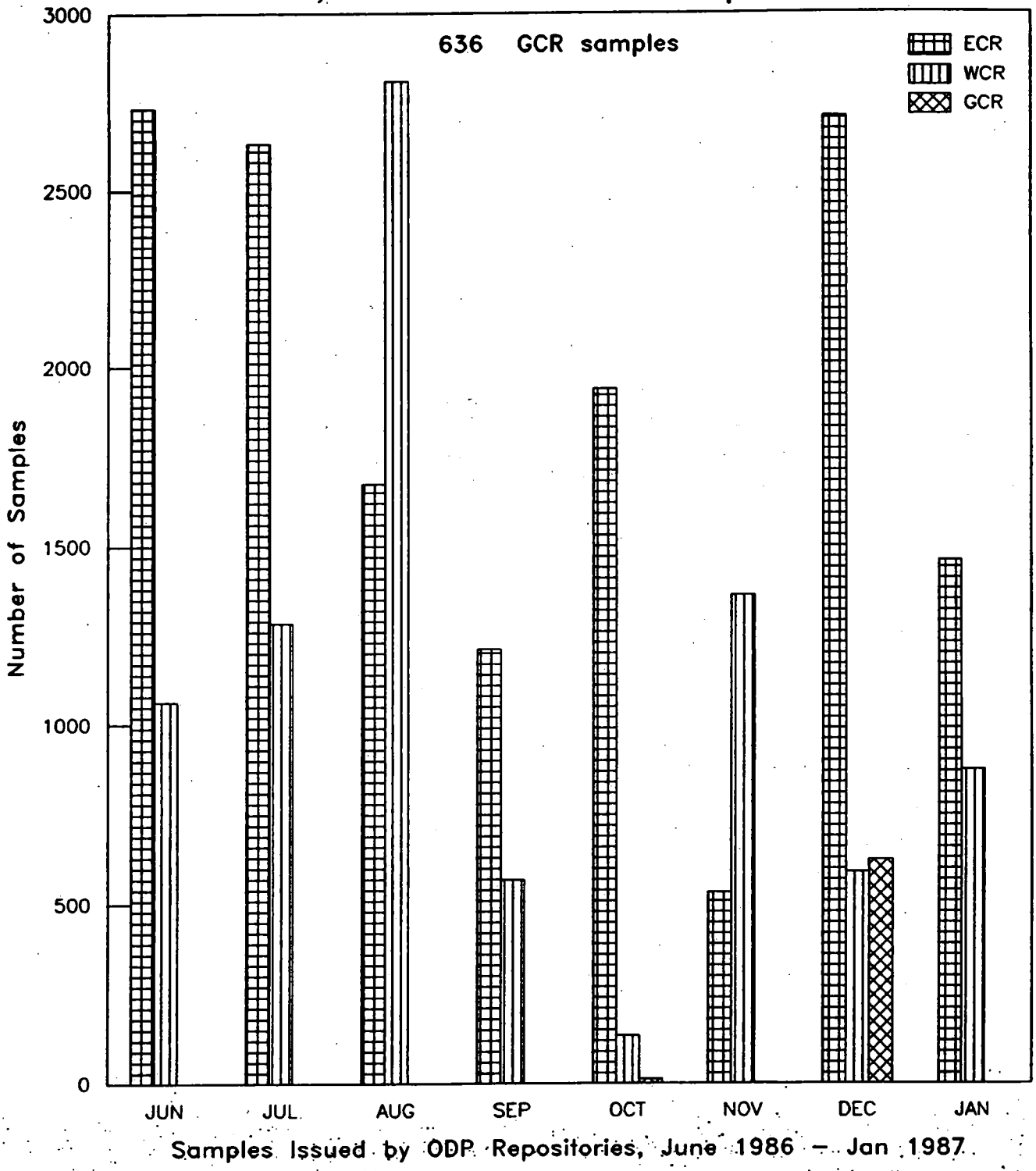


Samples Issued by ODP Repositories, Sep 84 – Jan '87

'24,199 Total (8 months)

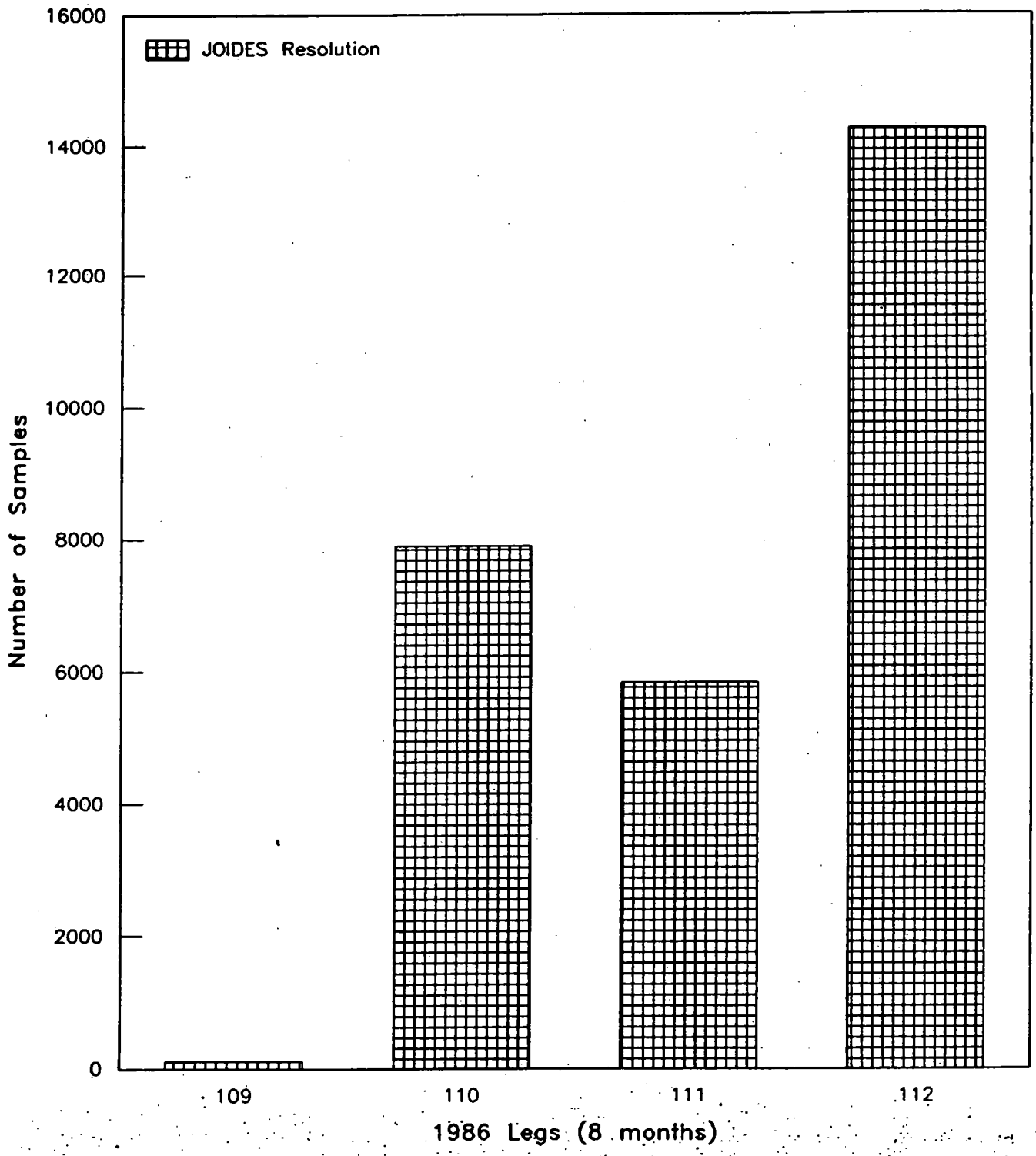
14,882 ECR samples

8,681 WCR samples



Samples Issued by ODP Repositories, June 1986 – Jan 1987

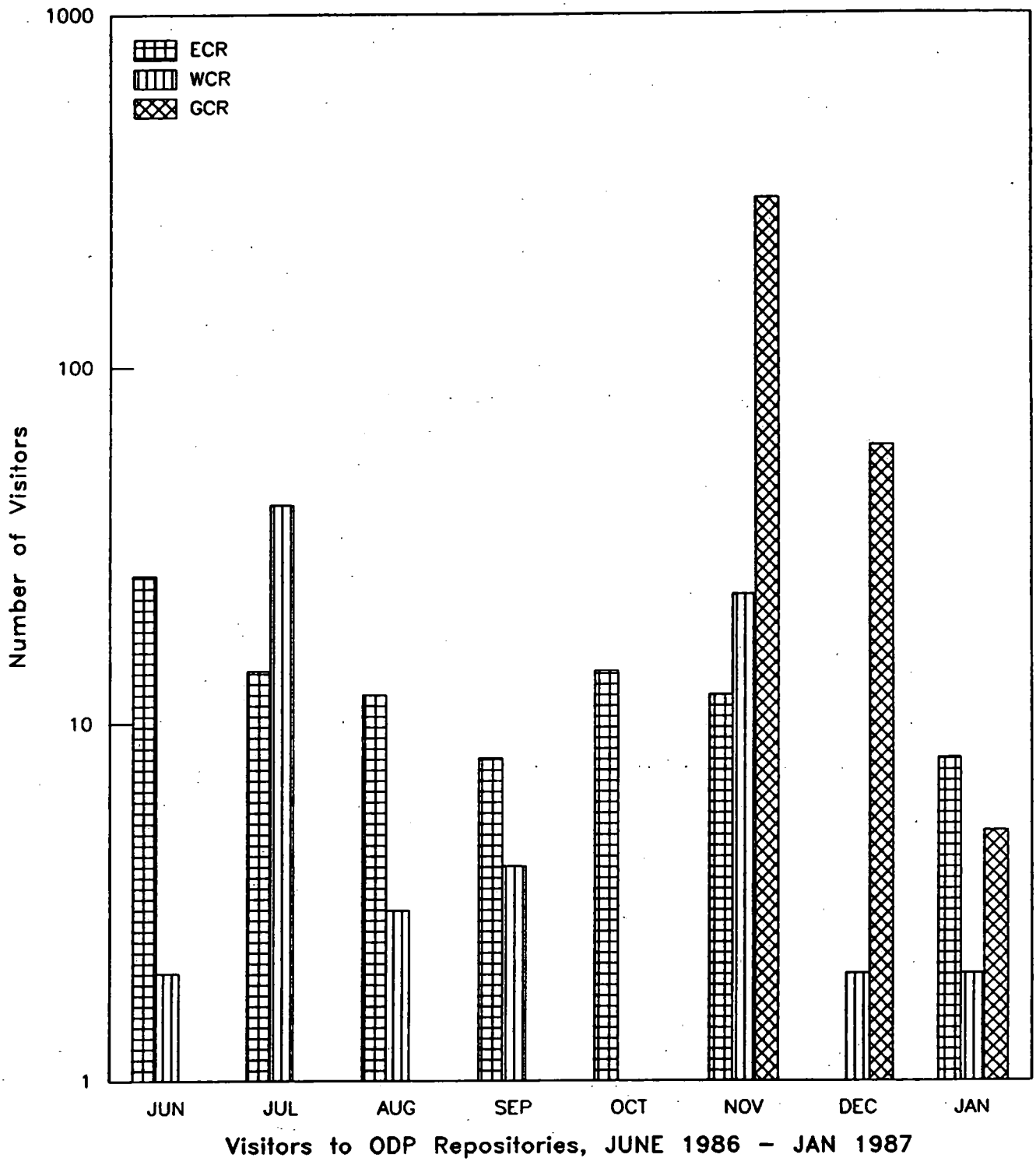
28,084 Samples Distributed Onboard JOIDES Resolution



95 ECR visitors

78 WCR visitors

365 GCR visitors



6 August 1986

Revision to Shipboard Handbook

beginning with second para., p. 49

The intent of the routine shipboard geochemical sampling program is to obtain a systematic set of data describing geochemical processes in sediments, particularly in those shallow sediments in which epigenetic/diagenetic changes are actively occurring. The routine whole-round sampling program is provides adjacent samples for gas, interstitial water, and particulate organic matter analyses. It is desirable to maximize the information gained from each whole-round sample removed from the core and to obtain each of the routine analytical measurements on every sample, when possible, in order to assemble the most useful data set.

An interstitial water (IW) sample is cleaned and squeezed in a Carver hydraulic press in the chemistry lab (Section VIII.D.5). Part of the resultant pore water is analyzed immediately, and the rest is put into glass vials or plastic tubes and sealed for return to an ODP repository. The pressed cake of sediment is bagged and refrigerated for eventual storage at a repository; however, portions may be sub-sampled onboard.

The 25-cm whole-round samples designated for shorebased organic geochemical (OG) work are to be capped; sealed with plastic wrap, a cap and electrical tape; labeled and frozen. These frozen samples are stored onboard until a frozen shipment can be sent to the repository from a port.

The following is the routine shipboard sampling program for interstitial water (IW) and organic geochemistry (OG):

- CORE 1: 5 cm whole-round is taken from section 3 or 4 for interstitial water (5 cm) and gas analyses (10 cc) with the natural gas analyzer (headspace technique). Vacutainer samples are taken if gas pockets are observed.

- CORE 2: 50 cc of working half are taken for interstitial water, and the immediately adjacent 10 cc are taken for gas analysis. Biostratigraphers must designate region to be sampled. Sample is to be removed immediately upon splitting.

- CORE 3: 30 cm whole-round is taken for shorebased organic geochemistry (25 cm frozen sediment), interstitial water (5 cm), and headspace gas analysis (10 cc are

taken from IW sample).

- CORES 4 & 5: Repeat program for CORE 2.

- CORES 6, 9, 12, 15, etc. to total depth: Repeat program for CORE 3.

Whole-round samples may be requested for consolidation testing. These consist of a maximum of one 8-10 cm section per lithologic unit of unlithified sediment, from core sections expected to have experienced no coring disturbance. If this frequency of sampling will excessively deplete the core in the judgment of the Co-Chief Scientists, then sampling must be restricted to a duplicate core at the site.

Sampling of whole-round cores for triaxial testing is an exception to this policy and must be proposed through the JOIDES panel structure. Alternatively, if time and resources permit, Co-chiefs may authorize a dedicated additional hole for this purpose. That is, sampling is restricted to the third (or higher-numbered) "copy" of the interval to be sampled. At least two copies of the cored interval should be preserved intact.

All whole-round samples must be retained intact until the shipboard scientists have determined that stratigraphically-critical intervals will not be destroyed.

ATTACHMENT 5

M E M O R A N D U M

TO: Members of Information Handling Panel

FROM: William D. Rose WDR
Supervisor of Publications

SUBJECT: Report of Publications Group

DATE: 20 February 1987

Status of Publication Activities

The big news is that we now have our first book in print, which combines Vols. 101 and 102 of the Initial Reports (Part A) of the Proceedings of the Ocean Drilling Program. This book was distributed in December 1986. Vol. 103A has been typeset and paged and is waiting only on receipt of the index (about a week from now) before being sent to the printer. Our projected distribution date is April.

Also in press are Vols. 104A, 105A, 107A, and 108A. We expect these volumes to be distributed in June through August of this year. The post-cruise meeting for Vols. 106A/109A was held about a week and a half ago. Andy Adamson, the ODP Staff Scientist for these volumes, will finish his editorial review shortly and then will turn the material over to us for editorial processing.

It is obvious that we are still behind schedule on producing Part A volumes. By the end of August, we anticipate gaining enough ground so that we can get the publications out by about 16 months post-cruise. We do plan to achieve our target date of publication of 12 to 14 months post-cruise by the beginning of the 1988 fiscal year. To accomplish this goal, we are planning to use temporary freelance help. Thus we will be ready to handle Part B manuscripts on schedule.

Part B volumes are on target for distribution 36 months post-cruise, beginning with the first, Vol. 101B. We now have in hand two manuscripts that have been accepted for publication in this volume. More will be coming in soon, along with those for Vol. 102B. Bill Winkler is the editor for the former volume, and Marie Littleton the editor for the latter.

By all means, let us know what you think of our new Proceedings, both in format and content. You will note a marked similarity to the widely accepted format of the DSDP Initial Reports, and we have imposed our own stamp as well.

Ocean Drilling Program
Publications
T[illegible]1 University Research Park
1[illegible]very Drive
Colle[illegible]station, Texas 77840 USA
(409) 845-1909
Telex Number: 792779 ODP TAMU
or Easylink Number: 62760290

With respect to the informal ODP series of publications, we now have issued 15 Scientific Prospectuses, 13 Hole Summaries, 12 Preliminary Reports (with another to be mailed this week), and 7 Technical Notes. We continue to produce these reports on our Kodak 225AF copier.

Although our first priority is always to our own publications, additional services we provide to the Program as a whole include artwork, such as Vu-graphs and color slides for presentations, posters, and illustrations for journal articles; editorial assistance for ODP and external publication, including the Nature and Geotimes articles for each cruise; and photographic services.

Current and Future Staffing

Publications is now approximately 80% staffed (see current table of organization, attached). Within the next two months we expect to hire our last two Editors and another Production Editor, as well as our last Illustrator. Then we will be fully prepared to take on production of Part B Proceedings volumes. The last staffer to be hired will be our final Production Editor, scheduled for this November, when production of Part B volumes will begin to approach steady-state.

Use of Electronic Equipment

With the help and advice of Russ Merrill and the Computer Services Group (CSG), we have automated much of our work to increase efficiency. I am listing many of the electronic aids that we use, as follows.

DEC Professional 350 workstations for Editors. Each workstation consists of a Pro 350, including hard disk, monitor, keyboard, and dual disk drive, manufactured by Digital Equipment Corp. These editing stations enable Editors to process most manuscripts by themselves by editing on-line from diskettes supplied either by contributing scientists or captured from "hard copy" by our Kurzweil 4000 optical character reader (OCR). This procedure eliminates the need for supportive typing or word-processing help, thus lowering overall costs. Costs are lowered even further by supplying electronic keystrokes to our typesetter instead of having him set type conventionally from hard copy. Linkage of the workstations with the VAX 11/750 central processing unit (CPU) provides additional options for utilization of a variety of hardware and software packages.

Lexidata 241M01-1-3 and Tektronix 4013 art stations for Illustrators. Illustrators now produce virtually all of the copy for "barrel-sheet" art by computer-assisted drafting (CAD) and more than half of the illustrations for Proceedings volumes and other ODP publications by CAD. Our primary software package is Design Graphix, which interfaces with the scientific (DI3000) graphics package. Art stations consist of Lexidata color screens and keyboards, and Tektronix black-and-white screens and keyboards. Some of these stations are powered by Pro 380's, and some are linked directly to a newly acquired microVAX. All of the art stations, together with plotters and digitizers, are linked by DECnet to the VAX CPU and to the microVAX for additional CAD processing power.

Hewlett-Packard 7586B plotter. This plotter has been used for some time to produce both large and small illustrations, including "barrel sheets."

Versatec 7424 electrostatic plotter. This newly acquired plotter has a high resolution of 400 dots per inch and can produce illustrations much more quickly than the Hewlett-Packard, enabling the art section to keep pace with expanding Publications activity. We hope to get this plotter up to full speed shortly: A new software package, written for us at no charge by Engineering Systems Corp. (the firm that licenses Design Graphix software), is being installed within a week; this package is expected to provide maximum efficiency of operation.

Calcomp 9000 digitizer. This device is used in the art section for electronic transfer of graphic data from large maps and charts to a digital data base. The data can then be manipulated in a variety of ways to produce maps and other illustrations as desired.

Kurzweil 4000 optical character reader. The OCR includes a processor, a terminal and keyboard, a disk-storage system, an automatic document feeder, and an electronic tablet. This device is linked to the VAX 11/750 CPU so that electronic files in ASCII format can be easily converted to IT*OS, the software package currently being used for word processing. We anticipate that the OCR will be used almost exclusively for "hard-copy" manuscripts that have been accepted for publication in Part B Proceedings volumes.

Manuscript tracking system. Development of this software program is continuing under the direction of Moses Sun of the CSG. Moses has completed the first phase of the program, which is analysis. The second phase, design, is about 40% complete. The last phase will be writing and implementing the program. When completed, this tracking system will enable us to keep up with the progress of all manuscripts submitted for publication in ODP Proceedings volumes and to take remedial action when and where necessary.

Other Projects

As part of our work with the ODP Science Operations Department to establish appropriate standards and procedures for manuscript review, we have decided, at Russ Merrill's suggestion, to send each reviewer, on a one-time basis, a copy of a booklet published by the American Geological Institute entitled Guidelines for Reviewers of Geological Manuscripts. This excellent little publication was written by Harold E. Malde and includes a checklist for reviewing geologic maps by John C. Reed, Jr., and a foreword by Wallace R. Hansen, all of the U.S. Geological Survey. The booklet sells for $3.95 a copy. We ordered a thousand of them and got a 40% discount.

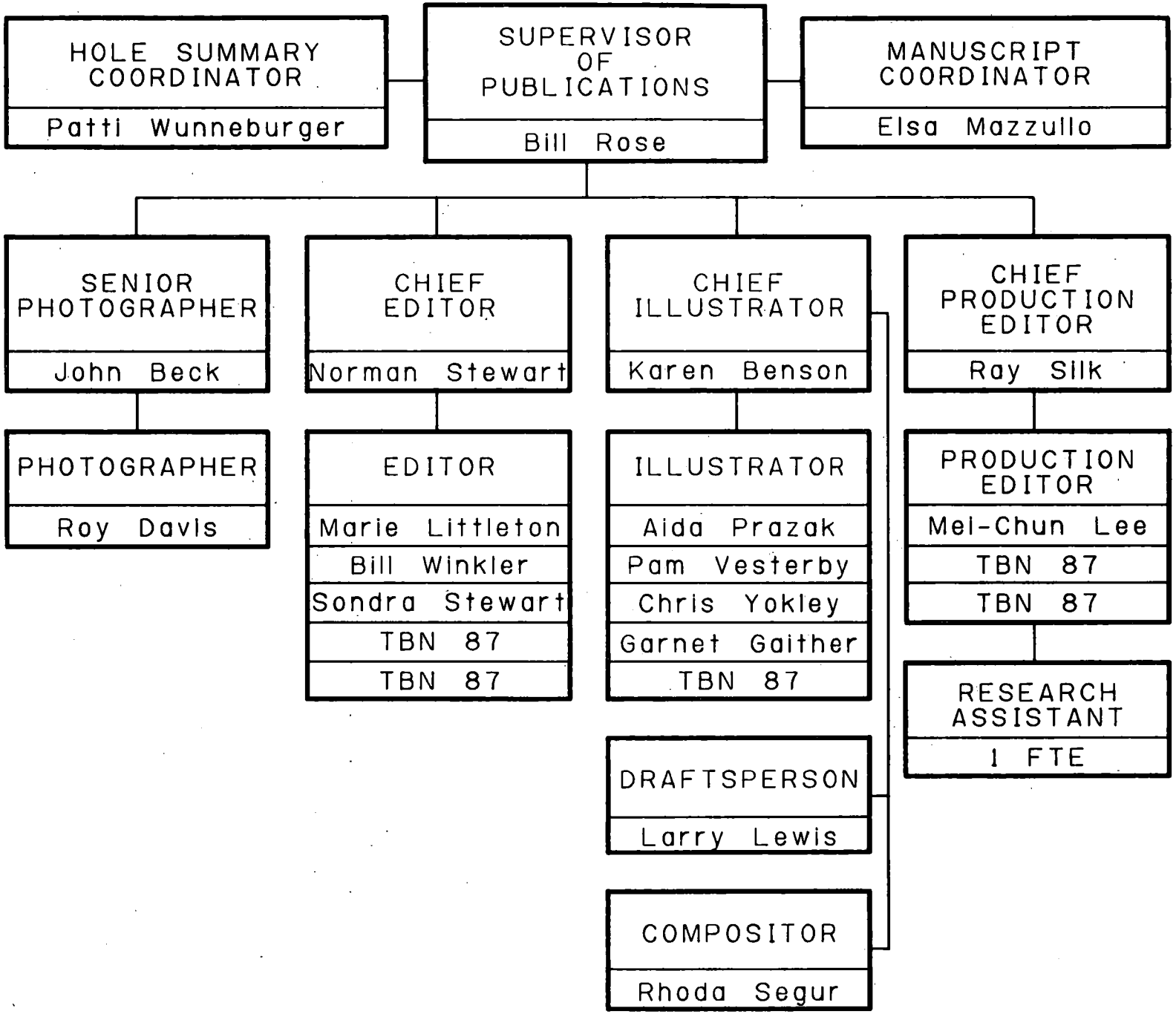
The Publications Group will be involved in completion of the DSDP cumulative index. This spring a total of $77,000 will be transferred from Scripps Institution of Oceanography to Texas A&M University to cover the remaining expenses of the subcontract with Richardson Associates (the indexer) and of other expenses, including computer time and two persons' time and services. Not included in these moneys will be ODP Publications' contributions of conducting an editorial review of the final product, and the

editing, typesetting, proofreading, and pasting up of the front matter, which will contain an introduction to the index by Peter Supko. The U.S. Government Printing Office will handle publication.

Meanwhile, we are putting the finishing touches on a request for proposals (RFP), which we plan to send to prospective bidders shortly, for a long-term subcontract for preparation of indexes for the ODP Proceedings volumes as they come out. Thus each Part A and Part B volume will have its own index, as in Vols. 101A/102A. We know of several bidders who have expressed an interest in this project, and we anticipate executing a subcontract for this purpose within the near future. Meanwhile, we want to work out a short-term plan so that we can use the services of Amanda Masterson and Edward Selig (our indexers for Vols. 101A/102A) for preparation of indexes for Proceedings volumes through 105A.

Attachment

TABLE OF ORGANIZATION
ODP PUBLICATIONS GROUP



ATTACHMENT 6

MEMORANDUM

TO: Information Handling Panel

FROM: Russell B. Merrill
Curator & Manager of Science Services

SUBJECT: Site Survey Papers in Part A Volumes

Stimulated by Leg 103, ODP has agreed to include papers by site survey scientists in the ODP Part A volume, provided they are completed in time to have been completely reviewed and revised prior to the post-cruise meeting.

The problem which we were attempting to address in permitting site survey papers to appear in part A is as follows:

1. The site survey is usually completed sufficiently far in advance of the cruise that publication is warranted well before the Part B volume will appear. Inasmuch as ODP has no control over site survey authors, as such, there is no way to prevent their publishing in the outside literature even if we desired to do so, which we do not.

2. It is not unusual, however, for the cruise itself to be completed before the site survey papers are ready to be published. If this occurs, the site survey authors will be tempted to employ drilling results in interpreting their survey results, especially if they participated in the drilling cruise as well as the survey cruise (which is sometimes the case).

3. In this event, the ODP scientific party may be concerned that the site survey paper will scoop the results of the drilling cruise -- i.e., the site survey authors will get to write "private" papers while the remainder of the party is still subject to ODP restrictions requiring joint papers.

4. This is especially aggravating to the scientific party if they believe that the site survey author will have substantially altered his original interpretation of site survey results as a result of the drilling cruise; however, it is difficult (if not impossible) to persuade the site survey author to restrict himself to a pre-cruise interpretation of the survey results, if he believes that interpretation to have been wrong.

5. The compromise which we have reached is to allow the site

survey author to include his paper(s) in Part A -- where the rest of the shipboard party can participate in the announcement of cruise results. Then the drilling cruise results are presented in site chapters & summary chapters to which the site survey paper may refer.

This requires, of course, that the peer review mechanism be set up for this cruise about 15 months before it normally would have been, in order to get the site survey papers through the system. The Part A production schedule will not permit any delay in receipt of the revised paper beyond the post-cruise meeting.

Note that all papers submitted to Part A must be accepted by the entire shipboard party. This includes any site survey papers submitted.

To date, this procedure has met with acceptance on the part of both shipboard party and site survey authors. I am not aware of any current controversy.

ATTACHMENT 7

Proposed agenda for next meeting

1. Report on action items.
2. Reports from ODP (mail to panel members prior to meeting)
   a. Data-base development.
   b. Remote-access trial.
   c. Systems development and scientific programs.
   d. Status of publications (scheme to produce Part B volumes,
      production schedule, problems, look at more Part As, look
      at paleo. report)
   e. Curatorial report.
3. Report from Site Survey Data Bank.
   a. What data do they have?
   b. How are they used?
   c. How are they archived?
   d. To what extent is it accessible?
4. Report from Logging Group.
5. Report from PCOM.
6. Report from NGDC.

IHP PANEL MEMBERS DIRECTORY

Appleman, Dan

Dept. of Mineral Sciences

National Museum of Natural History

Smithsonian Institution

Washington, DC 20560

Telemail/Telenet [DEAPPLEMAN/EDUNET] MAIL/USA

Hertogen, Jan

University of Leuven

Fysico-chemische geologie

Celestynenlaan 200c

B-3030 Leuven

Belgium

Phone 32-16-20 10 15

Telex 23674 KULEUV B

Telemail via BITNET on EARN network: FGEEA03 at BLEKUL 11

Jones, Meirion T.

Institute of Oceanographic Sciences

Bidston Observatory, Birkenhead

Merseyside, L43 7RA

United Kingdom

Phone 51 653 8633

Telemail [IOS/OMNET.BIDSTON] MAIL/USA (marked for his attention)

Latremouille, Michael

Bedford Institute of Oceanography

Box 1006

Dartmouth, NS B2Y 4A2

Canada

Phone (902)426-5947

Telemail BIO DRT

Loughridge, Michael

National Geophysical Data Center

NOAA/ Mail Code E/GC3

325 Groadway

Bouder, Colorado 80303

Telex 258169 WDCA UR Country Code 23

Telemail [MLOUGHRIDGE/NESDIS] TELEMAIL/USA

or [M.LOUGHRIDGE/OMNET] MAIL/USA

Merrill, Russell B.

Ocean Drilling Program

1000 Discovery Drive

College Station, Texas 77840

Phone (409)845-9324

Telex 627602 90 ESL UD

Telenet [OCEAN.DRILLING.TAMU/OMNET] MAIL/USA

Bitnet MERRILL@TAMU ODP

Moore, Ted

Exxon Production Research Co.

P.O. Box 2189

Houston, Texas 77252-2189

(no telenet yet) (713) 940-4946

Moussat, Eric

IFREMER, BP337

29273 Brest Cedex

France

Phone 98224205

Telemail [IFREMER.BNDO/OMNET] MAIL/USA

Novak, Judit

Information Centre Geosciences

Bundesanstalt f|r Geowissenschaften und Rohstoffe

Stillweg 2

3000 Hannover 51

West Germany

Phone (49)511-643-2815

Telex 92 37 30 / BGR HAD

Leblich, Alfred R., Jr.

Department of Earth and Space Sciences

University of California

Los Angeles, California 90024